kaspersky

Kaspersky Endpoint Security for Linux

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Kaspersky Endpoint Security 12.4 for Linux Help

What's new

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Kaspersky Endpoint Security 12.4 for Linux

Kaspersky Endpoint Security 12.4 for Linux ("Kaspersky Endpoint Security," "Application") designed to protect devices running Linux® operating systems against various types of threats, including network and scam attacks.

The application allows you to protect both physical devices and virtual machines. You can use Kaspersky Endpoint Security as part of Kaspersky Security for Virtualization Light Agent to protect virtual machines running Linux guest operating systems.

The application is not intended for industrial processes that use automated control systems. To protect devices in such systems, we recommend using Kaspersky Industrial CyberSecurity for Linux Nodes.

The following functional components and tasks of the application provide the main functions of device protection and control:

- **File Threat Protection** prevents infection of the file system on the user device. The *File Threat Protection* component starts automatically when Kaspersky Endpoint Security is launched and scans all files that are opened, saved, and started in real time.

  You can also scan protected devices on demand using the following scan tasks:

  - **Malware Scan**. The application scans for the presence of malware in file system objects located on local disks of the device, as well as mounted and shared resources, which are accessed via SMB and NFS protocols. You can use this task to perform a full or custom scan of the device.

  - **Critical Areas Scan**. The application scans boot sectors, startup objects, process memory, and kernel memory.

- **Removable Drives Scan**. The *Removable Drives Scan* component allows you to monitor the connection of removable drives to the device in real time and scan a removable drive and its boot sectors for malware. Kaspersky Endpoint Security can scan the following removable drives: CDs, DVDs, Blu-ray discs, flash drives (including USB modems), external hard drives, and floppy disks.

- **Container Scan**. The *Container Monitoring (Container Scan, Container Monitoring)* component allows scanning namespaces and running containers for malware in real time. Integration with Docker container management system, CRI-O framework, and Podman and runc utilities is supported. You can use the *Container Scan* task to scan containers and images on demand.

- **Web Threat Protection**. The *Web Threat Protection* component allows you to scan inbound traffic, prevent downloads of malicious files from the Internet, and block phishing, adware, and other malicious websites. Kaspersky Endpoint Security can scan encrypted connections.

- **Network Threat Protection**. The *Network Threat Protection* component allows you to scan inbound network traffic for activity that is typical for network attacks.

- **Firewall Management**. The *Firewall Management* component allows you to monitor the firewall settings of the operating system and filter all network activity in accordance with the network packet rules that you have configured.

- **Mail Threat Protection**. The *Mail Threat Protection* component scans the attachments of incoming and outgoing email messages for viruses and other threatening applications.

- **BadUSB Attack Prevention**. The *BadUSB Attack Prevention* protection component allows preventing the connection of infected USB devices that imitate a keyboard to the computer.

- **Anti-Cryptor**. The *Anti-Cryptor* component allows you to scan remote devices' calls to files located in local directories with network access via SMB/NFS protocols and protect files from remote malicious encryption.

- **Device Control**. The *Device Control* component allows you to manage user access to the devices that are installed on or connected to the client device (for example, hard drives, cameras, or Wi-Fi modules). This lets you protect the client device from infection when external devices are connected, and prevent data loss or leaks. User access to devices is governed by access regimes and access rules that you have configured.

- **Application Control**. The *Application Control* component allows you to manage the launch of applications on user devices. This reduces the risk of device infection by restricting access to applications. Application launching is regulated by the Application Control rules that you have configured.

- **Inventory**. The *Inventory* task provides information about all applications executable files stored on the client devices. This information can be useful, for example, for creating Application Control rules.

- **Web Control**. The *Web Control* component controls user access to web resources. This allows you to reduce traffic consumption and reduce inappropriate use of work time. If a user tries to open a website to which access is restricted by Web Control, Kaspersky Endpoint Security blocks access or displays a warning.

- **Behavior Detection**. The *Behavior Detection* component allows you to monitor for any malicious activity from applications in the operating system. When malicious activity is detected, Kaspersky Endpoint Security can terminate the process of the application that performs malicious activity.

- **System Integrity Monitoring** allows you to track changes to files and directories of the operating system. The *System Integrity Monitoring* component monitors the actions performed with objects from the monitoring scope specified in the component settings in real time. You can use the *System Integrity Check* task to check the integrity of the system on demand. The check is performed by comparing the current states of objects included in the monitoring scope with their initial states, which were previously established as a baseline.

Kaspersky Endpoint Security allows you to detect infected objects and neutralize the threats detected in them. For this, the application can use:

- Application databases to detect and disinfect infected files. During the scan process, the application analyzes each file for the presence of a threat: it compares the file code with the code of a specific threat and looks for possible matches.

- Kaspersky Security Network. The use of data from Kaspersky Security Network ensures faster responses by Kaspersky Endpoint Security to various threats, improves the performance of some protection components, and reduces the likelihood of false positives.

Prior to disinfection or removal, Kaspersky Endpoint Security saves backup copies of files in the Backup located on the device. If after disinfection, you partially or completely lose access to important information in a disinfected file, you can restore the file from the copy.

While performing scan tasks, Kaspersky Endpoint Security can disinfect and delete files that are protected from modification: files with the 'immutable' and 'append-only' attributes and files in directories with the 'immutable' and 'append-only' attributes. Backup stores copies of these files that were created before disinfection or deletion. You can restore files from backup copies, if necessary. When scan tasks are completed, the 'immutable' and 'append-only' attributes of disinfected files are not preserved.

Kaspersky Endpoint Security can operate in Notify-only mode. *Notify-only mode* is an operation mode for the application in which, if a threat is detected, application components and tasks do not attempt to disinfect or delete malicious objects, deny access or block the activity of applications. Instead, the application only informs the user about the detected threat.

Kaspersky Endpoint Security supports integration with other Kaspersky solutions to expand the capabilities of the application:

- Integration with Kaspersky Managed Detection and Response enables continuous search, detection and elimination of threats aimed at your organization.
- Integration with Kaspersky Anti Targeted Attack Platform ensures protection of the organization's IT infrastructure and rapid detection of threats such as zero-day attacks, targeted attacks and advanced persistent threats.
- Integration with Kaspersky Endpoint Detection and Response Optimum protects the organization's IT infrastructure from threats such as exploits, ransomware, fileless attacks and attackers' use of legitimate system tools to harm devices or data.
- Integration with Kaspersky Unified Monitoring and Analysis Platform enables the receipt, processing and storage of information security events, data analysis and correlation, search by events, and the creation of notifications about the detection of indications of information security threats.
- Integration with Kaspersky Endpoint Detection and Response Expert (on-premise) allows defending against most cybersecurity risks and cover the main scenarios of threat spread.

To keep the application up to date, additional application functions are provided:

- Activating the application with a key file or activation code.

  If Kaspersky Endpoint Security is used in Light Agent mode to protect virtual environments, activation is performed on the Protection Server (a component of Kaspersky Hybrid Cloud Security for Virtualization Light Agent).

- Updating the databases and application modules from Kaspersky update servers, via the Administration Server, or from a user-specified source on schedule and on demand.

  If Kaspersky Endpoint Security is used in Light Agent mode to protect virtual environments, the application receives updates of databases and application modules from the Protection Server (a component of Kaspersky Hybrid Cloud Security for Virtualization Light Agent).

- User access control for the application functions according to the user roles.
- Notification of the administrator about events that occurred while the application was running.
- Integrity check of application components using the integrity check tool.

You can manage Kaspersky Endpoint Security using the following methods:

- Using Kaspersky Security Center through the Kaspersky Security Center Web Console, Kaspersky Security Center Cloud Console, or the Administration Console.
- Using control commands from the command line.

- Using a graphical user interface.

  If Kaspersky Endpoint Security is used in Light Agent mode to protect virtual environments, Kaspersky Security Center must be used to manage the application. The application cannot be managed using Kaspersky Security Center Cloud Console or the graphical user interface.

The update functionality (including anti-virus signature updates and code base updates), as well as the KSN functionality may not be available in the application in the territory of the USA.

About Kaspersky Endpoint Security usage modes

You can use Kaspersky Endpoint Security in one of the following modes:

- In standard mode to protect workstations and servers ("Standard mode"). Kaspersky Endpoint Security is used as a standalone application for protecting devices running Linux operating systems.
- In Light Agent mode to protect virtual environments as part of Kaspersky Security for Virtualization Light Agent ("Light Agent mode"). Kaspersky Endpoint Security is used as the Light Agent component of the Kaspersky Hybrid Cloud Security for Virtualization Light Agent solution to protect virtual machines running Linux guest operating systems.
- In Endpoint Detection and Response Agent mode to support Kaspersky Detection and Response solutions working together with third-party anti-virus solutions on protected devices (hereinafter also referred to as the "Endpoint Detection and Response Agent mode").

The application can only be used in one mode at a time.

The application is used in standard mode by default.

Using the application in Light Agent mode

If you want to use the application in Light Agent mode, you need to do the following:

1. Install Kaspersky Endpoint Security in Light Agent mode on each virtual machine that needs to be protected using Kaspersky Security for Virtualization Light Agent. You can also install the application on a virtual machine template.

   Before starting installation of the application, you need to install Kaspersky Security Center Network Agent on virtual machines and virtual machine templates.

During installation, you must specify that the application will be used in Light Agent mode in one of the following ways:

- During the post-installation configuration of the application in interactive or automatic mode (if installed using the command line).
- In the properties of the application installation package or in the autoinstall.ini configuration file that is included in the installation package (if installing using Kaspersky Security Center).

After Kaspersky Endpoint Security is installed, you cannot change the application usage mode.

When selecting Light Agent mode, you can also configure the following settings for Kaspersky Endpoint Security in Light Agent mode:

- The role of the virtual machine that you want to protect, in the virtual infrastructure: server or workstation. The role of a virtual machine determines the license under which the application will be used on this virtual machine as well as the available functionality.
- VDI protection mode. It is recommended to enable this mode if you are installing the application on a virtual machine template that will be used to create temporary virtual machines. VDI protection mode optimizes the operation of Kaspersky Endpoint Security on temporary virtual machines.

2. Configure the settings for connecting Light Agent to SVMs and the settings for connecting Light Agent to the Integration Server.

   Kaspersky Endpoint Security in Light Agent mode interacts with other components of the Kaspersky Hybrid Cloud Security for Virtualization Light Agent solution: the Integration Server and the Protection Server installed on the SVM (for more information, see the Kaspersky Endpoint Security for Virtualization Light Agent Help). To interact with the Protection Server, Kaspersky Endpoint Security establishes and maintains a connection to the SVM on which this Protection Server is installed.

   A connection to the Integration Server is required if you want Light Agents to receive information about the SVM through the Integration Server, or if you want to protect the connection between the Protection Server and the Light Agent.

   You can configure the connection settings in the properties of a Kaspersky Endpoint Security policy using Kaspersky Security Center Administration Console or using Kaspersky Security Center Web Console.

You can get information about application operation in Light Agent mode, as well as information about the connection to the Integration Server and SVMs, by using the following application commands:

- `kesl-control --ksvla-info`
- `kesl-control --viis-info`
- `kesl-control --svm-info`

Information about the application usage mode is displayed in Kaspersky Security Center in the properties of Kaspersky Endpoint Security on the managed device in the **Components** section. Information is displayed in the **Light Agent mode for protecting virtual environments** line as follows:

- The *Running* status means that the application is being used in Light Agent mode.
- The *Not installed* status means that the application is being used in standard mode or in Endpoint Detection and Response Agent mode.

About activating the application in Light Agent mode

If Kaspersky Endpoint Security is used in Light Agent mode, the application does not need to be activated separately. You activate all components of the Kaspersky Security for Virtualization Light Agent solution at the same time. Activation is performed on the Protection Server side (a component of Kaspersky Security for Virtualization Light Agent) by adding the license key on the SVM. For more details, refer to the Help for Kaspersky Hybrid Cloud Security for Virtualization Light Agent.

The main license of Kaspersky Security for Virtualization Light Agent may not include the additional functionality of the Kaspersky Endpoint Security application (for example, the Integration with Kaspersky Detection and Response solutions). In this case, you also need to add to the SVM a license key to activate the additional functionality.

After activating the solution and connecting the Light Agent to the SVM, the Protection Server component sends license information to the Light Agent. When selecting an SVM to connect to, Light Agent considers, among other settings, the type of license key added to the SVM. The Light Agent does not connect to the SVM if the type of key added to the SVM does not match the role of the protected virtual machine in the virtual infrastructure (server or workstation). For more information about the special considerations involved in connecting the Light Agent to the SVM, please refer to the Help for Kaspersky Security for Virtualization Light Agent.

You can remotely view information about the license under which Light Agent for Linux is being used with the help of Kaspersky Security Center or on a protected virtual machine with Light Agent using the command line.

License keys cannot be managed using the *Add Key* task or via the Kaspersky Endpoint Security command for adding and deleting license keys.

About updating application databases and modules in Light Agent mode

Kaspersky Endpoint Security in Light Agent mode uses special anti-malware databases that are required for the application to work as part of Kaspersky Security for Virtualization Light Agent. Kaspersky Endpoint Security gets databases and application module updates from the Protection Server. For more details, refer to the Help for Kaspersky Hybrid Cloud Security for Virtualization Light Agent.

Databases and software modules on protected virtual machines are updated using a special *Update* local task of Kaspersky Endpoint Security, where the folder on the SVM is specified as the update source. The update task starts automatically. You cannot delete this task or change its settings.

Update sources other than a folder on SVMs are not supported. The use of group update tasks is not supported.

The last anti-malware database update is also rolled back on the Protection Server side. After a rollback of a databases and application modules update on the SVM, a special local *Update* task is started on the protected virtual machine. This task makes the Light Agent go back to using the previous set of malware databases.

The use of *Rollback* local and group tasks of Kaspersky Endpoint Security is not supported.

Other special considerations involved in using the application in Light Agent mode

If Kaspersky Endpoint Security is used in Light Agent mode:

- Application management using Kaspersky Security Center Cloud Console and the graphical user interface is not available.
- The use of cloud databases is not supported.
- Kaspersky Endpoint Security interacts with KSN servers using a KSN proxy server. Direct communication with KSN is not supported.
- The use of a proxy server for the application is not supported when connecting to the Integration Server, SVMs, or KSN servers.

Using the application in Endpoint Detection and Response Agent mode

Kaspersky Endpoint Security in Endpoint Detection and Response Agent mode lets you use the functionality of Kaspersky Detection and Response solutions to protect devices on which third-party anti-virus applications are installed.

In Endpoint Detection and Response Agent mode, the standard protection and control components of Kaspersky Endpoint Security are not used to protect the device. A third-party anti-virus application provides the standard device protection. Kaspersky Endpoint Security in Endpoint Detection and Response Agent mode continuously monitors processes running on the device, open network connections, and files being modified, and provides integration with the following Detection and Response solutions:

- Kaspersky Endpoint Detection and Response Expert (on-premise) on the Open Single Management Platform (hereinafter also referred to as "OSMP").
- Kaspersky Endpoint Detection and Response and Kaspersky Network Detection and Response components on the Kaspersky Anti Targeted Attack Platform (hereinafter also referred to as "KATA").

Kaspersky Endpoint Security 12.4 for Linux can work together with the Dr. Web anti-virus application. You can install Kaspersky Endpoint Security in Endpoint Detection and Response Agent mode on a device with the Dr. Web anti-virus application.

The applications must be installed in the following order: first, the third-party anti-virus application, then Kaspersky Security Center Network Agent, then the Kaspersky Endpoint Security application in the Endpoint Detection and Response Agent mode. This is important because the installer of a third-party application might identify Kaspersky applications as incompatible software and remove them. After updating a third-party application on the device, we recommend confirming that Kaspersky Endpoint Security and Network Agent are operating normally, because the installer of the third-party application re-checks the device for incompatible software and may remove Kaspersky applications.

Configuring the application in Endpoint Detection and Response Agent mode

If you want to use Kaspersky Endpoint Security in Endpoint Detection and Response Agent mode, you need to do the following:

1. Install Kaspersky Endpoint Security in Endpoint Detection and Response Agent mode on each virtual machine that you want to protect.

   You can query the information about the application mode on the command line by running the `kesl-control --app-info` command.

2. Activate the application. You need to add a separate license key to the application, "Kaspersky Endpoint Detection and Response Expert (on-premise) Add-on" (hereinafter also referred to as the "EDR Expert (on-premise) key").

   > To activate the application in Endpoint Detection and Response Agent mode, you only need the key for additional functionality. You do not need to add the main license key to the application.

3. Enable integration with the Detection and Response solutions that you want to use to protect the device:

   - To integrate with Kaspersky Endpoint Detection and Response Expert (on-premise) on the OSMP platform, you need to enable the EDR Expert (on-premise) component and manage integration settings in Kaspersky Security Center Web Console or on the command line.
   - To integrate with Kaspersky Endpoint Detection and Response on the Kaspersky Anti Targeted Attack Platform platform, you need to enable the EDR Expert (on-premise) component and manage integration settings in Kaspersky Security Center Web Console, Administration Console, or on the command line.
   - To integrate with Kaspersky Network Detection and Response on the Kaspersky Anti Targeted Attack Platform, you need to enable the NDR (KATA) component and manage integration settings in Kaspersky Security Center Web Console, Administration Console, or on the command line.

   You can check the status of the EDR Expert (on-premise) and NDR (KATA) components:

   - In the device properties in the Web Console (**Assets (Devices)** → **Managed devices** → <device name> link → **Applications** → <name of the Kaspersky Endpoint Security application> link → **General** → **Components**).
   - On the command line by running the following command: `kesl-control --app-info`.

Special considerations involved in using the application in Endpoint Detection and Response Agent mode

If Kaspersky Endpoint Security is being used in Endpoint Detection and Response Agent mode, only a limited subset of application component and tasks is available. After installation, the application settings are as follows:

- The following components that provide integration with Detection and Response solutions are fully manageable:
  - EDR Expert (on-premise)
  - NDR (KATA)

  These components are disabled by default, you need to enable them for the application to work in the Endpoint Detection and Response Agent mode. You can manage integration settings, including the functionality of Execution prevention of objects.
- Access to files is not blocked during the scan: the **Block access to files during scans** check box is cleared (`FileBlockDuringScan=No`). This setting cannot be modified.
- The File Threat Protection and Anti-Cryptor protection components are available in reduced functionality mode: when a threat is detected, these components do not attempt to disinfect or delete malicious objects, block access or application activity, but only send information about threat detection to Integration Servers that provide integration with Detection and Response solutions.

  You can enable or disable File Threat Protection and Anti-Cryptor and manage component settings, except for Action on threat detection. The following parameters cannot be modified:
  - File Threat Protection: **Action on threat detection** is **Skip** (`ActionOnThreat=Skip`).
  - Anti-Cryptor: **Action on encryption detection** is **Inform** (`ActionOnDetect=Notify`).
- The Behavior Detection component is fully manageable.
- All other protection and control components are disabled and cannot be managed.

When integrated with Kaspersky Endpoint Detection and Response Expert (on-premise) or with Kaspersky Endpoint Detection and Response (KATA), as part of a threat response action, Kaspersky Endpoint Security can control the launch of executable files and scripts on the device. The functionality of Execution prevention for objects is available with the following limitations:

- If a script is launched from an interpreter, the application does not control the launch of the script.
- The application does not control the opening of office software files on the device.

Distribution kit

You can download the files that are included in the Kaspersky Endpoint Security distribution kit, as well as the files needed to remotely install the application using Kaspersky Security Center, on the Kaspersky website.

The Kaspersky Endpoint Security distribution kit includes the following files:

- kesl-12.4.0-<build number>.i386.rpm, kesl_12.4.0-<build number>_i386.deb

  These contain the main application files. Packages can be installed to 32-bit operating systems based on the type of package manager.

- kesl-12.4.0-<build number>.x86_64.rpm, kesl_12.4.0-<build number>_amd64.deb

  These contain the main application files. Packages can be installed to 64-bit operating systems based on the type of package manager.

- kesl-12.4.0-<build number>.aarch64.rpm, kesl_12.4.0-<build number>_arm64.deb

  These contain the main application files. Packages for the relevant package manager can be installed on 64-bit operating systems for the Arm® architecture.

- kesl-gui-12.4.0-<build number>.i386.rpm, kesl-gui_12.4.0-<build number>_i386.deb

  These contain the files of the application graphical user interface. Packages can be installed to 32-bit operating systems based on the type of package manager.

- kesl-gui-12.4.0-<build number>.x86_64.rpm, kesl-gui_12.4.0-<build number>_amd64.deb

  These contain the files of the application graphical user interface. Packages can be installed to 64-bit operating systems based on the type of package manager.

- kesl-gui-12.4.0-<build number>.aarch64.rpm, kesl-gui_12.4.0-<build number>_arm64.deb

  These contain the files of the application graphical user interface. Packages for the relevant package manager can be installed on 64-bit operating systems for the Arm architecture.

- kesl-12.4.0.<build number>.zip

  Contains the files used for remote application installation using Kaspersky Security Center, including license.<language ID> and ksn_license.<language ID> files.

  > Kaspersky Security Center Network Agent is not included in the distribution kit. You can download it on the application download page in the **Kaspersky Security Center** section.

- ksn_license.<language ID>

  This file contains the text of the Statement on Kaspersky Security Network.

- license.<language ID>

  This file contains the text of the End User License Agreement. The End User License Agreement specifies the terms for using the application.

Editing configuration files of the application on your on using means not described in the application documentation or not recommended by Technical Support may cause poor performance and failures of the application and operating system, reduced protection of your device, inaccessible and corrupted data, as well as the sending of additional statistics to KSN getting turned on.

Hardware and software requirements

This section contains the hardware and software requirements for Kaspersky Endpoint Security.

Hardware requirements

Kaspersky Endpoint Security has the following hardware requirements:

Minimum hardware requirements

- CPU with AMD64 architecture, 2 GHz or more, two or more cores, and support for the SSE2 instruction set.
- Swap partition of at least 1 GB
- 2 GB of RAM available to the application for 64-bit operating systems (1 GB of RAM available to the application for 32-bit operating systems).
- 4 GB of free hard disk space for installation of the application and storage of temporary and log files

  Additional disk space is required to store trace files and application memory dump files.

  When scanning archives and compound objects with `ScanArchived=Yes` and/or `ScanSfxArchived=Yes` (by default, these are set to `Yes` for scan tasks and `No` for File Threat Protection), File Threat Protection and scan tasks require additional disk space depending on the type and unpacked size of such objects.

  We recommend making sure there is enough free space in the /tmp directory for scanning archives and compound objects. You can also limit the size (in the archived state) of archives that can be scanned by specifying the `SizeLimit` setting for each task.
- When using the graphical interface, the monitor must be capable of displaying windows 1000 pixels wide and 600 pixels tall (if screen scaling is applied, these dimensions are also scaled).
- If Kaspersky Endpoint Security is used in Light Agent mode to protect virtual environments, a virtual network interface with a bandwidth of 100 Mbps is necessary.

Minimum hardware requirements for the Arm architecture

- Armv8.2-A Kunpeng 920 or Armv8-A Baikal-M (BE-M1000) CPU or m-TrusT Terminal platform
- Swap partition of at least 1 GB
- 2 GB of RAM available to the application
- 3 GB of free hard disk space for installation of the application and storage of temporary and log files

  Additional disk space is required to store trace files and application memory dump files.

  When scanning archives and compound objects with `ScanArchived=Yes` and/or `ScanSfxArchived=Yes` (by default, these are set to `Yes` for scan tasks and `No` for File Threat Protection), File Threat Protection and scan tasks require additional disk space depending on the type and unpacked size of such objects.

We recommend making sure there is enough free space in the /tmp directory for scanning archives and compound objects. You can also limit the size (in the archived state) of archives that can be scanned by specifying the `SizeLimit` setting for each task.

- When using the graphical interface, the monitor must be capable of displaying windows 1000 pixels wide and 600 pixels tall (if screen scaling is applied, these dimensions are also scaled).

Using Kaspersky Endpoint Security in Light Agent mode to protect virtual environments is not supported on operating systems based on the Arm architecture.

Software requirements

To install Kaspersky Endpoint Security, one of the following operating systems must be installed on the device:

- Supported 32-bit operating systems:
  - Debian GNU/Linux 12.7, 12.8, 12.9, 12.10, 12.11, 12.12.
- Supported 64-bit operating systems:
  - AlmaLinux OS 8.6, 8.7, 8.8, 8.9.
  - AlmaLinux OS 9.4, 9.5, 9.6.
  - AlterOS® 2025.
  - Amazon™ Linux 2023.
  - Astra Linux Common Edition 2.12.
  - Astra Linux Special Edition RUSB.10015-01 (operational update 1.5).
  - Astra Linux Special Edition RUSB.10015-01 (operational update 1.6).
  - Astra Linux Special Edition RUSB.10015-01 (operational update 1.7).
  - Astra Linux Special Edition RUSB.10015-01 (operational update 1.8).
  - Astra Linux Special Edition RUSB.10015-03 (operational update 7.6).
  - Astra Linux Special Edition RUSB.10015-16 (release 1) (operational update 1.6).
  - Astra Linux Special Edition RUSB.10015-17 (operational update 1.7.3)

- Astra Linux Special Edition RUSB.10015-37 (operational update 7.7).

  Using Kaspersky Endpoint Security in Light Agent mode to protect virtual environments is not supported on devices running Astra Linux operating systems in mandatory access control and closed software environment modes.

The Astra Linux operating system in the "Mobile" mode is only supported on tablet computers (tablets) in desktop mode.

- CentOS 7.2, 7.3, 7.4, 7.5, 7.6, 7.7, 7.8, 7.9.
- CentOS Stream 8.
- CentOS Stream 9.
- CentOS Stream 10.
- Debian GNU/Linux 12.7, 12.8, 12.9, 12.10, 12.11, 12.12.
- Debian GNU/Linux 13.0, 13.1, 13.2.
- EMIAS 1.0.
- EulerOS 2.0 SP10.
- Fedora Linux 41.
- Kylin Desktop OS V10 SP1.
- Linux Mint 21.3.
- Linux Mint 22.2.
- Mostech 12 release 2021.1.
- openSUSE Leap 15.6.
- Oracle Linux 7.3, 7.4, 7.5, 7.6, 7.7, 7.8, 7.9.
- Oracle Linux 8.5, 8.6, 8.7, 8.8, 8.9.
- Oracle Linux 9.4, 9.5, 9.6.
- Red Hat Enterprise Linux 7.2, 7.3, 7.4, 7.5, 7.6, 7.7, 7.8, 7.9.
- Red Hat Enterprise Linux 8.5, 8.6, 8.7, 8.8, 8.9.
- Red Hat Enterprise Linux 9.4, 9.5, 9.6.
- Red Hat Enterprise Linux 10.0, 10.1.
- Rocky Linux 8.6, 8.7, 8.8, 8.9.

- Rocky Linux 9.4, 9.5, 9.6.
- SberLinux 8.10, 9.1, 9.5, 9.6.
- SberOS 3.4.0, 3.5.0.
- SUSE Linux Enterprise Server 12.5, 12.6, 12.7.
- SUSE Linux Enterprise Server 15.4, 15.5, 15.6, 15.7.
- Ubuntu® 22.04 LTS.
- Ubuntu 24.04 LTS.
- ALT Education 10.
- ALT Education 11.
- ALT Workstation 11.
- ALT Server 11.
- ALT SP Workstation release 10.
- ALT SP Server release 10.
- Atlant, Alcyone build, version 2022.02.
- GosLinux 7.2.
- M OS 12 Server release 2021.1.
- Mos OS 15.5 Arbat.
- MSVSphere 9.4 Workstation.
- MSVSphere 9.4 Server.
- MES OS 12 V release 2021.1.
- MES OS 12 Panel release 2021.1.
- MES OS 12 Desktop release 2021.1.
- OSnova 2.14.
- OSnova 3.0.5.
- RED OS® 7.3.
- RED OS 8.0.
- ROSA "Cobalt" 7.9 Workstation.
- ROSA "Cobalt" 7.9 Server.

- ROSA "Chrome" 12 Workstation.
- ROSA "Chrome" 12 Server.
- SintezM-Client 8.6.
- SintezM-Server 8.6.

- 64-bit operating systems for the Arm architecture:
  - Astra Linux Special Edition RUSB.10152-02 (operational update 4.7).
  - CentOS Stream 9.
  - EulerOS 2.0 SP10.
  - SUSE Linux Enterprise Server 15.4, 15.5, 15.6, 15.7.
  - Ubuntu 22.04 LTS.
  - ALT SP Workstation release 10.
  - ALT SP Server release 10.
  - RED OS 8.0.

  Using Kaspersky Endpoint Security in Light Agent mode to protect virtual environments is not supported on operating systems for the Arm architecture.

Due to technical limitations of fanotify, the application does not support the following file systems: autofs, binfmt_misc, cgroup, configfs, debugfs, devpts, devtmpfs, fuse, fuse.gvfsd-fuse, gfs2, gvfs, hugetlbfs, mqueue, nfsd, proc, parsecfs, pipefs, pstore, usbfs, rpc_pipefs, securityfs, selinuxfs, sysfs, tracefs.

Additional software requirements for Light Agent mode

Kaspersky Endpoint Security can be used as a Light Agent as part of Kaspersky Security for Virtualization Light Agent 6.4. You can view the virtual infrastructure requirements of the application in Light Agent mode in Kaspersky Security for Virtualization Light Agent Help.

The software and hardware requirements of Kaspersky Endpoint Security apply with the specified limitations to virtual machines with Kaspersky Endpoint Security in Light Agent mode.

The BIOS on a protected virtual machine must support the SMBIOS specification version 2.1 or later.

The following packages must be installed on the virtual machines that you want to protect, depending on the virtual infrastructure in which Kaspersky Hybrid Cloud Security for Virtualization Light Agent is deployed:

- In a Microsoft Hyper-V infrastructure, the Integration Services package must be installed on the virtual machines.
- In a VMware vSphere infrastructure, the VMware Tools package must be installed on the virtual machines.

- In a XenServer infrastructure, XenTools must be installed on the virtual machines.
- In a HUAWEI FusionSphere infrastructure, the HUAWEI Tools package must be installed on the virtual machines.
- In an infrastructure based on KVM, OpenStack, VK Private Cloud, TIONIX Cloud Platform, Astra Linux, ALT Server Virtualization, Basis.Dynamix, or Basis Dynamix Standard, QEMU Guest Agent must be installed on virtual machines.

Supported versions of Kaspersky Security Center

Kaspersky Endpoint Security is compatible with the following Kaspersky Security Center versions:

- Kaspersky Security Center Windows 14, 14.2, 15.1 Kaspersky Endpoint Security can be administered through Administration Console using the MMC management plug-in and through Kaspersky Security Center Web Console using the web management plug-in.
- Kaspersky Security Center Linux 15.1, 15.2, 15.3, 15.4, 16.0, 16.1, 16.2 The administration web plug-in can be used to administer Kaspersky Endpoint Security through Kaspersky Security Center Web Console.

If Kaspersky Endpoint Security is used in Light Agent mode to protect virtual environments (as part of Kaspersky Security for Virtualization Light Agent), we recommend to manage the application using one of the following versions of Kaspersky Security Center.

- Kaspersky Security Center Windows 14.2, 15.1.
- Kaspersky Security Center 15.4, 16.0, 16.1, 16.2.

Kaspersky Security Center Network Agent is required to manage Kaspersky Endpoint Security through Kaspersky Security Center.

> Kaspersky Security Center Network Agent is not included in the Kaspersky Endpoint Security distribution kit. You can download it on the application download page in the **Kaspersky Security Center** section.

If you are using application integration with the Kaspersky Endpoint Detection and Response component of the Kaspersky Anti Targeted Attack Platform platform, we recommend using the following versions of Kaspersky Security Center to manage the application:

- Kaspersky Security Center Windows 14.2, 15.1.
- Kaspersky Security Center Linux 15.3, 15.4, 16.0, 16.1, 16.2.

If you are using application integration with the Kaspersky Endpoint Detection and Response Optimum component, we recommend using the following versions of Kaspersky Security Center to manage the application:

- Kaspersky Security Center Windows 15.1.
- Kaspersky Security Center Linux 15.3, 15.4, 16.0, 16.1, 16.2.

Supported versions of solutions on KATA and OSMP platforms

Kaspersky Endpoint Security is compatible with the following solutions based on the Kaspersky Anti Targeted Attack Platform:

- Kaspersky Anti Targeted Attack Platform 6.0 (Kaspersky Endpoint Detection and Response (KATA), Kaspersky Network Detection and Response (KATA), Sandbox).
- Kaspersky Anti Targeted Attack Platform 6.1 (Kaspersky Endpoint Detection and Response (KATA), Kaspersky Network Detection and Response (KATA), Sandbox).
- Kaspersky Anti Targeted Attack Platform 7.0 (Kaspersky Endpoint Detection and Response (KATA), Kaspersky Network Detection and Response (KATA), Sandbox).
- Kaspersky Anti Targeted Attack Platform 7.1 (Kaspersky Endpoint Detection and Response (KATA), Kaspersky Network Detection and Response (KATA), Sandbox).
- Kaspersky Anti Targeted Attack Platform 8.0 (Kaspersky Network Detection and Response (KATA) and Sandbox).

For more details about the Kaspersky Anti Targeted Attack Platform solution, please refer to the Kaspersky Anti Targeted Attack Platform Help.

Kaspersky Endpoint Security is compatible with Endpoint Detection and Response Expert (on-premise) 8.0 on the Open Single Management Platform (hereinafter also OSMP).

For more information about Kaspersky Endpoint Detection and Response Expert (on-premise) 8.0, see the Kaspersky Endpoint Detection and Response Expert (on premise) Help.

What's new

Kaspersky Endpoint Security now boasts the following features and improvements:

- Introducing a new functional component, Mail Threat Protection. This component scans the attachments of incoming and outgoing email messages for viruses and other threatening applications.
- Introducing a new functional component, BadUSB Attack Prevention. This component prevents the connection of infected USB devices that imitate a keyboard to a client device.
- The Device Control component has been improved. Now you can grant temporary access to blocked devices upon user request.
- Improvements to the Exploit Prevention component. Now you can configure component-specific scan exclusions for objects.
- Improvements to the updatable kernel module:
  - Now the updatable kernel module lets you optimize file operation interception. Application performance is improved by using a cache of files and processes that do not need to be scanned.
  - Now, by using the updatable kernel module, you can configure global exclusions in a more granular way. If you are using the interception mechanism based on the fanotify technology, the specified mount points are entirely excluded from the interception of file operations. Using the updatable kernel module allows you to exclude specific local or remote directories mounted on the device.
- The EDR (KATA) component, which provides integration with Kaspersky Endpoint Detection and Response (KATA), has been renamed to EDR Expert (OSMP). This component also provides the Kaspersky Endpoint Detection and Response Expert (on-premise) Integration The integration task has been renamed to *Kaspersky Endpoint Detection and Response Expert (on-premise) Integration* (KATAEDR, ID: 24).
- Now you can set up integration with Kaspersky Endpoint Detection and Response Expert (on-premise), which is an enterprise cyber security solution that allows defending against most cybersecurity risks and cover the main scenarios of threat spread. Components of Kaspersky Endpoint Detection and Response Expert (on-premise) are deployed on the Open Single Management Platform (OSMP). Integration with Kaspersky Endpoint Detection and Response Expert (on-premise) supports all the capabilities of Kaspersky Endpoint Detection and Response (KATA) Integration, as well as new features:
  - Starting a YARA scan. During a *YARA scan*, Kaspersky Endpoint Security uses YARA files to search for signatures of malicious activity on a device.
  - Collection of forensics, that is, digital data that may be useful when investigating incidents involving cybercrime and data leaks.
  - Sending extended data about events on devices (telemetry) to the telemetry server on the OSMP platform.
  - Sending only telemetry with an Indicator of Attack (IOA). You can also now configure custom filters in the Web Console policy.

    - Activation of the EDR Expert (OSMP) component, which provides integration with Kaspersky Endpoint Detection and Response Expert (on-premise) and with Kaspersky Endpoint Detection and Response (KATA), by adding a license key.

    - Selecting an integration mode in the settings of the *Kaspersky Endpoint Detection and Response Expert (on-premise) Integration* task on the command line or in policy properties in the Web Console.

- The application can be used in Endpoint Detection and Response Agent mode to support Kaspersky Detection and Response solutions working together with third-party anti-virus solutions on protected devices. In this mode, the device is not protected by the standard protection and control components of Kaspersky Endpoint Security. A third-party application is responsible for the standard protection of the device.

- You can create trace files when the application is started for the first time after installation. Now you can enable trace file creation at the first start of the application in the Web Console, the Administration Console, or in the settings of the initial configuration file.

- The policy management interface in the Web Console has been updated. The structure of sections in the policy has been reworked to help find the necessary functions quicker.

- Now you can select the traffic interception mode: the eBPF technology or the iptables utility.

- Now you can select the telemetry source (only eBPF or eBPF plus auditd). For auditd, you can also select an operating mode (exclusive mode or multicast mode).

- Now you can select the mode for sending files and directories to Sandbox for scanning: manual, automatic only, automatic and manual.

- More functionality is available when using the application in Light Agent mode:

    - A system event interception mechanism based on the updatable kernel module is available.

    - The Exploit Prevention functional component is available.

    - Threat detection has been improved.

- Now you can use the Kaspersky Private Security Network (KPSN) directly without using the KSN proxy service on the Administration Server.

- Now you can create out-of-office policies in the Web Console and Administration Console. Out-of-office policies come into effect when a device leaves the organization's network.

- When viewing and exporting the list of mount points in the Web Console or Administration Console, or when viewing this list on the command line, information about the mount point being found in a namespace is now also displayed.

- We improved the alternative mechanism for getting system telemetry in the Behavior Detection component on 64-bit operating systems with kernel versions 4.18 or later with eBPF support, which allows freeing up the resources of the auditd kernel audit subsystem.

- Now you can include the following information in telemetry data when integrating with Kaspersky Managed Detection and Response:
  - Indication of the event occurring in a container
  - ID of the container namespace
  - Container name
- The list of supported operating systems has been updated.

Preparing to install Kaspersky Endpoint Security

General actions

Before starting installation of Kaspersky Endpoint Security, you need to perform the following actions:

- Check that your device meets the hardware and software requirements of the application.
- Be sure third-party anti-virus software is not installed on your device.
- Be sure that Kaspersky Endpoint Agent for Linux is not installed on your device. If Kaspersky Endpoint Agent for Linux is installed, during the installation process you will see a message about the need to manually remote it.
- If you plan to manage Kaspersky Endpoint Security using Kaspersky Security Center, prepare the installation of Kaspersky Security Center Network Agent on the device (for details, see the Kaspersky Security Center Help).

  If Kaspersky Endpoint Security is used in Light Agent mode to protect virtual environments, Kaspersky Security Center must be used to manage the application.

- If you want to use the SELinux access control system, you need to make sure that the semanage utility is installed on the operating system. If the utility is not installed, install the policycoreutils-python or policycoreutils-python-utils package, depending on the package manager.
- If you want to use the graphical user interface, you need to make sure that the dependencies of the GUI package are satisfied on your device. If the device is in an isolated network segment and does not have access to the repositories of the package manager, we recommend checking the list of dependencies on a reference device (libice6, libsm6, libx11-6, libx11-xcb1, libxcb-icccm4, libxcb-image0, libxcb-keysyms1, libxcb-randr0, libxcb-render-util0, libxcb-render0, libxcb-shape0, libxcb-shm0, libxcb-sync1, libxcb-xfixes0, libxcb-xinerama0, libxcb-xkb1, libxcb1, libxi6, libxml2, zlib1g), and then downloading and distributing the packages to all devices before installing the GUI.
- If you want to use the graphical user interface, you need to make sure that the Zenity utility is installed on the operating system.
- On devices with operating systems that do not support fanotify technology, make sure that the following are installed:
  - Packages for compiling applications and running tasks (gcc, binutils, glibc, glibc-devel, make)
  - Package with header files of the operating system kernel for compiling Kaspersky Endpoint Security modules
- On devices running the SUSE Linux Enterprise Server 15 operating system, the insserv-compat package must be installed.

- By default, Astra Linux operating systems block ptrace (Disable ptrace capability), which may affect the operation of Kaspersky Endpoint Security. For Kaspersky Endpoint Security to work correctly, unblock ptrace when installing Astra Linux. If Astra Linux is already installed, see the Astra Linux Help Center website for instructions on how to enable/disable this mode (**Configuring protection and blocking mechanisms** in the **Blocking ptrace** section).

  You can disable ptrace tracing by specifying the kernel parameter-value pair `kernel.yama.ptrace_scope=3`. In this case, the following will happen in the application:

  - Creating dump files of the kesl process when the application crashes will not be possible.
  - The Behavior Detection component will not be able to receive the environment settings of processes.
  - On operating systems with a kernel version higher than 5.7, the Application Control component will not be able to read command line arguments and process environment variables, because reading /proc/pid/syscall and /proc/pid/mem is prohibited. On operating systems with kernel version 5.0, the Application Control component will not function properly.
  - The process memory and kernel memory scan will not work in scan tasks, since reading / proc / pid / mem is prohibited.
  - YARA scanning of process memory in mandatory access control mode is not guaranteed, because reading /proc/pid/mem is not allowed.

- For the Firewall Management, Web Threat Protection and Network Threat Protection components to work, the iptables utility needs to be installed on your device.

- For the Kaspersky Endpoint Security MMC management plug-in to work, Microsoft® Visual C++® 2015 Redistributable Update 3 RC (see https://www.microsoft.com/en-us/download/details.aspx?id=52685) must be installed on device where Kaspersky Security Center Administration Server is installed.

- For the application to run correctly, make sure that the root account is the owner of the following directories and that only the owner has the right to write to them: /var, /var/opt, /var/opt/kaspersky, /var/log/kaspersky, /opt, /opt/kaspersky, /usr/bin, /usr/lib, /usr/lib64.

- Make sure that file descriptor limits recommended by the operating system vendor are configured in the operating system. To check the limit, run the command `cat /proc/sys/fs/file-max`. When the application is running, the operating system may use significantly more descriptors. In general, we recommend disabling the file limit by specifying `fs.file-max=9223372036854775807` in the /etc/sysctl.conf file. After changing the value of this setting, you must restart the operating system.

Additional actions before installing Kaspersky Endpoint Security in Light Agent mode

If you plan to use Kaspersky Endpoint Security in Light Agent mode to protect virtual environments (as part of Kaspersky Hybrid Cloud Security for Virtualization Light Agent), you must perform the following additional actions before starting the installation of Kaspersky Endpoint Security:

- Make sure that the virtual machines that you want to protect satisfy the general requirements for Light Agent mode.

- Make sure that the settings of network equipment or software that monitor traffic between virtual machines allow network traffic to pass through the ports that are used for interaction between Kaspersky Endpoint Security in Light Agent mode and other components of Kaspersky Hybrid Cloud Security for Virtualization Light Agent. The ports used by the Light Agent are listed in the Kaspersky Security for Virtual Environment Light Agent Help.

Installation and initial configuration of Kaspersky Endpoint Security

You need to prepare for installation before installing Kaspersky Endpoint Security.

The scenarios below describe how to install and perform initial configuration of Kaspersky Endpoint Security, how to install the Kaspersky Security Center Network Agent and Kaspersky Endpoint Security management plug-ins. The installation scenario depends on the mode in which you plan to use Kaspersky Endpoint Security.

After Kaspersky Endpoint Security is installed, you cannot change the application usage mode.

Standard mode

If you plan to use Kaspersky Endpoint Security in Standard mode, the installation procedure involves the following steps:

1. **Installation and initial configuration of the Network Agent**

   If you plan to manage Kaspersky Endpoint Security using Kaspersky Security Center, install and configure Kaspersky Security Center Network Agent on the protected device.

2. **Installing the Kaspersky Endpoint Security management plug-in**

   If you plan to manage Kaspersky Endpoint Security using Kaspersky Security Center, install the Kaspersky Endpoint Security management plug-in. Depending on the console used to manage Kaspersky Security Center, the following management plug-ins are used:

   - The Kaspersky Endpoint Security management web plug-in lets you manage the application using Kaspersky Security Center Cloud Console and Kaspersky Security Center Web Console. The web plug-in is installed on the device that has the Kaspersky Security Center Web Console installed.
   - The Kaspersky Endpoint Security MMC management plug-in lets you manage the application using Kaspersky Security Center Administration Console. The MMC plug-in is installed on the device where Kaspersky Security Center Administration Console is installed.

3. **Installing application packages and graphical user interface**

   Kaspersky Endpoint Security is distributed in the DEB and RPM packages. The application and the graphical user interface of the application are supplied as different packages. Install Kaspersky Endpoint Security and, if necessary, the graphical interface from packages in the appropriate format.

   You can perform installation in one of the following ways:

   - Using Kaspersky Security Center.
   - Using the command line.

4. **Initial configuration of Kaspersky Endpoint Security**

   The application needs initial configuration to prepare it for operation and enable the protection of the client device.

If you installed Kaspersky Endpoint Security using Kaspersky Security Center, the initial configuration was performed automatically during installation in accordance with the parameters specified in the installation package. After completing the installation, go through the Getting started procedure.

If you installed Kaspersky Endpoint Security using the command line, run the Initial Configuration Wizard and perform the initial configuration interactively or automatically.

If initial configuration of the application has not been completed on a device, you cannot use or update the application on that device.

Light Agent mode

Using Kaspersky Endpoint Security in Light Agent mode to protect virtual environments is not supported on operating systems based on the Arm architecture.

If you plan to use Kaspersky Endpoint Security in Light Agent mode to protect virtual environments, the installation procedure involves the following steps:

1. **Installation and initial configuration of the Network Agent**

   Install and configure Kaspersky Security Center Agent on virtual machines and virtual machine templates.

   If you are installing Network Agent on a template that will be used to create temporary virtual machines, it is recommended to configure settings that allow you to optimize performance on temporary virtual machines. For more details about installing on a virtual machine template, refer to the Help for Kaspersky Security for Virtualization Light Agent.

2. **Installing the Kaspersky Endpoint Security management plug-in**

   Install a Kaspersky Endpoint Security management plug-in. Depending on the console used to manage Kaspersky Security Center, the following management plug-ins are used:

   - The Kaspersky Endpoint Security management web plug-in lets you manage the application using Kaspersky Security Center Cloud Console and Kaspersky Security Center Web Console. The web plug-in is installed on the device that has Kaspersky Security Center Web Console installed.
   - The Kaspersky Endpoint Security MMC management plug-in lets you manage the application using Kaspersky Security Center Administration Console. The MMC plug-in is installed on the device where Kaspersky Security Center Administration Console is installed.

3. **Installation of application packages and initial configuration of Kaspersky Endpoint Security**

   Kaspersky Endpoint Security is distributed in the DEB and RPM packages. Install Kaspersky Endpoint Security from a package of the required format. The application and the graphical user interface of the application are supplied as different packages.

   The graphical interface of the application is not supported if Kaspersky Endpoint Security is used in Light Agent mode to protect virtual environments.

   You can install the application in one of the following ways:

   - Using Kaspersky Security Center.

Before starting the installation, you need to specify the initial configuration settings in the installation package parameters or in the configuration file that is included in the installation package.

You must select the Light Agent mode (`KSVLA_MODE=Yes` in the configuration file). If you are installing Kaspersky Endpoint Security on a template from which temporary virtual machines will be created, we recommend to also enable VDI protection mode to optimize the performance of the application on temporary virtual machines (`VDI_MODE=Yes` in the configuration file).

The setting values are case-sensitive.

- Using the command line. If installation is performed using the command line, the application usage mode is selected during initial configuration in interactive or automatic mode.

4. **Initial configuration of Kaspersky Endpoint Security**

The application needs initial configuration to prepare it for operation and enable the protection of the client device.

If you installed Kaspersky Endpoint Security using Kaspersky Security Center, the initial configuration was performed automatically during installation in accordance with the parameters specified in the installation package. After completing the installation, go through the Getting started procedure.

If you installed Kaspersky Endpoint Security using the command line, run the Initial Configuration Wizard and perform the initial configuration interactively or automatically. During initial configuration, select Light Agent mode in one of the following ways:

- Enter `yes` at the "Using the application in Light Agent mode" step of the Initial Configuration Wizard.
- Specify the `KSVLA_MODE=Yes` setting in the initial configuration file.

The setting value is case-sensitive.

If you install Kaspersky Endpoint Security on a template that will be used to create temporary virtual machines, it is recommended to also configure the setting for optimizing the operation on temporary virtual machines. For more details about installing on a virtual machine template, refer to the Help for Kaspersky Security for Virtualization Light Agent.

If initial configuration of the application has not been completed on a device, you cannot use or update the application on that device.

Endpoint Detection and Response Agent mode

We recommend performing the installation after installing third-party anti-virus applications on the device.

If you plan to use Kaspersky Endpoint Security in Endpoint Detection and Response Agent mode, the installation procedure involves the following steps:

1. **Installation and initial configuration of the Network Agent**

If you plan to manage Kaspersky Endpoint Security using Kaspersky Security Center, install and configure Kaspersky Security Center Network Agent on the protected device.

2. **Installing the Kaspersky Endpoint Security management plug-in**

   If you plan to manage Kaspersky Endpoint Security using Kaspersky Security Center, install the Kaspersky Endpoint Security management plug-in. Depending on the console used to manage Kaspersky Security Center, the following management plug-ins are used:

   - The Kaspersky Endpoint Security management web plug-in lets you manage the application using Kaspersky Security Center Cloud Console and Kaspersky Security Center Web Console. The web plug-in is installed on the device that has Kaspersky Security Center Web Console installed.
   - The Kaspersky Endpoint Security MMC management plug-in lets you manage the application using Kaspersky Security Center Administration Console. The MMC plug-in is installed on the device where Kaspersky Security Center Administration Console is installed.

3. **Installation of application packages and initial configuration of Kaspersky Endpoint Security**

   Kaspersky Endpoint Security is distributed in the DEB and RPM packages. Install Kaspersky Endpoint Security from a package of the required format. The application and the graphical user interface of the application are supplied as different packages.

   You can install the application in one of the following ways:

   - Using Kaspersky Security Center.

     Before starting the installation, you need to specify the initial configuration settings in the installation package parameters or in the configuration file that is included in the installation package.

     You need to select the Endpoint Detection and Response Agent mode (`ENDPOINT_AGENT_MODE=Yes` in the configuration file).

     > The setting value is case-sensitive.

   - Using the command line. If installation is performed using the command line, the application usage mode is selected during initial configuration in interactive or automatic mode.

4. **Initial configuration of Kaspersky Endpoint Security**

   The application needs initial configuration to prepare it for operation and enable the protection of the client device.

   If you installed Kaspersky Endpoint Security using Kaspersky Security Center, the initial configuration was performed automatically during installation in accordance with the parameters specified in the installation package. After completing the installation, go through the Getting started procedure.

   If you installed Kaspersky Endpoint Security using the command line, run the Initial Configuration Wizard and perform the initial configuration interactively or automatically. During initial configuration, select Endpoint Detection and Response Agent mode in one of the following ways:

   - Enter `yes` at the "Using the application in Endpoint Detection and Response Agent mode" step of the Initial Configuration Wizard.
   - Specify the `ENDPOINT_AGENT_MODE=Yes` setting in the initial configuration file.

     > The setting value is case-sensitive.

   > If initial configuration of the application has not been completed on a device, you cannot use or update the application on that device.

The installation and initial configuration of Kaspersky Security Center Network Agent

Network Agent facilitates the client device's connection with the Kaspersky Security Center Administration Server. It must be installed on every client device that will be connected to Kaspersky Security Center, the centralized remote management system.

Before you begin installing the Network Agent on Linux devices, you must perform some preparatory steps. For instructions on how to prepare devices for installing Network Agent, please refer to the Kaspersky Security Center Help. The procedure depends on the operating system.

You can perform the installation and initial configuration of Network Agent:

- Remotely from the administrator's workstation using the Kaspersky Security Center Web Console or the Administration Console. The Network Agent installation package is used for remote installation.
- Using the command line:
  - In silent mode with an answer file. An answer file is a text file that contains a custom set of settings for the installation and initial configuration of Network Agent. For a description of installation options and initial configuration of Network Agent, please refer to the Kaspersky Security Center Help (the "Installing Network Agent for Linux in silent mode (with an answer file)" section).
  - Interactively from an RPM or DEB package depending on your package manager. In this case, after installation, you need to perform the initial configuration of the Network Agent using a script.

For details on how to install Network Agent, refer to the Kaspersky Security Center Help system.

Installing Kaspersky Endpoint Security management plug-ins

The following Kaspersky Endpoint Security management plug-ins are used to manage Kaspersky Endpoint Security using Kaspersky Security Center:

- The Kaspersky Endpoint Security management web plug-in lets you manage the application using Kaspersky Security Center Web Console and Kaspersky Security Center Cloud Console.
- The Kaspersky Endpoint Security administration MMC plug-in lets you manage the application using Kaspersky Security Center Administration Console.

You can install administration plug-ins for different versions of Kaspersky Endpoint Security simultaneously. This allows you to manage the application by using the policies created with different administration plug-in versions.

If you use the Kaspersky Security Center Administration Console to manage the application, you can also convert policies and tasks created using earlier versions of the management plug-in to newer versions.

Installing Kaspersky Endpoint Security web plug-in

The Kaspersky Endpoint Security management web plug-in must be installed on the device that has the Kaspersky Security Center Web Console installed. The functionality of the web plug-in is available to all administrators who have access to Kaspersky Security Center Web Console in a browser.

You can install the web plug-in as follows:

- Using the Quick Start Wizard for Kaspersky Security Center Web Console.

  Kaspersky Security Center Web Console automatically prompts you to run the Quick Start Wizard when connecting Kaspersky Security Center Web Console to the Administration Server for the first time. You can also run the Initial Configuration Wizard in the Kaspersky Security Center Web Console interface (**Device discovery and deployment → Deployment and assignment → Quick Start Wizard**). The Quick Start Wizard can also check if the installed web plug-ins are up to date and download the necessary updates. For more information on the Initial Configuration Wizard for Kaspersky Security Center Web Console, please refer to Kaspersky Security Center Help section.

- Manually, using a distribution kit from the list of Kaspersky Web plug-ins or from an external source.

To install the Kaspersky Endpoint Security web plug-in manually:

1. In the main window of the Kaspersky Security Center Web Console, select **Settings → Web plug-ins**.

   A list of installed web plug-ins opens.

2. Start the installation of the Kaspersky Endpoint Security web plug-in by one of the following ways:

   - Installation from the list of Kaspersky web plug-ins:

     a. Click the **Add** button.

        A list of all available Kaspersky Web plug-ins opens. The list is updated automatically after new versions of web plug-ins are released.

     b. Find the **Kaspersky Endpoint Security <version number> for Linux** web plug-in in the list and click its name.

     c. In the window that opens with a description of the web plug-in, click the **Install plug-in** button.

     d. Wait for the installation to complete and click **OK** in the information window.

     e. This opens the **Web plug-in settings** window.

        > In Kaspersky Security Center Web Console 14.2, you need to refresh the browser page to open the **Web plug-in settings** window.

     f. Wait for the installation to complete and click **OK** in the information window.

- Installing a web plug-in from a third-party source (archives required for installing web plug-ins are included in the distribution kit or can be downloaded from the Kaspersky website):

  a. Click the **Add from file** button.

  b. In the window that opens, specify the path to the ZIP archive with the distribution kit for the web plug-in and the path to the signed file in TXT format. This file is in the archive with the web plug-in.

  c. Click the **Add** button.

  d. Wait for the installation to complete and click **OK** in the information window.

  e. This opens the **Web plug-in settings** window.

  > In Kaspersky Security Center Web Console 14.2, you need to refresh the browser page to open the **Web plug-in settings** window.

  f. Wait for the installation to complete and click **OK** in the information window.

The new plug-in is displayed in the list of installed web plug-ins (**Settings** → **Web Plug-ins**).

> If you select a language that is not included in Kaspersky Endpoint Security distribution package in the properties of Kaspersky Security Center Administration Server, the License Agreement and the entire Kaspersky Security Center Web Console interface will be displayed in English.

Installing Kaspersky Endpoint Security MMC plug-in

The Kaspersky Endpoint Security management MMC plug-in must be installed on the same device where the Kaspersky Security Center Administration Console is installed.

> Before installing Kaspersky Endpoint Security MMC management plug-in, make sure that Kaspersky Security Center and Redist C++ 2015 (Microsoft Visual C++ 2015 Redistributable) are installed.

To install the MMC plug-in:

on the device where the Kaspersky Security Center Administration Console is installed, run the executable file klcfginst.msi.

The file is included in the Kaspersky Endpoint Security distribution kit.

After installation, the MMC management plug-in is displayed in the list of installed MMC management plug-ins in the properties of the Kaspersky Security Center Administration Server.

To view the list of installed management MMC plug-ins:

1. In the Kaspersky Security Center Administration Console tree, select the **Administration Server <server name>** node and open the Administration Server properties window in one of the following ways:

   - using the **Properties** item in the **Administration Server <server name>** node context menu;
   - by clicking the **Administration Server properties** link located in the workspace of the **Administration Server <server name>** node in the **Administration Server** section.

2. In the list on the left, in the **Advanced** section, select the **Information about the installed application management plug-ins** section.

   In the right part of the window, the list of installed administration plug-ins displays the administration MMC plug-in for Kaspersky Endpoint Security: **Kaspersky Endpoint Security <version number> for Linux**.

Installing and initially configuring the application using Kaspersky Security Center

You can install Kaspersky Endpoint Security on a client device remotely from the administrator's workstation using the Kaspersky Security Center Web Console or the Administration Console.

Installation using Kaspersky Security Center involves the following steps:

1. Creating an installation package.

   For the remote installation, Kaspersky Endpoint Security installation package is used. Kaspersky Endpoint Security installation package is common for all supported operating systems and processor architecture types. You can create the installation package using the Kaspersky Security Center Web Console or the Administration Console.

   You can specify the initial configuration settings of the application in the properties of the installation package or in the autoinstall.ini configuration file, which is included in the installation package.

   > You must manage initial configuration settings of the application if you plan to use Kaspersky Endpoint Security in Light Agent mode to protect virtual environments (as part of the Kaspersky Security for Virtualization Light Agent solution) or in Endpoint Detection and Response Agent mode. The application is used in standard mode by default.

   If you plan to use the Kaspersky Endpoint Security application in Basic mode or Endpoint Detection and Response Agent mode, you can add the following to the installation package while creating it:

   - License key for automatic activation of the application during installation
   - Pre-downloaded application databases to avoid having to update the databases after installation

   You can also activate the application and update the databases later, as part of the getting started procedure.

   > If Kaspersky Endpoint Security is used in Light Agent mode to protect virtual environments, then activation of the application during installation and automatic license key distribution are not supported. If Kaspersky Endpoint Security receives information about the license from the Protection Server after connecting to the SVM; there is no need to activate Kaspersky Endpoint Security separately.

2. Deploying the Kaspersky Endpoint Security application on devices in the corporate network.

   Kaspersky Security Center Web Console supports the following main deployment methods:

   - Installing the application using the Protection Deployment Wizard.
   - Installing the application using the remote installation task.

   The Kaspersky Security Center Administration Console supports the following main deployment methods:

   - Installing the application using the Remote Installation Wizard.
   - Installing the application using the remote installation task.

   For a description of the deployment procedures, see the Kaspersky Security Center Help.

   If necessary, you can view the application remote installation log by using remote diagnostics of the Kaspersky Security Center client device.

3. Getting started.

   Before using the application, you need to complete the initial configuration of the application and prepare the application for operation.

   If initial configuration of the application has not been completed on a device, you cannot use or update the application on that device.

To use Kaspersky Security Center to manage Kaspersky Endpoint Security installed on client devices, you need to put these devices in administration groups. Before starting Kaspersky Endpoint Security installation, you can create Kaspersky Security Center administration groups to which you want to move the devices with Kaspersky Endpoint Security installed, and configure the rules to automatically move the devices to these administration groups. If rules for moving devices to the administration groups are not configured, Kaspersky Security Center moves all the devices that have the Administration Agent installed and are connected to Administration Server to the **Unassigned devices** list. In this case, you need to manually move computers to the administration groups (refer to the Kaspersky Security Center Help for details).

Creating an installation package in the Web Console

In Kaspersky Security Center Web Console, you can create an installation package in one of the following ways:

- From an archive file that you have prepared previously.
- From a distribution kit hosted on Kaspersky servers.

If you plan to use Kaspersky Endpoint Security in Light Agent mode to protect virtual environments or in Endpoint Detection and Response Agent mode, you need to specify the mode of the application in the initial configuration settings. You can specify the initial configuration settings of the application in the properties of the created installation package on the **Settings** tab or in the configuration file, which is included in the installation package.

To prepare an archive for creating an installation package:

1. Download the kesl.zip archive from the application download page. It is located in the **Kaspersky Endpoint Security for Linux** (**Additional distribution → Files for Product remote installation**).

2. Unpack the kesl.zip archive to a folder accessible to Kaspersky Security Center Administration Server. Place the distribution files, that correspond to the type of operating system where you want to install the application and the type of its package manager, to the same folder:

   - To install Kaspersky Endpoint Security:
     - kesl-12.4.0-<build number>.i386.rpm (for 32-bit operating systems with rpm)
     - kesl_12.4.0-<build number>_i386.deb (for 32-bit operating systems with dpkg)
     - kesl-12.4.0-<build number>.x86_64.rpm (for 64-bit operating systems with rpm)
     - kesl-12.4.0-<build number>_amd64.deb (for 64-bit operating systems with dpkg)
     - kesl-12.4.0-<build number>.aarch64.rpm (for 64-bit operating systems for the Arm architecture with rpm)
     - kesl-12.4.0-<build number>_arm64.deb (for 64-bit operating systems for the Arm architecture with dpkg)
   - To install the graphical user interface of the application:
     - kesl-gui-12.4.0-<build number>.i386.rpm (for 32-bit operating systems with rpm)
     - kesl-gui-12.4.0-<build number>_i386.deb (for 32-bit operating systems with dpkg)
     - kesl-gui-12.4.0-<build number>.x86_64.rpm (for 64-bit operating systems with rpm)
     - kesl-gui-12.4.0-<build number>_amd64.deb (for 64-bit operating systems with dpkg)
     - kesl-gui-12.4.0-<build number>.aarch64.rpm (for 64-bit operating systems for the Arm architecture with rpm)
     - kesl-gui-12.4.0-<build number>_arm64.deb (for 64-bit operating systems for the Arm architecture with dpkg)

   If you do not want to install the graphical user interface, do not add these files to the folder; this will make the installation package smaller.

   If Kaspersky Endpoint Security is used in Light Agent mode to protect virtual environments, the graphical user interface is not supported.

If you do not plan to install the graphical interface, disable it by editing the appropriate setting (`USE_GUI=No`) in the properties of the created installation package or in the autoinstall.ini configuration file. Otherwise, the installation will fail.

If you want to use the created installation package with different operating systems or package managers, place the files for all the types of operating systems and package managers that you need in the directory.

3. If you plan to use the Kaspersky Endpoint Security application in standard mode and want to use pre-downloaded application databases:

   a. Place prepared archives with databases for all your operating system types into the folder.

   b. In initial configuration settings, disable the database update task after installing the application. You can configure the relevant setting in the properties of the created installation package or in the autoinstall.ini configuration file (`UPDATE_EXECUTE=No`). The autoinstall.ini file is located in the folder where you unpacked the kesl.zip archive.

4. If you want to perform the initial configuration of the application using a configuration file, open the autoinstall.ini configuration file and edit it as necessary.

   If you plan to use Kaspersky Endpoint Security in Light Agent mode to protect virtual environments, you need to set `KSVLA_MODE=Yes` in the autoinstall.ini configuration file.

   If you plan to use Kaspersky Endpoint Security in Endpoint Detection and Response Agent mode, you need to set `ENDPOINT_AGENT_MODE=Yes` in the autoinstall.ini configuration file.

   The setting values in the autoinstall.ini file are case sensitive.

   You can also manage initial configuration settings later in the properties of the created installation package on the **Settings** tab.

5. Place all prepared files in an archive in ZIP, CAB, TAR, or TAR.GZ format with any name.

To create an installation package for Kaspersky Endpoint Security in Kaspersky Security Center Web Console:

1. In the main Web Console window, select one of the following sections:

   - **Device discovery and deployment** → **Deployment and assignment** → **Installation packages**.
   - **Operations** → **Repositories** → **Installation packages**.

   A list of installation packages available on the Administration Server opens.

2. Click the **Add** button.

   The wizard for creating an installation package will start.

3. Select a method that you want to use to create the installation package:

   - **Create an installation package from a file**. The installation package will be created from an archive that you have prepared in advance. You need to select this option if you plan to use Kaspersky Endpoint Security in Light Agent mode to protect virtual environments.
   - **Create installation package for a Kaspersky application**. The installation package will be created from a distribution package located on Kaspersky servers.

   Kaspersky Security Center Cloud Console does not allow creation of installation packages from a file.

4. Depending on the selected package creation method:

   - Specify the package name, click the **Browse** button, and specify the path to the archive that you have prepared for creating the installation package.

   - Select Kaspersky Endpoint Security distribution package. In the window on the right, read the information about the distribution package and click the **Download and create installation package** button. The installation package creation process starts.

5. Read the End User License Agreement concluded between you and Kaspersky, and the Privacy Policy describing the handling and transmission of data. To continue creating the installation package, you must confirm that you have read and accept the full terms of the End User License Agreement and the Privacy Policy.

6. Finish the wizard.

   The installation package will be created and added to the list of installation packages. Using the installation package, you can install the application on devices in the corporate network or update the application version.

7. If necessary, manage the initial configuration settings. To do this, open the properties of the installation package and go to **Settings** tab.

   Kaspersky Security Center Web Console versions earlier than 14.2 do not support providing initial configuration settings in the properties of the Kaspersky Endpoint Security installation package. Use the autoinstall.ini configuration file to configure settings.

Initial configuration settings in the Web Console

In Kaspersky Security Center Web Console, you can specify the initial configuration settings for Kaspersky Endpoint Security in the installation package properties on the **Settings** tab. The created installation packages are available in the main window of the Web Console in one of the following sections:

- **Device discovery and deployment** → **Deployment and assignment** → **Installation packages**.

- **Operations** → **Repositories** → **Installation packages**.

You can also specify initial configuration settings of the application in the configuration file that is included in the installation package.

Setting	Description
Language of events in KSC	Select the localization language for application events sent to Kaspersky Security Center: • **System** (default) to use the operating system locale. If the application cannot detect the locale of the operating system or this locale is not supported, English is used to localize events. • One of the languages supported by Kaspersky Endpoint Security. The application uses the UTF-8 encoding. The locale of the graphical interface and the application command line is taken from the `LANG` environment variable. If the application does not support this localization, it defaults to the English localization.
Activate the application	Select this check box if you want to activate the application during installation. In the displayed field, enter the activation code. This check box is cleared by default. You can also activate the application after installation. This setting applies only if the application is used in standard mode.
Update source	Select the update source for databases and application modules: • **Kaspersky update servers** (default). • **Kaspersky Security Center**. • **Other source in the local or global network**. If you select this option, enter the address of the update source in the field that opens. Applicable only if the application is being used in standalone mode or in Endpoint Detection and Response Agent mode.
Run database update task after installation	If this check box is selected, after the application is installed, the databases and application modules update task starts. This check box is selected by default. Applicable only if the application is being used in standalone mode or in Endpoint Detection and Response Agent mode.
Specify the proxy server settings	Select this check box if you use a proxy server for internet access. In the displayed field, enter the proxy server address in one of the following formats: • `[<connection protocol>://]<IP address of the proxy server>:<port>`, if no authentication is required to connect to the proxy server; • `[<connection protocol>://][<user name>:[<password>]@]<IP address of the proxy server>:<port>`, if authentication is required when connecting to the proxy server. Connecting to a proxy server over HTTPS is not supported. Applicable only if the application is being used in standalone mode or in Endpoint Detection and Response Agent mode.
Install kernel source	If this check box is selected, starting File Threat Protection automatically starts the compilation of the kernel module on operating systems that do not support fanotify. This check box is selected by default.

Setting	Description
Use the graphical user interface	Select this check box if you plan to install and use the application graphical interface. Files for installing the graphical interface must be added to the installation package. This check box is cleared by default. Applicable only if the application is being used in standalone mode or in Endpoint Detection and Response Agent mode.
Specify a user with the admin role	Select this check box to specify the user to which you want to assign the admin role. The Administrator role allows managing application settings and task settings in the graphical interface of the application and on the command line without using the `sudo` command. In the displayed field, enter the user name.
Configure SELinux automatically	If this check box is selected SELinux is automatically configured to work with Kaspersky Endpoint Security. This check box is selected by default.
Remove users from privileged groups	Select this check box to automatically remove users from the 'kesladmin' and 'keslaudit' privileged groups before installing the application. This check box is cleared by default. If the check box is selected and the 'nogroup' group does not exist, the installation fails and you are prompted to manually remove users from privileged groups.
Disable protection components and scan tasks for the first application startup after installation	Select this check box if, after completing the installation process, you want to run the application with protection components and scan tasks disabled. Installation with protection components disabled can be convenient, for example, to reproduce a problem in the operation of the application and create a trace file. If you enable the necessary components and tasks, the enabled components and tasks will continue to work after the application is restarted.
Enable tracing when the application is started for the first time after installation	Select the check box if you want to create a trace file when the application is started for the first time after installation. To create a trace, a kesl_startup.log file is automatically created in the /var/log/kaspersky/kesl/ directory. The size limit for regular application trace files does not apply to this file. Tracing stops after five minutes or after the File Threat Protection task is started.
Application mode	Select a mode for the application. • **Standard mode to protect workstations and servers** (default). If this option is selected, the application is used as a stand-alone application for protecting Linux workstations and servers. • **Endpoint Detection and Response Agent**. If this option is selected, the application is used to support Kaspersky Detection and Response solutions working together with third-party anti-virus solutions on protected devices. • **Light Agent for protecting virtual environments**. If this option is selected, the application is used in Light Agent mode for protecting virtual environments (as part of Kaspersky Security for Virtualization Light Agent).
Enable VDI protection mode	Select this check box to enable VDI protection mode. This is recommended if you are installing the application on a virtual machine template that will be used to create temporary virtual machines. This check box is cleared by default. The setting is applied only if the application is used in Light Agent mode.
The protected virtual machine is used as a server	The role of the virtual machine on which the application will be installed: server or workstation. By default, this check box is selected (the virtual machine is used in the virtual infrastructure as a server). The setting is applied only if the application is used in Light Agent mode.

Setting	Description
Interception mechanism	Select the system event interception mechanism to be used by the application: • **Fanotify technology** (default). If this option is selected, the application uses the fanotify technology for system event interception. • **Updatable kernel module**. If this option is selected, an updatable kernel module is installed during application installation. The application uses this module to intercept system events. This setting is applied only on devices running an operating system that supports the fanotify technology.
If the updatable kernel module fails to start	Select the action the application performs if the updatable kernel module fails to start: • **Use fanotify** (default). If this option is selected, the application switches to the fanotify technology for system event interception. • **Disable system event interception** If the application does not use system event interception, real-time file scanning is not performed, and the protection level of the device is reduced. This option is available if the **Updatable kernel module** interception mechanism is selected. This setting is applied only on devices running an operating system that supports the fanotify technology.

Creating an installation package in the Administration Console

Before creating an installation package for Kaspersky Endpoint Security, you need to prepare the files to be included in the package.

If you plan to use Kaspersky Endpoint Security in Light Agent mode to protect virtual environments or in Endpoint Detection and Response Agent mode, you need to specify the mode of the application in the initial configuration settings. You can specify the initial configuration settings when creating the installation package or in the properties of a created installation package in the **Settings** section, as well as in the configuration file that is included in the installation package.

To prepare files for creating an installation package:

1. Download the kesl.zip archive from the application download page. It is located in the **Kaspersky Endpoint Security for Linux** (**Additional distribution → Files for Product remote installation**).

2. Unpack the kesl.zip archive to a folder accessible to Kaspersky Security Center Administration Server. Place the distribution files, that correspond to the type of operating system where you want to install the application and the type of its package manager, to the same folder:

   - To install Kaspersky Endpoint Security:

     - kesl-12.4.0-<build number>.i386.rpm (for 32-bit operating systems with rpm)

     - kesl_12.4.0-<build number>_i386.deb (for 32-bit operating systems with dpkg)

     - kesl-12.4.0-<build number>.x86_64.rpm (for 64-bit operating systems with rpm)

     - kesl-12.4.0-<build number>_amd64.deb (for 64-bit operating systems with dpkg)

- kesl-12.4.0-<build number>.aarch64.rpm (for 64-bit operating systems for the Arm architecture with rpm)
- kesl-12.4.0-<build number>_arm64.deb (for 64-bit operating systems for the Arm architecture with dpkg)

- To install the graphical user interface of the application:
  - kesl-gui-12.4.0-<build number>.i386.rpm (for 32-bit operating systems with rpm)
  - kesl-gui-12.4.0-<build number>_i386.deb (for 32-bit operating systems with dpkg)
  - kesl-gui-12.4.0-<build number>.x86_64.rpm (for 64-bit operating systems with rpm)
  - kesl-gui-12.4.0-<build number>_amd64.deb (for 64-bit operating systems with dpkg)
  - kesl-gui-12.4.0-<build number>.aarch64.rpm (for 64-bit operating systems for the Arm architecture with rpm)
  - kesl-gui-12.4.0-<build number>_arm64.deb (for 64-bit operating systems for the Arm architecture with dpkg)

  If you do not want to install the graphical user interface, do not add these files to the folder; this will make the installation package smaller.

  If Kaspersky Endpoint Security is used in Light Agent mode to protect virtual environments, the graphical user interface is not supported.

If you do not plan to install the graphical interface, disable it by editing the appropriate setting (`USE_GUI=No`) when creating the installation package, in the properties of the created installation package, or in the autoinstall.ini configuration file. Otherwise, the installation will fail.

If you want to use the created installation package with different operating systems or package managers, place the files for all the types of operating systems and package managers that you need in the directory.

3. If you plan to use the Kaspersky Endpoint Security application in standard mode and want to use pre-downloaded application databases:

   a. Place prepared archives with databases for all your operating system types into the folder.

   b. In initial configuration settings, disable the database update task after installing the application. You can edit the relevant setting when creating the installation package, in the properties of the created installation package, or in the autoinstall.ini configuration file (`UPDATE_EXECUTE=No`). The autoinstall.ini file is located in the directory into which you extracted the kesl.zip archive.

4. If you want to perform the initial configuration of the application using a configuration file, open the autoinstall.ini configuration file and edit it as necessary.

   If you plan to use Kaspersky Endpoint Security in Light Agent mode to protect virtual environments, you need to set `KSVLA_MODE=Yes` in the autoinstall.ini configuration file.

If you plan to use Kaspersky Endpoint Security in Endpoint Detection and Response Agent mode, you need to set `ENDPOINT_AGENT_MODE=Yes` in the autoinstall.ini configuration file.

The setting values in the autoinstall.ini file are case sensitive.

You can also manage the initial configuration settings later, when creating an installation package or in the properties of the created installation package in the **Settings** section.

To create an installation package for Kaspersky Endpoint Security in the Administration Console of Kaspersky Security Center:

1. In the console tree, select **Additional** → **Remote installation** → **Installation packages**.
2. Click the **Create installation package** button.

   The wizard for creating an installation package will start.
3. Click the **Create an installation package for a Kaspersky application** button.
4. Enter the name of the new installation package and proceed to the next step of the wizard.
5. Select Kaspersky Endpoint Security distribution package. To do this, open a standard browsing window using the **Browse** button and specify the path to the kesl.kud file. The file is located in the folder where you unpacked the kesl.zip archive.

   The name and version of the application are displayed in the window.

   Proceed to the next step of the wizard.
6. Read the End User License Agreement concluded between you and Kaspersky, and the Privacy Policy describing the handling and transmission of data.

   To continue creating the installation package, you must confirm that you have read and accept the full terms of the End User License Agreement and the Privacy Policy. To confirm, in the window that opens, select both check boxes.

   Proceed to the next step of the wizard.
7. If necessary, manage the initial configuration settings.

   You can also perform the initial configuration of the application later in the properties of the created installation package in the **Settings** section.
8. The wizard downloads the files required to install the application to Kaspersky Security Center Administration Server. Wait for the download to finish.
9. Finish the wizard.

The created installation package is located in the tree of the Administration Console of Kaspersky Security Center in the **Additional** → **Remote installation** → **Installation packages** folder. You can use the same installation package many times.

Initial configuration settings in the Administration Console

In the Kaspersky Security Center Administration Console, you can specify the initial configuration settings for Kaspersky Endpoint Security when creating an installation package or in the installation package properties, in the **Settings** section. The created installation packages are available in the tree of the Administration Console in the **Additional** → **Remote installation** → **Installation packages** folder.

You can also specify initial configuration settings of the application in the configuration file that is included in the installation package.

Initial configuration settings

Setting	Description
Language of events in KSC	Select the localization language for application events sent to Kaspersky Security Center: • **System** (default) to use the operating system locale. If the application cannot detect the locale of the operating system or this locale is not supported, English is used by default. • An explicitly specified language. The application uses the UTF-8 encoding. The locale of the graphical interface and the application command line is taken from the `LANG` environment variable. If the application does not support this localization, it defaults to the English localization.
Activation code	If you want to activate the application during installation, enter the activation code. You can also activate the application after installation. This setting applies only if the application is used in standard mode.
Select update source	Clicking the **Configure** button opens a window in which you can select the databases and application modules update source: • **Kaspersky update servers** (default). • **Kaspersky Security Center**. • **Other source in the local or global network**. If you select this option, enter the address of the update source in the **Address** field. Applicable only if the application is being used in standalone mode or in Endpoint Detection and Response Agent mode.
Run database update task after installation	If this check box is selected, after the application is installed, the databases and application modules update task starts. This check box is selected by default. Applicable only if the application is being used in standalone mode or in Endpoint Detection and Response Agent mode.

Setting	Description
Proxy server address	If you use a proxy server to access the internet, enter the address of your proxy server in one of the following formats: • `[<connection protocol>://]<IP address of the proxy server>:<port>`, if no authentication is required to connect to the proxy server; • `[<connection protocol>://][<user name>:[<password>]@]<IP address of the proxy server>:<port>`, if authentication is required when connecting to the proxy server. Connecting to a proxy server over HTTPS is not supported. Applicable only if the application is being used in standalone mode or in Endpoint Detection and Response Agent mode.
Install kernel source	If this check box is selected, starting File Threat Protection automatically starts the compilation of the kernel module on operating systems that do not support fanotify. This check box is selected by default.
Use the graphical user interface	Select this check box if you plan to install and use the application graphical interface. Files for installing the graphical interface must be added to the installation package. This check box is cleared by default. Applicable only if the application is being used in standalone mode or in Endpoint Detection and Response Agent mode.
User with admin role	Enter the user to which you want to assign the admin role. The Administrator role allows managing application settings and task settings in the graphical interface of the application and on the command line without using the `sudo` command.
Configure SELinux automatically	If this check box is selected SELinux is automatically configured to work with Kaspersky Endpoint Security. This check box is selected by default.
Remove users from privileged groups	Select this check box to automatically remove users from the 'kesladmin' and 'keslaudit' privileged groups before installing the application. This check box is cleared by default. If the check box is selected and the 'nogroup' group does not exist, the installation fails and you are prompted to manually remove users from privileged groups.
Disable protection components and scan tasks for the first application startup after installation	Select this check box if, after completing the installation process, you want to run the application with protection components and scan tasks disabled. Installation with protection components disabled can be convenient, for example, to reproduce a problem in the operation of the application and create a trace file. If you enable the necessary components and tasks, the enabled components and tasks will continue to work after the application is restarted.
Enable tracing when the application is started for the first time after installation	Select the check box if you want to create a trace file when the application is started for the first time after installation. To create a trace, a kesl_startup.log file is automatically created in the /var/log/kaspersky/kesl/ directory. The size limit for regular application trace files does not apply to this file. Tracing stops after five minutes or after the File Threat Protection task is started.
Application mode	This group of settings contains the **Configure** button, which you can click to open the **Application mode** window. In this window you can select an application mode. • **Standard mode to protect workstations and servers** (default). If this option is selected, the application is used as a stand-alone application for protecting Linux workstations and servers. • **Endpoint Detection and Response Agent**. If this option is selected, the application is used to support Kaspersky Detection and Response solutions working together with third-party anti-virus solutions on protected devices. • **Light Agent for protecting virtual environments**. If this option is selected, the application is used in Light Agent mode for protecting virtual environments (as part of Kaspersky Security for Virtualization Light Agent).

Setting	Description
The protected virtual machine is used as a server (**Application mode** window)	The role of the virtual machine on which the application will be installed: server or workstation. By default, this check box is selected (the virtual machine is used in the virtual infrastructure as a server). The setting is applied only if the application is used in Light Agent mode.
Enable VDI protection mode (**Application mode** window)	Select this check box to enable VDI protection mode. This is recommended if you are installing the application on a virtual machine template that will be used to create temporary virtual machines. This check box is cleared by default. The setting is applied only if the application is used in Light Agent mode.
System event interception	The group of settings contains the **Configure** button. Clicking this button opens the **System event interception settings** window. In this window, you can select a system event interception mode, which you want application to use: • **Fanotify technology** (default). If this option is selected, the application uses the fanotify technology for system event interception. • **Updatable kernel module**. If this option is selected, an updatable kernel module is installed during application installation. The application uses this module to intercept system events. This setting is applied only on devices running an operating system that supports the fanotify technology.
If the updatable kernel module fails to start (**System event interception settings** window).	Select the action the application performs if the updatable kernel module fails to start: • **Use fanotify** (default). If this option is selected, the application switches to the fanotify technology for system event interception. • **Disable system event interception** If the application does not use system event interception, real-time file scanning is not performed, and the protection level of the device is reduced. This option is available if the **Updatable kernel module** interception mechanism is selected. This setting is applied only on devices running an operating system that supports the fanotify technology.

Preparing an archive with application databases in order to create an installation package with integrated databases

You can create an installation package for remote installation and include pre-downloaded application databases in it. This may be useful, for example, if you are installing the application on a device with the Astra Linux Special Edition operating system. If you are using an installation package with integrated databases, the application is installed together with the databases; in this case, you do not need to update the databases immediately after installation.

To create an archive with databases for installing the application:

1. Install and perform the initial configuration of Kaspersky Endpoint Security on the device using the command line or using Kaspersky Security Center.

2. Update the application databases. You can update the databases during the initial configuration of the application or after installation by running a task of an Update type in the command line or an *Update* task in the Kaspersky Security Center Administration Console or the Kaspersky Security Center Web Console.

3. Copy the contents of the /var/opt/kaspersky/kesl/private/updates/ directory to one of the following subdirectories, depending on the architecture of the operating system for which you are creating the installation package with integrated databases: /i386/, /x86_64/, or /arm64/.

4. Place the directories with the databases into a kesl-bases.tgz archive, preserving the structure of nested directories. You can place only one subdirectory with databases for the required architecture of the operating system in the archive, or if you plan to create an installation package for installation on several operating systems with different architectures, you can place all the subdirectories with databases (/i386/, /x86_64/, or /arm64/) into a single archive for different architectures.

You can use the created archive with application databases when creating an installation package in the Kaspersky Security Center Administration Console or Kaspersky Security Center Web Console.

Autoinstall.ini configuration file settings

In the autoinstall.ini configuration file, you can specify the settings shown in the table below. The set of applicable settings depends on the application usage mode.

The setting values are case-sensitive.

Autoinstall.ini configuration file settings

Setting	Description	Values
KSVLA_MODE	Using Kaspersky Endpoint Security in Light Agent mode.	`Yes` - Kaspersky Endpoint Security is used in Light Agent mode to protect virtual environments (as part of Kaspersky Hybrid Cloud Security for Virtualization Light Agent). `No` (default value) – Kaspersky Endpoint Security is used in standard mode or in Endpoint Detection and Response Agent mode (see the ENDPOINT_AGENT_MODE setting).
SERVER_MODE	The role of the protected virtual machine (server or workstation). The setting is applied only if the application is used in Light Agent mode.	`Yes` (default value) – the protected virtual machine is used as a server. `No` - the protected virtual machine is used as a workstation.
VDI_MODE	Enabling VDI protection mode to optimize application performance on temporary virtual machines. The setting is applied only if the application is used in Light Agent mode.	`Yes` – enable VDI protection mode. This is recommended if you are installing Kaspersky Endpoint Security on a virtual machine template that will be used to create temporary virtual machines. `No` (default value) – do not enable VDI protection mode.
ENDPOINT_AGENT_MODE	Using Kaspersky Endpoint Security in Endpoint Detection and Response Agent mode	`Yes` - Kaspersky Endpoint Security is being used in the Endpoint Detection and Response Agent mode to support Kaspersky Detection and Response solutions working together with third-party anti-virus solutions on protected devices. `No` (default value) – Kaspersky Endpoint Security is used in standard mode or in Light Agent mode (see the KSVLA_MODE setting).

Setting	Description	Values
EULA_AGREED	Required setting. Acceptance of the terms of the End User License Agreement.	`Yes` (default) – accept the terms and conditions of the End User License Agreement. `No` – do not accept the terms and conditions of the End User License Agreement. The application installation will be terminated.
PRIVACY_POLICY_AGREED	Required setting. Acceptance of the terms of the Privacy Policy.	`Yes` (default) – accept the terms and conditions of the Privacy Policy. `No` – do not accept the terms and conditions of the Privacy Policy. The application installation will be terminated.
USE_KSN	Required setting. Enabling Kaspersky Security Network usage: To enable the use of KSN, the terms of the Kaspersky Security Network Statement must be accepted. If Kaspersky Endpoint Security is used in Standard mode and you have enabled the use of KSN, the application's cloud mode is automatically enabled. In this mode, Kaspersky Endpoint Security uses a lightweight version of the malware databases.	`Yes` – accept the terms of the Kaspersky Security Network Statement and enable the use of KSN. `No` – (default value) do not accept the terms and conditions of the Kaspersky Security Network Statement. Opting out of the KSN does not abort the application installation process.
GROUP_CLEAN	Required setting. Automatically removing users from the kesladmin and keslaudit privileged groups before installing the application.	`Yes` - Remove users from the privileged groups. If the value is `Yes` and there is no nogroup group, the installation will fail and you will be prompted to manually remove users from privileged groups. `No` - Do not remove users from the privileged groups.
LOCALE	Optional setting. The locale used for the application events sent to Kaspersky Security Center. The locale of the graphical interface and the application command line is taken from the `LANG` environment variable. If the application does not support this localization, it defaults to the English localization.	Locale in RFC 3066 format. Possible values: • `de_DE.UTF-8` – German • `en_US.UTF-8` – English • `fr_FR.UTF-8` – French • `ja_JP.UTF-8` – Japanese • `ru_RU.UTF-8` – Russian • `zh_TW.UTF-8` – Chinese Traditional • `zh_CN.UTF-8` – Chinese Simplified If the `LOCALE` setting is not specified, the operating system locale is used. If the application cannot detect the locale of the operating system or this locale is not supported, English (en_US.UTF-8 in RFC 3066 format) is used to localize events.
INSTALL_LICENSE	Activation code for adding a license key to the application. This setting applies only if the application is used in standard mode.	`<activation code>` if you want to activate the application during installation. `None` if you do not want to activate the application during installation, for example, if you are installing the application in an isolated network segment without internet access.

Setting	Description	Values
UPDATER_SOURCE	Update source for databases and application modules. Applicable only if the application is being used in standalone mode or in Endpoint Detection and Response Agent mode.	`SCServer` – use the Kaspersky Security Center Administration Server as the update source. `KLServers` – use Kaspersky servers as the update source. This value is used by default. `< update source address >`.
PROXY_SERVER	Address of the proxy server used to connect to the Internet. Applicable only if the application is being used in standalone mode or in Endpoint Detection and Response Agent mode.	Address of the proxy server in one of the following formats: • `[<connection protocol>://]<IP address of the proxy server>:<port>`, if no authentication is required to connect to the proxy server; • `[<connection protocol>://][<user name>:[<password>]@]<IP address of the proxy server>:<port>`, if authentication is required when connecting to the proxy server. Connecting to a proxy server over HTTPS is not supported.
UPDATE_EXECUTE	Start the application database update task during the initial configuration. Applicable only if the application is being used in standalone mode or in Endpoint Detection and Response Agent mode.	`Yes` (default value) – start the update task. `No` – do not start update task.
KERNEL_SRCS_INSTALL	Automatic start of kernel module compilation when the File Threat Protection task is started (for operating systems that do not support the fanotify technology).	`Yes` (default) – compile the kernel module when File Threat Protection starts. `No` – do not compile the kernel module.
USE_GUI	Installing and using the graphical interface of the application. Applicable only if the application is being used in standalone mode or in Endpoint Detection and Response Agent mode.	`Yes` – install and use the application's graphical interface (the files for installing the graphical interface must be added to the installation package). `No` (default) – do not use the graphical interface.
ADMIN_USER	A user assigned the administrator role (admin). The Administrator role allows managing application settings and task settings in the graphical interface of the application and on the command line without using the `sudo` command.	
CONFIGURE_SELINUX	Automatic configuration of SELinux for working with Kaspersky Endpoint Security.	`Yes` (default value) – automatically configure SELinux to work with Kaspersky Endpoint Security. `No` – do not perform automatic SELinux configuration.

Setting	Description	Values
DISABLE_PROTECTION	Disabling the functional components of the application after installation. An installation with components disabled can be convenient, for example, if you need to reproduce a problem with the application and create a trace file. If you enable the necessary components after installing the application with `DISABLE_PROTECTION=Yes`, the enabled components will continue to work after the application is restarted.	`Yes` - Disable protection components and scan tasks when the application is started after installation. `No` - Do not disable protection components and scan tasks when the application is started after installation.
INTERCEPTOR_MODE	The system event interception mechanism used by Kaspersky Endpoint Security: This setting is applied only on devices running an operating system that supports the fanotify technology.	`UseFanotify` (default) – use the fanotify technology to intercept system events. `UseUpdatableKernelModule` – use an updatable kernel module to intercept system events.
INTERCEPTOR_FALLBACK_STRATEGY	What the application does if the updatable kernel module fails to start. This setting is applied only on devices running an operating system that supports the fanotify technology.	`FallbackToFanotify` (default) – switch to fanotify for system event interception. `FallbackToLimitedMode` – do not use system event interception. As a result, real-time file scanning is not performed, and the protection level of the device is reduced.
INTERCEPTOR_APPLY_STRATEGY	If the application switches to using the updatable kernel module, the application must be restarted to start the module. This setting lets you specify if you want the application to be restarted automatically or if you prefer to restart the application manually. This setting is applied only on devices running an operating system that supports the fanotify technology.	`RestartServiceAutomatically` (default value) automatically restarts the application to start the updatable kernel module. `RestartServiceManually` starts the updatable kernel module after the application is restarted manually by the user. We recommend automatically restarting the application to switch to using the updatable kernel module. Starting the updatable kernel module manually after restarting the application can lead to application errors.
ENABLE_TRACES_ON_FIRST_STARTUP	Create a trace file when the application is started for the first time after installation. To create a trace, a kesl_startup.log file is automatically created in the /var/log/kaspersky/kesl/ directory. The size limit for regular application trace files does not apply to this file. Tracing stops after five minutes or after the File Threat Protection task is started.	`Yes` – create a trace file when the application is started for the first time after installation. `No` – do not create a trace file when the application is started for the first time.

If you want to change the settings in the autoinstall.ini configuration file, specify the values of settings in the following format: <setting_name>=<setting_value> without spaces between the name of the setting and its value.

Getting started using Kaspersky Security Center

After deploying Kaspersky Endpoint Security through Kaspersky Security Center, you must prepare the application for operation. The actions to be performed depend on the mode in which you plan to use Kaspersky Endpoint Security.

Standard mode

If you plan to use Kaspersky Endpoint Security in Standard mode, after deploying the application, you need to do the following:

1. Activate the application if activation was not performed using the key added to the installation package of the application.

   You can create and execute an activation task using the Administration Console or Kaspersky Security Center Web Console, as well as distribute the license key from the Kaspersky Security Center key storage to the devices.

2. Update the databases and application modules if you did not add pre-downloaded application databases to the installation package of the application. You can use the *Update* task, which is created automatically by the initial configuration wizard of Kaspersky Security Center after installing the MMC management plug-in or the Kaspersky Endpoint Security management web plug-in.

   Kaspersky Endpoint Security protects the device only after the application databases are updated.

3. Configure a policy for centralized management of the application using the Kaspersky Security Center Administration Console (Managing policies in the Administration Console, Creating a policy using the Administration Console) or Web Console. You can use a policy that is created automatically by the initial configuration wizard of Kaspersky Security Center after installing the administration MMC plug-in or the Kaspersky Endpoint Security administration web plug-in.

   You can also configure the application management tasks using the Administration Console or the Web Console.

Light Agent mode

If you plan to use Kaspersky Endpoint Security in Light Agent mode to protect virtual environments, after deploying the application, perform the following actions:

1. Configure SVM detection settings for Light Agents. To do this, you need to create and configure a policy for centralized application management on client devices. To manage policies, you can use the Administration Console (Managing policies in the Administration Console, Creating a policy using the Administration Console) or the Web Console.

You need to configure the following settings in the policy properties:

- Settings for connecting Light Agents to the Integration Server.
- Settings for connecting Light Agents to SVMs.

2. Make sure that a connection is established between Light Agents and the SVMs and the Integration Server.

   You can get information about the connection by using Kaspersky Endpoint Security commands on the protected virtual machine:

   - You can view information about connecting to SVMs using the `kesl-control [-V] --svm-info` command.
   - You can view information about connecting to the Integration Server using the `kesl-control [-V] --viis-info` command.

3. Make sure that Kaspersky Endpoint Security used as a Light Agent receives information about the license under which Kaspersky Hybrid Cloud Security for Virtualization Light Agent is activated.

   After activating the solution on SVMs and connecting Light Agents to the SVMs, the Protection Server component sends license information to Light Agents. You can remotely view information about the license used by the Kaspersky Endpoint Security application as part of the solution using Kaspersky Security Center or on the command line of a protected virtual machine.

4. Make sure that database updates required for Light Agent to operate are installed on the protected virtual machines.

   Databases on protected virtual machines are updated using a special *Update* task, in which a folder on the SVM is specified as the update source. The update task starts automatically.

   You can check how up-to-date the databases are on a protected virtual machine with Light Agent by using the `kesl-control --app-info` command.

You can also configure the application using the policy and application management tasks in the Administration Console or the Web Console.

Installing and initially configuring the application using the command line

You can install the Kaspersky Endpoint Security application on a client device using the command line.

Installation using the command line involves the following steps:

1. Installing the application and the graphical interface of the application. Depending on the mode in which you want to use Kaspersky Endpoint Security, you can choose the following installation options:

   - If you want to use Kaspersky Endpoint Security in Basic mode, you can:
     - Install the application with the graphical interface.
     - Install the application without the graphical interface.

- Install the graphical interface on the device where the application is installed.

  It is not possible to install the graphical interface on a device on which the application is not installed.

- If you want to use Kaspersky Endpoint Security in Light Agent mode, you must install the application without the graphical interface. Graphical interface is not supported.

If the version of the apt package manager is lower than 1.1.X, you need to use the dpkg package manager (depending on the operating system) for installation.

2. Initial configuration of the application

   The application needs initial configuration to prepare it for operation and enable the protection of the client device.

   If initial configuration of the application has not been completed on a device, you cannot use or update the application on that device.

   Initial configuration of the application is performed using the Initial Configuration Wizard from the distribution kit of Kaspersky Endpoint Security. You can perform the initial configuration of the application in interactive mode or in automatic mode.

Installing the application using the command line

Installing the application without the graphical interface.

To install Kaspersky Endpoint Security from an RPM package on a 32-bit operating system, execute the following command:

```
# rpm -i kesl-12.4.0-<build number>.i386.rpm
```

To install Kaspersky Endpoint Security from an RPM package on a 64-bit operating system, execute the following command:

```
# rpm -i kesl-12.4.0-<build number>.x86_64.rpm
```

To install Kaspersky Endpoint Security from an RPM package on a 64-bit ALT operating system, execute the following command:

```
# apt-get install kesl-12.4.0-<build number>.x86_64.rpm
```

To install Kaspersky Endpoint Security from an RPM package on a 64-bit operating system for the Arm architecture, execute the following command:

```
# rpm -i kesl-12.4.0-<build number>.aarch64.rpm
```

To install Kaspersky Endpoint Security from an RPM package on a 64-bit ALT operating system for the Arm architecture, execute the following command:

```
# apt-get install kesl-12.4.0-<build number>.aarch64.rpm
```

To install Kaspersky Endpoint Security from a DEB package on a 32-bit operating system, execute the following command:

```
# apt-get install ./kesl_12.4.0-<build number>_i386.deb
```

To install Kaspersky Endpoint Security from a DEB package on a 64-bit operating system, execute the following command:

```
# apt-get install ./kesl_12.4.0-<build number>_amd64.deb
```

To install Kaspersky Endpoint Security from a DEB package on a 64-bit operating system for the Arm architecture, execute the following command:

```
# apt-get install ./kesl_12.4.0-<build number>_arm64.deb
```

Installing the graphical interface of the application

To install the graphical interface from the RPM package to a 32-bit operating system, execute the following command:

```
# rpm -i kesl-gui-12.4.0-<build number>.i386.rpm
```

To install the graphical interface from the RPM package to a 64-bit operating system, execute the following command:

```
# rpm -i kesl-gui-12.4.0-<build number>.x86_64.rpm
```

To install the graphical interface from an RPM package on a 64-bit ALT operating system, execute the following command:

```
# apt-get install kesl-gui-12.4.0-<build number>.x86_64.rpm
```

To install the graphical interface from an RPM package on a 64-bit operating system for the Arm architecture, execute the following command:

```
# rpm -i kesl-gui-12.4.0-<build number>.aarch64.rpm
```

To install the graphical interface from an RPM package on a 64-bit ALT operating system for the Arm architecture, execute the following command:

```
# apt-get install kesl-gui-12.4.0-<build number>.aarch64.rpm
```

To install the graphical interface from the DEB package to a 32-bit operating system, execute the following command:

```
# apt-get install ./kesl-gui_12.4.0-<build number>_i386.deb
```

To install the graphical interface from the DEB package to a 64-bit operating system, execute the following command:

```
# apt-get install ./kesl-gui_12.4.0-<build number>_amd64.deb
```

To install the graphical interface from a DEB package on a 64-bit operating system for the Arm architecture, execute the following command:

```
# apt-get install ./kesl-gui_12.4.0-<build number>_arm64.deb
```

Post-installation configuration of the application in interactive mode

To perform the initial configuration of the application in interactive mode, you need to run the Initial Configuration Wizard of the Kaspersky Endpoint Security application.

You must run the Initial Configuration Wizard as root.

To run the Initial Configuration Wizard, execute the following command:

```
# /opt/kaspersky/kesl/bin/kesl-setup.pl
```

The wizard prompts you for the values of Kaspersky Endpoint Security settings step-by-step. The wizard finishing and the console being released indicate that the post-installation configuration is completed.

To check the return code, execute the following command:

```
echo $?
```

If the command returns 0, the post-installation configuration of the application is completed successfully.

Kaspersky Endpoint Security protects the device only after the application databases are updated.

Selecting the Standard mode or Light Agent mode

At this step, specify whether you intend to use Kaspersky Endpoint Security in Light Agent mode to protect virtual environments as a component of the Kaspersky Security for Virtualization Light Agent solution:

- Enter `yes` if you want to use Kaspersky Endpoint Security in Light Agent mode.
- Enter `no` if you want to use Kaspersky Endpoint Security in standard mode as a stand-alone application for protecting workstations and servers.

  If you intend to use the application in Endpoint Detection and Response Agent mode, you also need to enter `no` at this step. You will be able to select the Endpoint Detection and Response Agent mode at the next step.

After the initial configuration is complete, you cannot change the application usage mode.

Defining the role of the virtual machine

This step is displayed only if at the first step you selected to use Kaspersky Endpoint Security in Light Agent mode for protecting virtual environments.

At this step, specify the role of the virtual machine (server or workstation) on which you are installing Kaspersky Endpoint Security:

- Enter `yes` if you are using the virtual machine as a server.
- Enter `no` if you are using a virtual machine as a workstation.

The role of a virtual machine determines the license under which the application will be used on this virtual machine as well as the available functionality.

Enabling VDI protection mode

This step is displayed only if at the first step you selected to use Kaspersky Endpoint Security in Light Agent mode for protecting virtual environments.

At this step, you can enable VDI protection mode. This mode optimizes the operation of Kaspersky Endpoint Security on temporary virtual machines. If VDI protection mode is enabled, updates that require restarting the virtual machine are not installed. When receiving updates that require a restart, the Light Agent installed on the virtual machine sends a message to Kaspersky Security Center about the need to update the protected virtual machine template.

Specify `yes` if you want to enable VDI protection mode. This is recommended if you are installing Kaspersky Endpoint Security on a virtual machine template that will be used to create temporary virtual machines.

Specify `no` if you do not want to enable VDI protection mode. This is recommended if you are installing Kaspersky Endpoint Security on a persistent virtual machine or on a virtual machine template that will be used to create persistent virtual machines.

Selecting the mode: Standard or Endpoint Detection and Response Agent

This step is displayed only if you selected to use Kaspersky Endpoint Security in Standard mode as a first step. The application cannot be used in Light Agent mode and in Endpoint Detection and Response Agent mode at the same time.

At this step, specify whether you intend to use Kaspersky Endpoint Security in Endpoint Detection and Response Agent mode:

- Enter `yes` if you want to use Kaspersky Endpoint Security in Endpoint Detection and Response Agent mode as an application that provides support for Kaspersky Detection and Response solutions working together with third-party anti-virus solutions on protected devices.
- Enter `no` if you want to use Kaspersky Endpoint Security in standard mode as a stand-alone application for protecting workstations and servers.

After the initial configuration is complete, you cannot change the application usage mode.

Selecting the locale

At this step, the application displays the list of supported locales in RFC 3066 format.

Specify the locale as it is listed here. This locale is used for the following purposes:

- Localization of the texts of the End User License Agreement, Privacy Policy, and Kaspersky Security Network Statement, which are displayed during the installation.
- Localization of application events sent to Kaspersky Security Center.

The locale of the graphical interface and the application command line is taken from the `LANG` environment variable. If the application does not support this localization, it defaults to the English localization.

Viewing the End User License Agreement and the Privacy Policy

At this step, read the End User License Agreement concluded between you and Kaspersky, and the Privacy Policy describing the handling and transmission of data.

Accepting the End User License Agreement

At this step, you must either accept or decline the terms of the End User License Agreement.

After exiting viewing mode, enter one of the following values:

- `yes` (or `y`), if you accept the terms of the End User License Agreement.
- `no` (or `n`), if you do not accept the terms of the End User License Agreement.

If you did not accept the terms and conditions of the End User License Agreement, the Kaspersky Endpoint Security setup process is aborted.

Accepting the Privacy Policy

At this step, you must either accept or decline the terms of the Privacy Policy.

After exiting viewing mode, enter one of the following values:

- `yes` (or `y`), if you accept the terms of the Privacy Policy.
- `no` (or `n`), if you do not accept the terms of the Privacy Policy.

If you did not accept the terms and conditions of the Privacy Policy, the Kaspersky Endpoint Security setup process is aborted.

Using Kaspersky Security Network

At this step, you must either accept or decline the terms of use of the Kaspersky Security Network Statement. The file ksn_license.<language ID> containing the text of the Kaspersky Security Network Statement is located in the directory /opt/kaspersky/kesl/doc/.

Enter one of the following values:

- `yes` (or `y`), if you accept the terms of the Kaspersky Security Network Statement. This enables the extended KSN mode.
- `no` (or `n`), if you do not accept the terms of the Kaspersky Security Network Statement.

Refusal to participate in Kaspersky Security Network does not interrupt the initial configuration of Kaspersky Endpoint Security. You can enable, disable, or change the Kaspersky Security Network mode at any time.

If Kaspersky Endpoint Security is used in Standard mode and you have enabled the use of Kaspersky Security Network, the application's cloud mode is automatically enabled. In this mode, Kaspersky Endpoint Security uses a lightweight version of the anti-malware databases. Use of the lightweight anti-malware databases is not supported in Light Agent mode for protecting virtual environments.

Removing users from privileged groups

This step is displayed only if users are detected in the kesladmin group and/or in the keslaudit group.

At this step, specify whether or not to remove users from the kesladmin and keslaudit privileged groups. Users included in the kesladmin and keslaudit groups receive privileged access to the application's functions.

Enter `yes` to remove all detected users from the kesladmin and/or keslaudit group. Users whose primary group is kesladmin or keslaudit will be moved to the nogroup group. If there is no nogroup group, the installation will fail and you will be prompted to manually remove users from privileged groups.

Enter `no` if you do not want the application to remove users from the privileged groups.

Assigning the Administrator role to a user

At this step, you can grant the administrator (admin) role to the user.

Enter the name of the user to whom you want to grant the administrator role. You need the Administrator role to manage application settings and task settings in the graphical interface of the application and on the command line without using the `sudo` command.

You can assign the administrator role to a user later, after completing the initial configuration.

Configuring the system event interception mechanism

At this step, the possibility of using various system event interception mechanisms is determined. If the operating system of the device supports the fanotify technology, you can select the system event interception method that you want the application to use:

- Enter `yes` if you want to use the updatable kernel module.
- Enter `no` if you want to use fanotify.

The application can use the interception mechanism based on the updatable kernel module if the operating system satisfies the requirements for installing the updatable kernel module. If the operating system on the device supports fanotify, but does not satisfy the requirements for installing the updatable kernel module, the application uses fanotify to intercept system events.

If you select the updatable kernel module as the interception mechanism, specify the following settings:

- What the application does if the updatable kernel module fails to start:
  - Enter `yes` if you want the application to fall back to fanotify for system events interception if the updatable kernel module fails to start.
  - Enter `no` if you want the application to continue running without system event interception if the updatable kernel module fails to start.

    If the application does not use system event interception, real-time file scanning is not performed, and the protection level of the device is reduced.

- Application restart mode when switching to using the updatable kernel module. To run the module, the application must be restarted automatically or manually.

  We recommend automatically restarting the application to switch to using the updatable kernel module. Starting the updatable kernel module manually after restarting the application can lead to application errors.

  Enter `yes` if you want to allow automatically restarting the application to run the module.

If the operating system on the device does not support fanotify, the application uses the kernel module for File Threat Protection. If all the dependencies are available, the compilation of the kernel module is started automatically when File Threat Protection starts.

If any dependencies are not found on the device, the Kaspersky Endpoint Security application suggests installing the relevant packages. If the package download fails, an error message will be displayed.

Enabling automatic configuration of SELinux

This step is displayed only if SELinux is installed on your operating system.

At this step, you can enable automatic configuration of the SELinux access control system for working with Kaspersky Endpoint Security.

Enter `yes` to enable automatic configuration of SELinux. If SELinux cannot be configured automatically (for example, if the semanage utility is missing), the application displays an error message and prompts the user to configure SELinux manually.

Enter `no` if you do not want the application to automatically configure SELinux.

By default, the application suggests `yes`.

If necessary, you can manually configure SELinux to work with the application later, after the initial configuration of the application is complete.

Configuring the update source

This step is displayed only if you chose to use Kaspersky Endpoint Security in standard mode or in Endpoint Detection and Response Agent mode at the first steps of the Wizard. If Kaspersky Endpoint Security is used in Light Agent mode, Kaspersky Endpoint Security receives updates of databases and application modules for the Light Agent from the Protection Server.

At this step, you must specify the update source for databases and application modules. The application databases contain descriptions of the threat signatures and methods of countering them. The application uses these records when searching and neutralizing threats. Kaspersky virus analysts regularly add new records about threats.

Enter one of the following values:

- `KLServers`: the application receives updates from one of the Kaspersky update servers.
- `SCServer`: the application downloads updates to the protected device from Kaspersky Security Center Administration Server installed in your organization. You can select this update source if you use Kaspersky Security Center for centralized administration of device protection in your organization.
- `Custom`: the application downloads updates from a custom source. You can specify the address of the custom source of updates in the local area network or on the Internet.

Configuring proxy server settings

This step is displayed only if you chose to use Kaspersky Endpoint Security in standard mode or in Endpoint Detection and Response Agent mode at the first steps of the Wizard.

At this step, you must specify the proxy server settings if you are using a proxy server to access the Internet. Internet connection is required to download the application databases from the update servers.

To configure proxy server settings, perform one of the following actions:

- If you use a proxy server to connect to the Internet, specify the address of the proxy server using one of the following formats:
  - `<connection protocol>://<IP address of the proxy server>:<port number>`, if the proxy server connection does not require authentication
  - `<connection protocol>://<user name>:<password>@<IP address of the proxy server>:<port number>` if the proxy server connection requires authentication

    Connecting to a proxy server over HTTPS is not supported.

When connecting via an HTTP proxy, we recommend to use a separate account that is not used to sign in to other systems. An HTTP proxy uses an insecure connection, and the account may be compromised.

- If you do not use a proxy server to connect to the Internet, enter `no` as your answer.

By default, the application suggests `no`.

You can manage proxy server settings later, after completing the initial configuration.

Starting an application database update

This step is displayed only if you chose to use Kaspersky Endpoint Security in standard mode or in Endpoint Detection and Response Agent mode at the first steps of the Wizard. If Kaspersky Endpoint Security is used in Light Agent mode, Kaspersky Endpoint Security receives updates of databases and application modules for the Light Agent from the Protection Server.

At this step, you can run the application database update task on the client device.

If you do not want to start to download the application databases, enter `no`.

If you want to start the database update task on the device, enter `yes`.

By default, the application suggests `yes`.

If `yes` is selected, the application will be automatically restarted after the databases are updated.

Kaspersky Endpoint Security protects the device only after the application databases are updated.

You can run the update task later, after completing the initial configuration.

Enabling automatic application database update

This step is displayed only if you chose to use Kaspersky Endpoint Security in standard mode or in Endpoint Detection and Response Agent mode at the first steps of the Wizard. If Kaspersky Endpoint Security is used in Light Agent mode, Kaspersky Endpoint Security receives updates of databases and application modules for the Light Agent from the Protection Server.

At this step, you can enable automatic update of the application databases.

Enter `yes` to enable automatic application database update. By default, the application checks for available database updates every 60 minutes. If updates are available, the application downloads the updated databases.

Enter `no` if you do not want the application to automatically update the databases.

You can enable automatic database update later, after completing the initial configuration, by configuring the update task schedule.

Activating the application

This step is displayed only if you selected to use Kaspersky Endpoint Security in Standard mode at the first steps of the wizard. If Kaspersky Endpoint Security is being used in Endpoint Detection and Response Agent mode, after completing the initial configuration of the application, you need to add a license key that activates the Kaspersky Endpoint Detection and Response Expert (on-premise) functionality. If Kaspersky Endpoint Security is used in Light Agent mode, Kaspersky Endpoint Security receives information about the license from the Protection Server; there is no need to activate Kaspersky Endpoint Security separately.

At this step, you can activate the application using an activation code or a key file.

To activate the application using an activation code, enter the activation code.

To activate the application using a key file, specify the full path to the key file.

If no activation code or key file is specified, the application is activated using a trial key for one month.

You can activate the application later, after completing the initial configuration.

Post-installation configuration of the application in automatic mode

To perform the initial configuration of the application in automatic mode:

1. Prepare a configuration file that contains the initial configuration settings. You can create this file or copy the necessary structure from the autoinstall.ini configuration file used for remote installation of the application using Kaspersky Security Center.

2. Pass the path to the configuration file to the Initial Configuration Wizard of the Kaspersky Endpoint Security application.

   You must run the Initial Configuration Wizard as root.

To launch the automatic initial configuration of the application, the following command:

```
# /opt/kaspersky/kesl/bin/kesl-setup.pl --autoinstall=< initial configuration file >
```

where < `initial configuration file` > is a path to the configuration file that contains initial configuration settings.

When the Initial Configuration Wizard finishes and releases the console, the post-installation configuration of the application is complete.

To check the return code, execute the following command:

```
echo $?
```

If the command returns 0, the post-installation configuration of the application is completed successfully.

Kaspersky Endpoint Security protects the device only after the application databases are updated.

To correctly update application modules after the wizard has finished, the application may need to be restarted. Check the status of updates for the application using the `kesl-control --app-info` command.

Settings in the configuration file for post-installation configuration

In the post-installation configuration file, you can specify the settings shown in the table below. The set of applicable settings depends on the application usage mode.

The setting values are case-sensitive.

Settings in the configuration file for post-installation configuration

Setting	Description	Values
KSVLA_MODE	Using Kaspersky Endpoint Security in Light Agent mode.	`Yes` - Kaspersky Endpoint Security is used in Light Agent mode to protect virtual environments (as part of Kaspersky Hybrid Cloud Security for Virtualization Light Agent). `No` – Kaspersky Endpoint Security is used in standard mode or in Endpoint Detection and Response Agent mode (see the ENDPOINT_AGENT_MODE setting).
SERVER_MODE	The role of the protected virtual machine (server or workstation). The setting is applied only if the application is used in Light Agent mode.	`Yes` - the protected virtual machine is used as a server. `No` - the protected virtual machine is used as a workstation.
VDI_MODE	Enabling VDI protection mode to optimize application performance on temporary virtual machines. The setting is applied only if the application is used in Light Agent mode.	`Yes` – enable VDI protection mode. This is recommended if you are installing Kaspersky Endpoint Security on a virtual machine template that will be used to create temporary virtual machines. `No` – do not enable VDI protection mode.
ENDPOINT_AGENT_MODE	Using Kaspersky Endpoint Security in Endpoint Detection and Response Agent mode	`Yes` - Kaspersky Endpoint Security is being used in the Endpoint Detection and Response Agent mode to support Kaspersky Detection and Response solutions working together with third-party anti-virus solutions on protected devices. `No` – Kaspersky Endpoint Security is used in standard mode or in Light Agent mode (see the KSVLA_MODE setting).

Setting	Description	Values
EULA_AGREED	Required setting. Acceptance of the terms of the End User License Agreement.	`Yes` – accept the terms and conditions of the End User License Agreement. `No` – do not accept the terms and conditions of the End User License Agreement. The initial configuration of the application is aborted.
PRIVACY_POLICY_AGREED	Required setting. Acceptance of the terms of the Privacy Policy.	`Yes`: accept the Privacy Policy to continue installing the application. `No` – do not accept the terms and conditions of the Privacy Policy. The initial configuration of the application is aborted.
USE_KSN	Required setting. Enabling Kaspersky Security Network usage: To enable the use of KSN, the terms of the Kaspersky Security Network Statement must be accepted. If Kaspersky Endpoint Security is used in Standard mode and you have enabled the use of KSN, the application's cloud mode is automatically enabled. In this mode, Kaspersky Endpoint Security uses a lightweight version of the malware databases.	`Yes` – accept the terms of the Kaspersky Security Network Statement and enable the use of KSN. `No` – do not accept the Kaspersky Security Network Statement. Opting out of the KSN does not abort the initial configuration process.
GROUP_CLEAN	Required setting. Removing users from the kesladmin and keslaudit privileged groups before installing the application.	`Yes` - Remove users from the privileged groups. If the value is `Yes` and there is no nogroup group, the installation will fail and you will be prompted to manually remove users from privileged groups. `No` - Do not remove users from the privileged groups.
LOCALE	Optional setting. The locale used for the application events sent to Kaspersky Security Center. The locale of the graphical interface and the application command line is taken from the `LANG` environment variable. If the application does not support this localization, it defaults to the English localization.	Locale in RFC 3066 format. Possible values: • `de_DE.UTF-8` – German • `en_US.UTF-8` – English • `fr_FR.UTF-8` – French • `ja_JP.UTF-8` – Japanese • `ru_RU.UTF-8` – Russian • `zh_TW.UTF-8` – Chinese Traditional • `zh_CN.UTF-8` – Chinese Simplified If the `LOCALE` setting is not specified, the operating system locale is used. If the application cannot detect the locale of the operating system or this locale is not supported, English (en_US.UTF-8 in RFC 3066 format) is used to localize events.
INSTALL_LICENSE	Activation code or path to the key file for adding a license key to the application. This setting applies only if the application is used in standard mode.	`<activation code>` if you want to activate the application using an activation code during installation. `<full path to key file>` if you want to activate the application using a key file during installation. `None` if you do not want to activate the application during installation, for example, if you are installing the application in an isolated network segment without internet access.

Setting	Description	Values
UPDATER_SOURCE	Update source for databases and application modules. Applicable only if the application is being used in standalone mode or in Endpoint Detection and Response Agent mode.	`SCServer` – use the Kaspersky Security Center Administration Server as the update source. `KLServers` – use Kaspersky servers as the update source. `< update source address >`.
PROXY_SERVER	Address of the proxy server used to connect to the Internet. Applicable only if the application is being used in standalone mode or in Endpoint Detection and Response Agent mode.	Address of the proxy server in one of the following formats: • `[<connection protocol>://]<IP address of the proxy server>:<port>`, if no authentication is required to connect to the proxy server; • `[<connection protocol>://][<user name>:[<password>]@]<IP address of the proxy server>:<port>`, if authentication is required when connecting to the proxy server. Connecting to a proxy server over HTTPS is not supported.
UPDATE_EXECUTE	Start the application database update task during the initial configuration. Applicable only if the application is being used in standalone mode or in Endpoint Detection and Response Agent mode.	`Yes` – start update task. `No` – do not start update task.
KERNEL_SRCS_INSTALL	Automatic start of kernel module compilation when the File Threat Protection task is started (for operating systems that do not support the fanotify technology).	`Yes` – compile the kernel module when File Threat Protection starts. `No` – do not compile the kernel module.
ADMIN_USER	A user assigned the administrator role (admin).	
CONFIGURE_SELINUX	Automatic configuration of SELinux for working with Kaspersky Endpoint Security.	`Yes` – automatically configure SELinux to work with Kaspersky Endpoint Security. `No` – do not perform automatic SELinux configuration.
DISABLE_PROTECTION	Disable protection components and scan tasks after the application is installed. Installation with protection components disabled can be convenient, for example, to reproduce a problem in the operation of the application and create a trace file. If you enable the necessary components and tasks after installing the application with the `DISABLE_PROTECTION=Yes` parameter, the enabled components and tasks will continue to work after the application is restarted.	`Yes` - Disable protection components and scan tasks when the application is started after installation. `No` - Do not disable protection components and scan tasks when the application is started after installation.
INTERCEPTOR_MODE	The system event interception mechanism used by Kaspersky Endpoint Security: This setting is applied only on devices running an operating system that supports the fanotify technology.	`UseFanotify` to use the fanotify technology to intercept system events. `UseUpdatableKernelModule` – use an updatable kernel module to intercept system events.

Setting	Description	Values
INTERCEPTOR_FALLBACK_STRATEGY	What the application does if the updatable kernel module fails to start. This setting is applied only on devices running an operating system that supports the fanotify technology.	`FallbackToFanotify` – switch to fanotify for system event interception. `FallbackToLimitedMode` – do not use system event interception. As a result, real-time file scanning is not performed, and the protection level of the device is reduced.
ENABLE_TRACES_ON_FIRST_STARTUP	Create a trace file when the application is started for the first time after installation. To create a trace, a kesl_startup.log file is automatically created in the /var/log/kaspersky/kesl/ directory. The size limit for regular application trace files does not apply to this file. Tracing stops after five minutes or after the File Threat Protection task is started.	`Yes` – create a trace file when the application is started for the first time after installation. `No` – do not create a trace file when the application is started for the first time.

Specify the values of settings in the format <setting name>=<setting value> (spaces between the a setting name and its value are not processed).

Configuring allowing rules in the SELinux system

Manually configuring SELinux for working with the application

If SELinux couldn't s be configured automatically during the initial configuration of the application, or if you declined automatic configuration, you can manually configure SELinux to work with Kaspersky Endpoint Security.

To manually configure SELinux to work with the application:

1. Switch SELinux to permissive mode:
   - If SELinux has been activated, run the following command:

     ```
     # setenforce Permissive
     ```

   - If SELinux was disabled, set the `SELINUX=permissive` setting in the configuration file / etc / selinux / config and restart the operating system.
2. Make sure the semanage utility is installed on the system. If the utility is not installed, install the policycoreutils-python or policycoreutils-python-utils package, depending on the package manager.
3. If you are using a custom SELinux policy instead of the default targeted policy, assign a label to each source executable file of Kaspersky Endpoint Security in accordance with the SELinux policy being used; to do so, run the following commands:

   ```
   # semanage fcontext -a -t bin_t <executable file>
   # restorecon -v <executable file>
   ```

where < `executable file` > is:

- /var/opt/kaspersky/kesl/12.4.0.<build number>_<installation timestamp>/opt/kaspersky/kesl/libexec/kesl
- /var/opt/kaspersky/kesl/12.4.0.<build number>_<installation timestamp>/opt/kaspersky/kesl/bin/kesl-control
- /var/opt/kaspersky/kesl/12.4.0.<build number>_<installation timestamp>/opt/kaspersky/kesl/libexec/kesl-gui
- /var/opt/kaspersky/kesl/12.4.0.<build number>_<installation timestamp>/opt/kaspersky/kesl/shared/kesl

4. Run the following tasks:

   - File Threat Protection task:

     ```
     kesl-control --start-task 1
     ```

   - Critical Areas Scan task:

     ```
     kesl-control --start-task 4 -W
     ```

   It is recommended to run all the tasks that you plan to run while using Kaspersky Endpoint Security.

5. Start the graphical user interface if you plan to use it.

6. Ensure that there are no errors in the audit.log file:

   ```
   # grep kesl /var/log/audit/audit.log
   ```

7. If there are errors in the audit.log file, create and download a new rule module based on the blocking records in order to fix the errors, and then relaunch all the tasks that you plan to run while using Kaspersky Endpoint Security; to do so, run the following commands:

   ```
   # grep kesl /var/log/audit/audit.log | audit2allow -M kesl
   # semodule -i kesl.pp
   ```

   If new audit messages related to Kaspersky Endpoint Security appear, the file with the rule module file must be updated.

8. Switch SELinux to blocking mode:

   ```
   # setenforce Enforcing
   ```

If you use a custom SELinux policy, manually assign a label to Kaspersky Endpoint Security source executable files after installing application updates (follow steps 1, 3–8).

You can find more information in the documentation for your operating system.

Configuring SELinux to run the "Start process" task

If SELinux is installed in your operating system in `Enforcing` mode, running the Start process task requires additional configuration of SELinux.

To configure SELinux to run the "Start process" task:

1. Switch SELinux to permissive mode:
   - If SELinux has been activated, run the following command:
     ```
     # setenforce Permissive
     ```
   - If SELinux was disabled, set the `SELINUX=permissive` setting in the configuration file / etc / selinux / config and restart the operating system.
2. Make sure the semanage utility is installed on the system. If the utility is not installed, install the policycoreutils-python or policycoreutils-python-utils package, depending on the package manager.
3. Start the "Start process" task.
4. Ensure that there are no errors in the audit.log file:
   ```
   # grep kesl /var/log/audit/audit.log
   ```
5. If errors are present in the audit.log file, create and load a new rules module based on blocking rules to fix the errors, then run the "Start process" task again.
   ```
   # grep kesl /var/log/audit/audit.log | audit2allow -M kesl
   # semodule -i kesl.pp
   ```
6. Switch SELinux to blocking mode:
   ```
   # setenforce Enforcing
   ```

Running the application on Astra Linux OS in closed software environment mode

This section describes how to start the application in the Astra Linux Special Edition operating system in closed software environment mode.

For Astra Linux Special Edition (updates 1.6, 1.7, and 1.8)

To run the application in the Astra Linux Special Edition operating system (updates 1.6, 1.7 or 1.8):

1. Specify the following setting in the /etc/digsig/digsig_initramfs.conf file:
   ```
   DIGSIG_ELF_MODE=1
   ```

2. Install the compatibility package:

   ```
   apt install astra-digsig-oldkeys
   ```

3. Create a directory for the application key:

   ```
   mkdir -p /etc/digsig/keys/legacy/kaspersky/
   ```

4. Locate the application key (/opt/kaspersky/kesl/shared/kaspersky_astra_pub_key.gpg) in the directory created at the previous step:

   ```
   cp kaspersky_astra_pub_key.gpg /etc/digsig/keys/legacy/kaspersky/
   ```

5. Update the initramfs image:

   ```
   update-initramfs -u -k all
   ```

6. Restart the operating system.

For Astra Linux Special Edition (operational update 1.5)

To run the application in the Astra Linux Special Edition (operational update 1.5) operating system:

1. Specify the following setting in the /etc/digsig/digsig_initramfs.conf file:

   ```
   DIGSIG_LOAD_KEYS=1
   DIGSIG_ENFORCE=1
   ```

2. Create a directory for the application key:

   ```
   mkdir -p /etc/digsig/keys/legacy/kaspersky/
   ```

3. Locate the application key (/opt/kaspersky/kesl/shared/kaspersky_astra_pub_key.gpg) in the directory created at the previous step:

   ```
   cp kaspersky_astra_pub_key.gpg /etc/digsig/keys/legacy/kaspersky/
   ```

4. Update the initramfs image:

   ```
   sudo update-initramfs -u -k all
   ```

5. Restart the operating system.

The application graphical user interface can be used during mandatory access control sessions.

Running the application on ALT SP in closed software environment mode

This section describes the steps you need to perform on the command line to be able to start the application in the ALT SP operating system in closed software environment mode.

To run the application on the ALT SP operating system:

1. Disable the closed software environment mode, if enabled, by running the following command:

   `integrity-remover`

2. Create a kesl group for further changes to the IMA policy by running the following command:

   `groupadd kesl`

3. Find out the unique identifier (GUID) of the created group by running the following command:

   `cat /etc/group | grep kesl`

4. Edit the IMA policy to exclude the kesl group. To do so:

   a. Copy the /usr/share/integrity/policy file by running the following command:

      `cp /usr/share/integrity/policy /etc/integrity/policy`

   b. Edit the /etc/integrity/policy file using a text editor (for example, vim) by running the following command:

      `vim /etc/integrity/policy`

   c. After the `dont_measure fsmagic=0xf97cff8c` line (this is usually the last line in the `dont_measure` section), add the `dont_measure fgroup=<GUID>` line, where `<GUID>` is the unique ID of the group created at step 2 of these instructions).

   d. After the `dont_appraise fsmagic=0x27e0eb` line (this is usually the last line in the `dont_appraise` section), add the `dont_appraise fgroup=<GUID>` line, where `<GUID>` is the unique ID of the group created at step 2 of these instructions).

   e. Save your changes.

5. In the /usr/sbin/integrity-sign file, edit the list_all_files function to include the Kaspersky Endpoint Security application in the allowlist of applications that are allowed to run in the closed environment mode. To do so:

   a. Edit the /usr/sbin/integrity-sign file using a text editor (for example, vim) by running the following command:

      `vim /usr/sbin/integrity-sign`

   b. Find the list_all_files function and in the body of the function, in lines starting with `find -P`, add the directories of the Kaspersky Endpoint Security application under /var/opt and /opt to the end of each enumeration of directories.

   c. Save your changes.

6. Install the Kaspersky Endpoint Security application. To make sure that the application database update works correctly after the installation, at the initial configuration stage, refuse to start the application database update (to do this, enter 'no' at the application database update step).

7. Assign the inheritance of the kesl group and directory permissions for the updatable components of the Kaspersky Endpoint Security application by running the following commands:

   ```
   cd /var/opt/kaspersky/kesl/<build number>_*/var/opt/kaspersky/kesl/private
   chown -R root:kesl updates/
   find updates -type d -exec chmod g+s {} \;
   cd /opt/kaspersky/kesl/lib64
   chown -R root:kesl updatable_modules/
   ```

```
find updatable_modules -type d -exec chmod g+s {} \;
cd /var/opt/kaspersky/kesl/common/
chown -R root:kesl temp/
find temp -type d -exec chmod g+s {} \;
```

8. Assign the inheritance of the kesl group and directory permissions for the updatable components of the Network Agent by running the following commands:

```
cd /var/opt/kaspersky/
chown -R root:kesl klnagent/
find klnagent/ -type d -exec chmod g+s {} \;
cd /opt/kaspersky/
chown -R root:kesl klnagent64/
find klnagent64/ -type d -exec chmod g+s {} \;
```

9. Enable the closed software environment mode by initiating the signing of the system using the following command:

```
integrity-applier -i -A
```

10. Make sure that the IMA subsystem is activated by running the following command:

```
cat /proc/cmdline
```

The command output should contain the lines `lsm=integrity ima_hash=sha512 ima_appraise=enforce.`

11. Start the database update task by running the following command:

```
kesl-control --start 6 -W
```

If the output contains the *EventType=BasesApplied* event, it means the database update was performed correctly.

12. Restart the application by running the following command:

```
systemctl restart kesl
```

Configuring the OSnova operating system for the application to work

For OSnova 2.4

To prepare a device with the OSnova 2.4 operating system for remote installation of the Network Agent:

1. Open the /etc/systemd/logind.conf file and in the `[Login]` section, comment out the `#KillUserProcesses=yes` line.

2. Open the file /usr/lib/NESS/pam-user-session and comment out the `#loginctl terminate-session "$XDG_SESSION_ID"` line.

To run the application on the OSnova 2.4 operating system:

1. Open the /etc/NESS/systemd/kesl.service.config file and set `NESSCTX_MODIFY=t+ADDEQUSOCK,OMIT,70,SSUID_SAVE_CTX_PERMANENT"`.

2. Refresh the service settings by running the `systemctl daemon-reload` command.

3. If you want to run process memory and kernel memory scans, you need to disable the mprotect (or PaX) memory protection in the kernel, that is, add `mprotect=off` to the kernel command line parameters. For more details, please refer to the OSnova documentation.

4. Restart the operating system.

After installing the graphical interface (the kesl-gui package), run the following commands on the command line as root:

```
rm /etc/xdg/autostart/kaspersky-kesl.desktop

cp /opt/kaspersky/kesl/resource/autostart.desktop /etc/xdg/autostart/kaspersky-
kesl.desktop

rm /usr/share/applications/kaspersky-kesl.desktop

cp /opt/kaspersky/kesl/resource/app.desktop /usr/share/applications/kaspersky-
kesl.desktop

rm /usr/share/autostart/kaspersky-kesl.desktop

cp /opt/kaspersky/kesl/resource/autostart.desktop /usr/share/autostart/kaspersky-
kesl.desktop

rm /usr/share/kde4/services/ServiceMenus/kaspersky-kesl.desktop

cp /opt/kaspersky/kesl/resource/kde.desktop
/usr/share/kde4/services/ServiceMenus/kaspersky-kesl.desktop

rm /usr/share/kservices5/ServiceMenus/kaspersky-kesl.desktop

cp /opt/kaspersky/kesl/resource/kde.desktop /usr/share/kservices5/ServiceMenus/kaspersky-
kesl.desktop

rm /usr/share/Thunar/sendto/kaspersky-kesl.desktop

cp /opt/kaspersky/kesl/resource/sendto.desktop /usr/share/Thunar/sendto/kaspersky-
kesl.desktop
```

For OSnova 2.5.1 and later

To prepare a device with the OSnova operating system 2.5.1 and later for remote installation of the Network Agent:

1. Open the file /usr/lib/systemd/logind.conf.d/10-enable-kill-user-processes.conf and in the `[Login]` section, comment out the `#KillUserProcesses=yes` line.

2. Open the file /usr/lib/NESS/pam-user-session and comment out the `#loginctl terminate-session "$XDG_SESSION_ID"` line.

To run the application on the OSnova operating system 2.5.1 and later:

1. Open the /etc/NESS/systemd/kesl.service.config file and set `NESSCTX_MODIFY="t+ADDEQUSOCK,OMIT,OMIT_PID,SSUID_SAVE_CTX_PERMANENT"`.

2. Refresh the service settings by running the `systemctl daemon-reload` command.

3. Open the file /etc/sysctl.d/30-disable-ptrace.conf and set `kernel.yama.ptrace_scope=0.`.

4. If you want to run process memory and kernel memory scans, you need to disable the mprotect (or PaX) memory protection in the kernel, that is, add `mprotect=off` to the kernel command line parameters. For more details, please refer to the OSnova documentation.

5. Restart the operating system.

When installing Kaspersky Endpoint Security on a device with OSnova 2.14 or later version, you may encounter an error, `"dpkg: error processing package kesl (--install): installed kesl package post-installation script subprocess returned error exit status 1"` because of the two `SUPPORT_URL` lines in the /etc/os-release file. For the application to install correctly, you need to delete one of the two `SUPPORT_URL` lines in the /etc/os-release file.

Optimizing resource consumption by the application

This section contains recommendations of Kaspersky experts on configuring Kaspersky Endpoint Security to optimize system resource consumption. The application running with default settings may impact system performance on some devices because of the same resources being used by your applications and Kaspersky Endpoint Security. To avoid performance degradation, we recommend following the steps in this section after installing the application and completing the initial configuration.

We recommend the following steps to optimize system resource consumption by the application:

1. **Put your devices in administration groups according to the role of each device in the infrastructure.**

   Take an inventory of devices and the functions they perform and put them in different administration groups based on those functions. For example, you can have an administration group with web servers, another administration group with database servers, a third administration group with user workstations, and so on.

2. **Configure the application for typical server roles.**

   Configure the application on devices according to their role in the infrastructure as recommended.

3. **Analyze the performance on pilot devices.**

   Pick 1 or 2 pilot devices in each administration group. For each device, analyze how Kaspersky Endpoint Security uses system resources and how this impacts the performance of installed applications.

4. **Configure the application on pilot devices based on the results of performance analysis.**

   If the performance of applications is significantly degraded or the amount of system resources consumed by Kaspersky Endpoint Security is critical for the operation of the operating system and applications, configure File Threat Protection and scan tasks as recommended.

   You can also optimize the Web Threat Protection and Network Threat Protection components.

5. **Update the configuration of the application on all devices.**

   If the above steps helped improve performance on your pilot device, make the same changes on other devices of the same type.

Recommendations for typical server roles

Web server

When using HTTPS, with high client load on the server, the Web Threat Protection and Network Threat Protection components may significantly increase the consumption of system resources. This is caused by the application decrypting and scanning HTTPS traffic.

Analyze how the server load changes while these components are running. To get help choosing optimal parameters and resolve compatibility issues, please contact Kaspersky Technical Support.

Proxy server

We recommend disabling the Web Threat Protection and Network Threat Protection components on the device that acts as a proxy server or load balancer.

Server with containerization

We recommend disabling the Web Threat Protection and Network Threat Protection components on servers that are used for containerization services. To protect container environments, you can use the Kaspersky Container Security application.

Analysis of application performance on the device

When scanning objects, Kaspersky Endpoint Security uses CPU resources, disk subsystem input/output, and RAM.

To view the information about resource consumption by the application, execute the following command:

```
top -bn1|grep kesl
```

> The command must be executed when the system is under load.

The command output shows the amount of used memory and processor time:

```
651 root 20 0 3014172 2.302g 154360 S 120.0 30.0 0:32.80 kesl
```

Column 6 displays the amount of resident memory – `2.302g`.

Column 9 displays the percentage of the processor cores usage – 120.0, where each core is represented by 100 percent. Thus, 120% means that one core is fully used, and the other is used at 20%.

If Kaspersky Endpoint Security critically slows down your system, you need to find out which application components and tasks are taking up system resources. To do this, examine the following on the device using the command line:

1. Analyze the resource consumption of the File Threat Protection task (task of the OAS type). In this way, you can find out if the performance issues are related to the File Threat Protection task or the scan tasks (tasks of the ODS and ContainerScan types), and follow the recommendations for the relevant tasks.

2. Identify the most frequently scanned objects. You can optimize performance by excluding safe objects and files from scanning.

> You can analyze the performance of tasks on the command line. If the device is managed by Kaspersky Security Center policy, you need to allow local task management while you carry out your investigation.

Analyzing the resource consumption of the File Threat Protection task

To analyze the resource consumption of the File Threat Protection task:

1. Stop all scan and monitoring tasks.
2. Make sure that on-demand scan tasks (tasks of the ODS and ContainerScan types) are not scheduled to run during your investigation:
   a. Get the list of all application tasks by executing the following command:
      `kesl-control --get-task-list`
   b. Get the schedule settings for all tasks of the ODS and ContainerScan types by running the following command:
      `kesl-control --get-schedule <task ID/name>`
      If the command output is `RuleType=Manual`, the task can only be started manually.
   c. For all tasks that have a `RuleType` other than `Manual`, change the schedule by running the following command:
      `kesl-control --set-schedule <task ID/name> RuleType=Manual`
3. Enable generation of application trace files with a high level of details by executing the following command:
   `kesl-control --set-app-settings TraceLevel=Detailed`
4. If the File Threat Protection task is not running, start it with the following command:
   `kesl-control --start-task 1`
5. Load the system in the mode that caused the performance problems; a few hours is enough.
6. Analyze the resulting trace files. By default, trace files are saved in the /var/log/kaspersky/kesl/ directory.

   Under load, the application writes a lot of information to the trace files; however only 10 files 500 MB each are kept, meaning that older information is overwritten.

   If performance and resource consumption issues persist, you may need to optimize File Threat Protection.

   If performance and resource consumption issues no longer occur, then the most likely cause of the issues are the on-demand scan tasks (tasks of the ODS and ContainerScan types). This means you need to optimize these tasks.
7. Disable creation of the application trace files by executing the following command:
   `kesl-control --set-app-settings TraceLevel=None`

Identifying the most frequently scanned objects

You can get the list of objects that have been scanned the most times by running the following command:

```
fgrep 'AVP ENTER' /var/log/kaspersky/kesl/kesl.* | awk '{print $8}' | sort | uniq -c |
sort -k1 -n -r|less
```

The result is loaded into less, a text viewer utility, where the objects that have been scanned the most times are displayed first.

If you need to aggregate object scanning statistics in subdirectories down to a certain depth starting from the root directory `/`, you can add `cut -d/ -f 1-X` to the command, where X is the nesting depth, for example:

```
fgrep 'AVP ENTER' /var/log/kaspersky/kesl/kesl.* | awk '{print $8}' | cut -d/ -f 1-4 |
sort | uniq -c | sort -k1 -n -r|less
```

If various services frequently write data to files in the system, such files are scanned again in the pending queue. Get the list of paths that have been scanned the most times in the pending queue by running the following command:

```
fgrep 'SYSCALL' /var/log/kaspersky/kesl/kesl.* | fgrep 'KLIF_ACTION_CLOSE_MODIFY' | awk
'{print $10}' | sort | uniq -c | sort -k1 -n -r
```

The files that were scanned the most times will appear at the beginning of the list.

If you need to aggregate object scanning statistics in subdirectories down to a certain depth starting from the root directory `/`, you can add `cut -d/ -f 1-X` to the command, where X is the nesting depth, for example:

```
fgrep 'SYSCALL' /var/log/kaspersky/kesl/kesl.* | fgrep 'KLIF_ACTION_CLOSE_MODIFY' | awk
'{print $10}' | tr -d ',' | cut -d/ -f 1-3 | sort | uniq -c | sort -k1 -n -r
```

We recommend determining whether the objects scanned the most number of times are dangerous. You can add objects and files confirmed as safe to exclusions to optimize File Threat Protection and scan tasks. For example, database files, directories, and log files can be considered safe if a write operation is performed by a trusted process. In case of any difficulties, contact Technical Support.

Recommendations for File Threat Protection and scan tasks

Optimizing File Threat Protection

To optimize the File Threat Protection component, you can:

- Configure scan exclusions for objects that are scanned most frequently and are safe.
- Configure exclusions from file operation interception.

- Change the file scanning mode to scan a file only when the file is opened. By default, the application scans a file when something attempts to open it, and scan it again when something attempts to close it, if the file was modified. You can change the file scanning mode in the File Threat Protection settings:

  - In the policy using the Web Console or Administration Console: set **File Threat Protection mode** to **When opened**.

  - Locally on the device using the following command:

    ```
    kesl-control --set-set 1 ScanByAccessType=Open
    ```

  Changes made to the file after it is opened are not scanned until the next opening of the file.

- Make sure that archive scanning is disabled (default value). Scanning archives impacts performance because access to the archive file is blocked while the file is being unpacked to the /tmp temporary directory and scanned. The definition of archive includes traditional archives as well as packaged objects such as .jar.

  You can enable or disable archive scanning using the Web Console or Administration Console (the **Scan archives** setting) or locally on the device using the command line (the `ScanArchived` setting).

- Limit the amount of RAM the application can use.

Optimizing scan tasks

To optimize scan tasks (tasks of the ODS and ContainerScan types), you can:

- Schedule scan tasks so that they do not overlap. The application allows running scan tasks simultaneously, but this may significantly increase resource consumption. Check the schedule of all ODS and ContainerScan tasks locally on the device or in Kaspersky Security Center.

- Run the scan at a time when the server load is minimal.

- Make sure that the scope of the scan tasks does not include remote directories mounted on the device via SMB and NFS. We recommend scanning such directories directly on the device that provides the resource. If this is not possible, do not perform the scan on servers that run critical services, because such a task may take quite a long time (depending on the connection speed and the number of files).

- Configure scan exclusions for objects that are scanned most frequently and are safe.

- Configure exclusions from file operation interception.

- Limit the amount of RAM the application can use.

Configuring scan exclusions

Scan exclusions help balance system security with performance. For example, according to Kaspersky virus experts, you can safely add data files and index files of databases to exclusions. It is believed that no danger exists of such files becoming virus vectors.

You can exclude safe objects on the list of most frequently scanned objects.

You can configure exclusions by file path (you can also specify the mount type), file mask, threat type, and path to the process performing file operations.

The application does not scan objects excluded from scanning, but file operations still experience minimal delays because the application still performs file operation interception and blocking. If you need to prevent even minimal delays, we recommend configuring exclusions from file operation interception.

You can configure File Threat Protection exclusions in a policy using the Web Console or Administration Console, or locally on the device using the command line.

You can also configure exclusions for scan tasks of the ODS and ContainerScan types. Exclusions are configured in task settings in Kaspersky Security Center or locally on the device using the command line.

Scan exclusion settings for one scan task do not affect other scan tasks. Exclusions must be configured separately for each scan task.

Below are examples of configuring File Threat Protection exclusions on the command line.

To exclude the /tmp/logs directory and all subdirectories and files recursively, execute the following command:

```
kesl-control --set-settings 1 --add-exclusion /tmp/logs
```

To exclude a specific file or files by mask in the /tmp/logs directory, execute the following command:

```
kesl-control --set-settings 1 --add-exclusion /tmp/logs/*.log
```

To exclude all files with the .log extension in the /tmp/ directory and subdirectories using a recursive mask, execute the following command:

```
kesl-control --set-settings 1 --add-exclusion /tmp/**/*.log
```

Configuring exclusions from file operation interception

Files excluded from scanning may still be intercepted by the application during File Threat Protection and scanning tasks. The application intercepts file operation events and blocks actions until the events are processed. After the scan, the application can:

- Unblock and allow the operation.
- Block the operation and perform the actions specified in protection or verification settings.

Intercepting events takes time, which affects the performance of other applications and the operating system.

You can get file interception statistics using the following command:

```
kesl-control --get-statistic --files
```

This command lets you display file operation interception statistics over the last 24 hours.

If necessary, you can use application trace files for more detailed analysis. By default, the application does not generate trace files. You can enable tracing using the following command:

```
kesl-control --set-app-settings TraceLevel=Detailed
```

Enabling tracing may impact overall system performance. We recommend disabling tracing when you no longer need trace files.

You can disable tracing using the following command:

```
kesl-control --set-app-settings TraceLevel=None
```

By analyzing trace files, you can get a list of files intercepted by the application and identify paths associated with a lot of file operation interception. You can get a list of intercepted files by running the following command:

```
grep 'FACACHE.*needs' /var/log/kaspersky/kesl/kesl.* | awk '{print $9}' | tr -d '}'|awk -F':' '{print $2}'|sort | uniq -c | sort -k1 -n -r
```

If you need to aggregate file operation interception statistics in subdirectories down to a certain depth starting from the root directory `/`, you can add `cut -d/ -f 1-X` to the command, where X is the nesting depth, for example:

```
grep 'FACACHE.*needs' /var/log/kaspersky/kesl/kesl.* | awk '{print $9}' | tr -d '}'|awk -F':' '{print $2}'| cut -d/ -f 1-3|sort | uniq -c | sort -k1 -n -r|less
```

To exclude files in a certain directory not only from scan, but also from interception, you need to exclude the entire mount point. Exclusion of mount points (global exclusion) allows you to exclude local or remote directories mounted on the device from interception of file operations.

Global exclusions have no effect on paths that are not mount points.

Kaspersky experts recommend using global exclusions in the following cases:

- The connection to a mounted remote resource, such as NFS or SMB, is slow.
- Even minimal lag is not acceptable.

To protect shared network resources, use the Kaspersky Endpoint Security application on the device where the resources are physically stored.

You can configure global exclusions in a policy using the Web Console or Administration Console, or locally on the device using the command line.

Below is an example of configuring a file operation interception exclusion using the command line.

To exclude all files in the /tmp directory from interception:

1. If the directory is not a mount point, create a mount point from it. For example, to create a mount point from the /tmp directory, run the following command:

   ```
   mount --bind /tmp/ /tmp
   ```

2. To keep the mount point after the server reboot, add the following line to the /etc/fstab file:

   ```
   /tmp /tmp none defaults,bind 0 0
   ```

3. Add the /tmp directory to the global exceptions by executing the following command:

   ```
   kesl-control --set-app-settings ExcludedMountPoint.item_0000=/tmp
   ```

4. If you want to add several directories, increase the item_0000 counter by one (item_0001, item_0002, and so on).

Setting the application memory usage limit

You can limit the amount of RAM that Kaspersky Endpoint Security uses when scanning files with the File Threat Protection component and when performing scan tasks of the ODS and ContainerScan types.

Limiting memory usage can be useful for systems with a large amount of RAM (more than 5 GB).

By default, the application may use up to 8192 MB of RAM. You can adjust the amount of RAM used by the application:

- In the policy, using the **Memory usage limit for scan tasks (MB)** setting.
- Locally on the device using the `ScanMemoryLimit=< amount of memory in megabytes >` setting in the kesl.ini configuration file.

If the specified value is less than 2 MB, the application uses the minimum value (2 MB). If the specified value is greater than the amount of RAM available on the device, the application uses up to 25% of the RAM. This value cannot be changed.

> This setting limits only the amount of memory used when scanning files. That means that the total amount of memory required by the application can be more than the value of this setting.

Recommendations for the Web Threat Protection and Network Threat Protection tasks

To reduce the impact of the Web Threat Protection and Network Threat Protection components on the performance of your applications, we recommend taking the following steps.

- Configure the firewall of the operating system. If the system has its own network rules (or firewalld rules) with Drop policies, then for the application to work correctly, you need to add an accept rule to allow incoming connections from the local device (loopback):

  Example command for iptables:

  ```
  iptables -A INPUT -i lo -j ACCEPT
  ```

- To ensure the compatibility of a REDIRECT rule (for example, redirection from port 443 to 8443) with the Network Threat Protection component interception rules:

  a. Delete a rule such as the following:

  ```
  iptables -t nat -A PREROUTING -p tcp -m tcp --dport 443 -j REDIRECT --to-ports 8443
  ```

  b. Replace it with the following rules:

  ```
  iptables -t nat -A PREROUTING -p tcp -m tcp --dport 443 -m mark ! --mark 0x400/0x400
  -j REDIRECT --to-ports 8443
  ```

  ```
  iptables -t nat -A OUTPUT -p tcp --dport 443 -m mark --mark 0x400/0x400 -m addrtype
  ! --src-type LOCAL -j DNAT --to-destination :8443
  ```

- Configure certificate verification policy. By default, the Web Threat Protection component decrypts and scans network traffic sent over encrypted connections. When doing so, the component can use the internet for the verification and download missing chains required to verify the certificate. If the device does not have direct internet access, you must select a local certificate verification method (without using the internet) or use a proxy server for internet access.

  You can select a local certificate verification method in the network traffic scan settings:

  - In the policy using the Web Console or Administration Console: set **Certificate verification policy** to **Local check**.

  - Locally on the device using the following command:

    ```
    kesl-control --set-net-settings CertificateVerificationPolicy=LocalCheck
    ```

  The application will not use the internet to verify certificates.

  You can configure a proxy server in a policy using the Web Console, Administration Console, or locally on the command line.

- Limit the list of network ports monitored by the application. By default, the application only monitors selected network ports. If the device uses an SMB connection, make sure the default value is used:

  - In the policy in the Web Console or Administration Console: in the network traffic scan settings, the **Monitor selected network ports only** option is selected.

  - Locally on the device: the `MonitorNetworkPort` network traffic scan setting is set to `Selected`.

When using the application together with the HAProxy load balancer, we recommend taking the following steps:

1. Open the /var/opt/kaspersky/kesl/common/kesl.ini configuration file, create the `[Environment]` section and add the `TcpSynInterceptDisabled=1` setting to it.

2. Restart the application:

   ```
   systemctl restart kesl
   ```

Using the Web Threat Protection and Network Threat Protection components together with Kubernetes containerization requires additional painstaking fine-tuning of the operating system firewall. The components cannot be used with Kubernetes if Cillium CNI is also used.

Updating the application from a previous version

You can only upgrade to Kaspersky Endpoint Security 12.4 for Linux from Kaspersky Endpoint Security 12.3 for Linux.

Upgrading earlier Kaspersky Endpoint Security versions to version 12.4 is not supported. If you have an earlier version of Kaspersky Endpoint Security installed, you need to first uninstall it and then install Kaspersky Endpoint Security 12.4 for Linux.

You need to prepare to install before installing Kaspersky Endpoint Security.

The application update procedure involves the following steps:

1. **Updating the Kaspersky Security Center Network Agent**

   If you are managing Kaspersky Endpoint Security using Kaspersky Security Center, you must update the Network Agent on the protected devices. The update is performed by installing a new version of Network Agent.

   > On a device running the Astra Linux Special Edition operating system, we recommend to update Network Agent remotely using Kaspersky Security Center, since updating using the command line in the Kaspersky Security Center administration console creates a new copy of the same managed device, and the old one becomes inaccessible.

   The application continues working correctly during the Network Agent update.

2. **Updating the Kaspersky Endpoint Security management plug-in**

   If you are managing Kaspersky Endpoint Security using Kaspersky Security Center, you must update the Kaspersky Endpoint Security management web plug-in or MMC plug-in, depending on the console that you are using to manage Kaspersky Security Center.

3. **Updating the application and graphical interface on protected devices**

   You must update the application installed on protected devices. The updated application retains the application usage mode that was selected during installation. If you want to use the application in a different mode, you must uninstall the application and then perform the installation and initial configuration of the application.

   If you are using Kaspersky Endpoint Security in Basic mode or in Endpoint Detection and Response Agent mode and you use the graphical interface of the application, you also need to update the graphical interface.

   You can update the application and the application's graphical interface in the following ways:

   - Remotely using Kaspersky Security Center.
   - Locally from the command line.

> If an error occurs while updating the application, the update is rolled back and the previous version of the application is started. In this case, an error message will be displayed, but the package manager (rpm/dpkg) will indicate the new version.

Even if Kaspersky Endpoint Security is launched before the update process start, if the update is completed successfully, a new application version is launched.

When you update the application to a newer version, the dump files of the previous version are deleted.

When you update the application, the event database file from the previous version becomes the first event file in the set of files of the current version. This file is kept until the number of events in the remaining files reaches the specified maximum number (the `MaxEventsNumber` setting). Therefore, a transient situation is possible wherein the application stores twice as many events as specified in the `MaxEventsNumber` setting.

If Kaspersky Endpoint Security is being used in Basic mode or in the Endpoint Detection and Response Agent mode, we recommend starting the database update task after updating the application.

Updating Kaspersky Endpoint Security management plug-ins

The administration plug-in for Kaspersky Endpoint Security is updated by installing the new version of the administration plug-in. Depending on the Kaspersky Security Center administration console that you use, you have to install:

- Kaspersky Endpoint Security management web plug-in
- Kaspersky Endpoint Security management MMC plug-in

Policies and tasks configured for previous versions of Kaspersky Endpoint Security are not compatible with the updated version of the application. If you use the Kaspersky Security Center Administration Console to manage the application, then after updating the MMC management plug-in, you can convert policies and tasks using the Kaspersky Security Center Policies and Tasks Batch Conversion Wizard (for details, see the Kaspersky Security Center Help).

The converted policies and tasks have names "<Original policy/task name> (converted)".

For most settings, converted policies and tasks use the values configured for the previous version of the application. Some settings are assigned special values. The settings that were not configured in the policies and tasks of the previous version take default values in the converted policies and tasks.

The procedure for converting policies and tasks is not available in Kaspersky Security Center Web Console. If you use the Web Console to manage the application, you must create new policies and tasks for the application in Kaspersky Security Center. You can migrate some values of settings of policies and tasks from a previous version of a policy or task to a new one by exporting and importing settings.

Management plug-ins of the previous version continue to work after installing the new version of Kaspersky Endpoint Security management plug-ins. You can use them to manage the previous version of Kaspersky Endpoint Security.

If you have updated the application on all client devices, you can uninstall the Kaspersky Endpoint Security administration plug-ins of the previous version.

When installing a new build of the MMC management plug-in for the same version of the application, you must first uninstall the currently installed MMC plug-in of this version, and then install the new MMC plug-in of this version.

Updating the application using Kaspersky Security Center

The application and graphical interface are updated by remotely installing the new version of the application packages and graphical interface on the protected device.

> The graphical interface is not supported if Kaspersky Endpoint Security is used in Light Agent mode to protect virtual environments.

Updating using Kaspersky Security Center involves the following steps:

1. Creating an installation package.

   For the remote installation, Kaspersky Endpoint Security installation package is used. You can create the installation package using the Kaspersky Security Center Web Console or the Administration Console.

2. Deploying the Kaspersky Endpoint Security application on devices in the corporate network.

   Kaspersky Security Center Web Console supports the following main deployment methods:

   - Installing the application using the Protection Deployment Wizard.
   - Installing the application using the remote installation task.

   The Kaspersky Security Center Administration Console supports the following main deployment methods:

   - Installing the application using the Remote Installation Wizard.
   - Installing the application using the remote installation task.

   For a description of the deployment procedures, see the Kaspersky Security Center Help.

Updating the application using the command line

Updating the application using the command line is performed by installing a new version of the application on the device from an RPM or DEB format package depending on the type of package manager.

> The graphical interface is not supported if Kaspersky Endpoint Security is used in Light Agent mode to protect virtual environments.

If the terms and conditions of the End User License Agreement and/or the Privacy Policy have changed in the new version of the application, you must accept the new terms and conditions during the update. Read the new version of the End User License Agreement and/or the Privacy Policy:

- The new version of the End User License Agreement is located in the ~/.kesl/<application version>/license.<language ID> directory.
- The new version of the Privacy Policy is located in the ~/.kesl/<application version>/license.<language ID> directory.

If you do not accept the conditions of the End User License Agreement and/or the Privacy Policy, the application will not be updated.

If the terms of the Kaspersky Security Network Statement changed in the new version of the application, you need to accept or decline the new terms of use for participating in Kaspersky Security Network. Read the new version of the document located in the ~/.kesl/<application version>/ksn_license.<language ID> directory. Refusal to participate in Kaspersky Security Network does not interrupt the Kaspersky Endpoint Security update process. You can enable, disable, or change Kaspersky Security Network mode later.

If you used KSN and accepted the conditions of the Kaspersky Security Network Statement in a previous version of the application, you need to accept the conditions of the Kaspersky Security Network Statement when updating the application. Otherwise, use of KSN will be disabled.

To accept the terms of the new agreements during the upgrade, use the variables `KESL_EULA_AGREED=yes`, `KESL_PRIVACY_POLICY_AGREED=yes`, and `KESL_USE_KSN=yes/no`.

To update the application:

1. Install the application package using the following command, depending on the package manager. If you have the graphical user interface of the previous version of the application installed, then you also need to start the package containing the files of the graphical user interface.

   - For an RPM package:

     ```
     # [KESL_EULA_AGREED=yes] [KESL_PRIVACY_POLICY_AGREED=yes] [KESL_USE_KSN=yes/no] rpm -U --replacefiles --replacepkgs kesl-12.4.0-<build number>.<arch>.rpm [kesl-gui-12.4.0-<build number>.<arch>.rpm]
     ```

     where <arch> is the architecture type:

     - i386 – for 32-bit operating systems
     - x86_64 – for 64-bit operating systems
     - aarch64 – for 64-bit operating systems for the Arm architecture

     On an operating system with a package manager of the RPM type, if the application package and the GUI package are both installed, we do not recommend updating only one of the packages without the other.

   - For a DEB package:

     ```
     # [KESL_EULA_AGREED=yes] [KESL_PRIVACY_POLICY_AGREED=yes] [KESL_USE_KSN=yes/no] apt-get install ./kesl_12.4.0-<build number>_<arch>.deb [./kesl-gui_12.4.0-<build number>_<arch>.deb]
     ```

where <arch> is the architecture type:

- i386 – for 32-bit operating systems
- amd64 – for 64-bit operating systems
- arm64 – for 64-bit operating systems for the Arm architecture

On an operating system with a package manager of the dpkg type, if the application package and the GUI package are both installed, either of the packages cannot be updated without the other.

2. Kaspersky Endpoint Security will restart automatically.

Example:
Update the RPM application package with the GUI package for 64-bit operating systems:

```
# KESL_EULA_AGREED=yes KESL_PRIVACY_POLICY_AGREED=yes KESL_USE_KSN=yes rpm -U --replacefiles --replacepkgs kesl-12.4.0-<build number>.x86_64.rpm kesl-gui-12.4.0-<build number>.x86_64.rpm
```

If you use the command line to manage the application, then after upgrading, most application settings use the values configured for the previous version of the application. Some settings are assigned special values. Settings that were missing in the previous version of the application take on default values in the new version of the application.

Changes to the application settings made after the update is complete and before the application restarts are not saved.

Special considerations when setting parameter values when updating the application

If you use Kaspersky Security Center Administration Console to manage the application, you can convert policies and tasks to use the values of policy and task settings configured for the previous version of the application (for more information, see the Kaspersky Security Center Help). The procedure for converting policies and tasks is not available in Kaspersky Security Center Web Console.

After updating the application using the command line, most settings carry over from the previous version of the application. You can also migrate application settings by exporting settings to a file and then importing them from that file.

Default values are assigned to settings that did not exist in the previous version of the application. Some settings are assigned special values.

Database update sources

In the new version of the application, the following changes have been made to the database update tasks:

- The **Use Kaspersky update servers if other update sources are not available** (`UseKLServersWhenUnavailable`) setting has been removed. You can configure this functionality using other task settings.

- You can specify multiple update database update sources at the same time. The application uses these update sources in the order in which they appear in the list of sources.

After converting tasks in the MMC plug-in, the update sources are configured as follows:

- If the **Kaspersky update servers** option was selected in the previous version, the **Kaspersky update servers** check box is selected in the list of sources.

- If the **Kaspersky Security Center** option was selected in the previous version, the **Kaspersky Security Center** check box is selected in the list of sources.

  However, if the **Use Kaspersky update servers if other update sources are not available** check box was selected in the previous version, then the **Kaspersky update servers** check box is also selected in the list of sources, and the **Kaspersky Security Center** source is moved to the top of the list.

- If a custom source was configured in the previous version (**Other sources on the local or global network**), then the custom source with the specified parameters (path or web address of the source) is added to the list of sources, and this check box is selected.

  However, if the **Use Kaspersky update servers if other update sources are not available** check box was selected in the previous version, then the **Kaspersky update servers** check box is also selected in the list of sources, and the custom source is moved to the top of the list.

The conversion of policies is not supported by the web plug-in.

After updating the application on the command line, update sources are configured as follows:

- If the `SourceType` was set to `KLServers` in the previous version, the following update source is created in the **[Sources]** section: `SourceType=KLServers`, `Enabled=Yes`.

- If the `SourceType` was set to `SCServer` in the previous version, the following update source is created in the **[Sources]** section: `SourceType=SCServer`, `Enabled=Yes`.

  However, if the parameter was set to `UseKLServersWhenUnavailable=Yes` in the previous version, a second update source is created in the **[Sources]** section: `SourceType=KLServers`, `Enabled=Yes`.

- If `SourceType` was set to `Custom` in the previous version, and the custom source was configured in the **[CustomSources.item_#]** section, a custom update source is created in the **[Sources]** section: `SourceType=Custom`, `URL=<path or web address of the source>`, `Enabled=Yes`.

  However, if the parameter was set to `UseKLServersWhenUnavailable=Yes` in the previous version, a second update source is created in the **[Sources]** section: `SourceType=KLServers`, `Enabled=Yes`.

System event interception settings

If the system event interception mechanism based on the updatable kernel module was selected in the previous version of the application, after the update, the application switches to intercepting system events using the fanotify. Then, after updating the databases and application modules and automatically restarting, the application reverts to using the updatable kernel module again.

Kaspersky Security Network settings

After converting a policy in the MMC plug-in, the Kaspersky Security Network settings in the policy properties depend on whether you accepted or rejected the terms of the Kaspersky Security Network Statement in the Policies and Tasks Batch Conversion Wizard:

- If you accepted the terms of the Statement, the **Extended KSN mode** option is selected.
- If you rejected the terms of the Statement, the **Do not use KSN** option is selected.

The conversion of policies is not supported by the web plug-in.

After upgrading the application on the command line, the `UseKSN` setting is set to `No` if when updating you set `KESL_USE_KSN=No`, and `UseKSN=Extended` is applied if you set `KESL_USE_KSN=Yes`. In other cases, the value of the `UseKSN` setting does not change after the update.

Cloud mode settings

After converting a policy in the MMC plug-in, the settings for using cloud mode may change depending on whether you accepted or rejected the terms of the Kaspersky Security Network Statement in the Policies and Tasks Batch Conversion Wizard:

- If you accepted the terms of the Statement, the **Enable cloud mode** check box will be selected.
- If you rejected the terms of the Statement, the **Enable cloud mode** check box will be cleared.

The conversion of policies is not supported by the web plug-in.

After updating the application on the command line, `CloudMode` is set to:

- `CloudMode=No` if `UseKSN=No` after the upgrade.
- `CloudMode=Yes` if `UseKSN=Basic/Extended` was set after the update and `CloudMode=Yes` was set before the update.

Cloud mode is available if use of KSN is enabled. To enable cloud mode:

- If using the MMC or web plug-in, select the **Extended KSN mode** option and select the **Enable cloud mode** check box.
- When using the command line, set the `UseKSN` parameter to `Basic` or `Extended` and the `CloudMode` parameter to `Yes`.

Kaspersky Managed Detection and Response integration settings

If the MDR component was enabled, after converting the policy in the MMC plug-in, the status of the MDR component depends on whether you have accepted or rejected the terms of the Kaspersky Security Network Statement in the Policies and Tasks Conversion Wizard:

- If you have accepted the terms of the Statement, the MDR component remains enabled (the **Enable Managed Detection and Response** check box is selected).
- If you have rejected the terms of the Statement, the **Enable Managed Detection and Response** check box is cleared.

The conversion of policies is not supported by the web plug-in.

After updating the application on the command line, `UseMDR` is set to:

- `UseMDR=No` if `UseKSN=No` after the upgrade.
- `UseMDR=Yes` if `UseKSN=Basic/Extended` was set after the update and `UseMDR=Yes` was set before the update.

If you want to use the Kaspersky Managed Detection and Response functionality, you need to enable the extended mode of Kaspersky Security Network.

Uninstalling the application

Uninstalling Kaspersky Endpoint Security involves the following steps:

1. **Uninstalling the application and graphical interface of the application**

   Uninstall the packages of the application and, if you are using the graphical interface, the packages of the graphical interface from the protected devices.

   You can uninstall both the application package and the graphical interface package, or uninstall only the graphical interface package. It is not possible to uninstall only the application package if the graphical interface package is installed.

   You can uninstall the application and the application's graphical interface in the following ways:

   - Remotely using Kaspersky Security Center.
   - Locally from the command line.

   > While the application is being uninstalled, all Kaspersky Endpoint Security tasks will be stopped on the device.

2. **Removing Network Agent**

   If you were using Kaspersky Security Center to manage Kaspersky Endpoint Security, you must uninstall the Network Agent from protected devices.

   You can uninstall Network Agent in the following ways:

   - Remotely using Kaspersky Security Center.
   - Locally from the command line.

3. **Uninstalling the Kaspersky Endpoint Security management plug-in**

   If you were using Kaspersky Security Center to manage Kaspersky Endpoint Security, you must uninstall the Kaspersky Endpoint Security administration web plug-in or MMC plug-in, depending on the console that you were using to manage Kaspersky Security Center.

> After removing the application, all information saved by the application is deleted, except for the license database. Installed application certificates are also removed. The license database is saved, and you can use it to reinstall the application. The unique ID of the application installation (SensorID) is also saved.

If the application was installed in a systemd, the systemd settings are restored to their initial state after the application uninstallation.

Uninstalling the application and Network Agent using Kaspersky Security Center

You can remotely uninstall Kaspersky Endpoint Security and Network Agent from the client devices.

Uninstallation is performed using the remote uninstallation of applications task in Kaspersky Security Center Web Console or in the Administration Console. For more information, see the Kaspersky Security Center Help.

If you want to remove only the graphical user interface without removing the application, specify the `USE_GUI=No` setting value in the autoinstall.ini configuration file and start the remote application installation task.

Uninstallation is performed in the background. After the application uninstallation finishes, you will be prompted to restart the client device.

Uninstalling the application using the command line

Removing the application package and the graphical user interface package

To uninstall the application and the graphical interface installed from the RPM packages, run the following command:

```
# rpm -e kesl kesl-gui
```

To remove the application and the graphical user interface installed from DEB packages, run the following command:

```
# apt-get purge kesl kesl-gui
```

Uninstalling the application package without the graphical user interface package

To uninstall the application installed from the RPM package without removing the graphical user interface, run the following command:

```
# rpm -e kesl
```

To uninstall the application installed from the DEB package without removing the graphical user interface, run the following command:

```
# apt-get purge kesl
```

Removing the graphical user interface package

To remove the graphical interface that was installed from an RPM package, run the following command:

```
# rpm -e kesl-gui
```

To remove the graphical interface that was installed from a DEB package, run the following command:

```
# apt-get purge kesl-gui
```

After the uninstallation procedure is complete, a message about the results of the uninstallation is displayed.

Network Agent removal using the command line

To uninstall the Network Agent installed on a 32-bit operating system from an RPM package, run the following command:

```
# rpm -e klnagent
```

To uninstall the Network Agent installed on a 64-bit operating system from an RPM package, run the following command:

```
# rpm -e klnagent64
```

To uninstall the Network Agent installed on a 32-bit operating system from a DEB package, run the following command:

```
# apt-get purge klnagent
```

To uninstall the Network Agent installed on a 64-bit operating system from a DEB package, run the following command:

```
# apt-get purge klnagent64
```

After the uninstallation procedure is complete, a message about the results of the uninstallation is displayed.

Uninstalling the Kaspersky Endpoint Security management plug-ins

The Kaspersky Endpoint Security web management plug-in is uninstalled in Kaspersky Security Center Web Console from the list of installed plug-ins (**Settings** → **Web Plug-ins**).

To remove the Kaspersky Endpoint Security MMC management plug-in:

1. Close the Kaspersky Security Center Administration Console.
2. On the device where the Kaspersky Security Center Administration Console is installed, open the Windows registry editor and go to:

   ```
   HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\KasperskyLab\Components\28\Plugins
   ```

   This key contains information about all management plug-ins installed in the Administration Console. The name of the managed application is in the **DisplayName** value.

3. Select the section corresponding to the relevant version of the Kaspersky Endpoint Security application plug-in.

4. Open and copy the **UninstallString** value.

5. Open the command prompt as administrator, paste the copied value and press **Enter**.

Application licensing

This section contains information about the basic concepts associated with licensing Kaspersky applications, as well as information about the specifics of activating the Kaspersky Endpoint Security application.

After activating the application, we recommend monitoring the license validity period in order to renew the license in a timely manner when necessary. You can use Kaspersky Security Center or the command line on a protected device to view information about license keys used by Kaspersky Endpoint Security.

About the End User License Agreement

The *End User License Agreement* is a binding agreement between you and AO Kaspersky Lab, stipulating the terms on which you may use the application.

Read through the terms of the End User License Agreement carefully before you start using the application.

You can read the End User License Agreement and the Privacy Policy, which describes data processing and provision:

- Before installing the application in the license.<language identifier> file. This file is included in the application distribution kit.
- During Kaspersky Endpoint Security installation.

  By confirming your consent to the text of the End User License Agreement and Privacy Policy when creating the application installation package (if installed using Kaspersky Security Center) or during the initial application configuration (if installing using the command line), you accept the terms of the End User License Agreement and Privacy Policy If you do not accept the terms of the End User License Agreement or Privacy Policy, you must cancel the installation of the application and may not use the application.
- After the application is installed, the files containing the texts of the End User License Agreement of the Kaspersky application and the Privacy Policy are located on the protected device in the /opt/kaspersky/kesl/doc/license.<language ID> directory.

About the license

A *license* is a time-limited right to use Kaspersky Endpoint Security, granted under the End User License Agreement.

The list of available functions and the validity period of the application depend on the license under which the application is used.

The following license types are provided:

- *Trial*

Free license intended for trying out the application. Trial licenses have a short validity period.

When the trial license expires, all Kaspersky Endpoint Security features become disabled. To continue using the application, you need to purchase a commercial license.

You can use the application under a trial license for only one trial period.

- *Commercial*

  Paid license.

  The main functions of the application stop working when a commercial license expires. To continue using Kaspersky Endpoint Security, you need to renew the commercial license. After the license expires, you can no longer use the application and must uninstall it from the device.

  It is recommended to renew the license before its expiration date to ensure continued protection of your device against security threats.

To activate the Kaspersky Endpoint Security application, you need a license that covers the basic functionality of the application. The main license can also include additional functionality of the application (for example, the Integration with Kaspersky Detection and Response solutions functionality). If the main license which you are using for the application does not cover the additional functionality that you need, you must purchase a separate license to activate the additional functionality.

To clarify the range of functionality included in the main license and the additional functionality license, please contact the Kaspersky partner from which you are purchasing the license.

About license certificate

A *license certificate* is a document transferred to the user together with a key file or activation code.

The license certificate contains the following license information:

- License ID or order number.
- Details of the user to whom the license is granted.
- Details of the application that can be activated using the license.
- Limitation on the number of licensed units (for example, the number of devices on which the application can be used under the license).
- License term start date.
- License expiration date or license term.
- License type.

About license key

A *license key* is a sequence of bits that you can use to activate and then use the application in accordance with the terms of the End User License Agreement. License key is generated by Kaspersky experts.

To activate the application, you need the main license key. If the main license which you are using for the application does not include the additional functionality that you need (for example, Kaspersky Endpoint Detection and Response Optimum functionality), you also need a license key to activate the additional functionality.

You can add a license key to the protected device using one of the following methods: by applying a *key file* or by entering an *activation code*. After you add a key to the protected device, the license key is displayed in the application interface as a unique alphanumeric sequence.

The license key may be blocked by Kaspersky, if the terms of the End User License Agreement are violated. If the license key is blocked, add another license key for proper application operation.

A license key can be added as an active key or as a reserve key.

- *Active license key* is currently used to run the application. A trial license key, commercial license key (commercial key), or subscription key can be added as the active key. You can add only one main license key as the active key. You can have multiple active license keys for additional functionality.

- *Reserve license key* is a license key that entitles the user to use the application, but is not currently in use. The reserve license key automatically becomes active when the license associated with the current active license key expires.

  To extend the term of the application's main license, you can add a reserve key for the basic functionality. If you have activated additional functionality under a separate license, you can also add a reserve key for additional functionality.

  A reserve license key can be added only if an active license key of the same type is already added.

  > A trial license key can only be added as an active license key. A trial license key or a subscription key cannot be added as a reserve license key.

About activation code

An *activation code* is a unique sequence of 20 alphanumeric characters. You enter an activation code to add a license key that activates Kaspersky Endpoint Security. You receive the activation code at the email address that you provided when you bought Kaspersky Endpoint Security or requested the trial version of Kaspersky Endpoint Security.

To activate the application with an activation code, you need Internet access in order to connect to Kaspersky activation servers.

If you lost your activation code after activating the application, contact the Kaspersky partner from whom you purchased the license.

About the key file

A *key file* is a file with the .key extension that you receive from Kaspersky. The purpose of a key file is to add a license key that activates the application.

You receive a key file at the email address that you provided when you purchased Kaspersky Endpoint Security or ordered the trial version of Kaspersky Endpoint Security.

You do not need to connect to Kaspersky activation servers in order to activate the application with a key file.

You can restore a key file if it has been accidentally deleted. You may need a key file to register a Kaspersky CompanyAccount, for example.

To restore your key file, perform any of the following actions:

- Contact the license seller.
- Obtain a key file on the Kaspersky website based on your existing activation code.

About subscription

Subscription for Kaspersky Endpoint Security is a purchase order for the application with specific settings (subscription expiry date, number of devices protected). You can order a subscription for Kaspersky Endpoint Security from your service provider (such as your internet service provider). You can renew or cancel your subscription. You can manage your subscription on the website of the service provider.

Subscription can be limited (for one year, for example) or unlimited (without an expiry date). To continue using the application after the limited subscription expires, you need to renew your subscription. Unlimited subscription is renewed automatically if the vendor's services have been prepaid on time.

Upon a limited subscription's expiry, you may be offered a grace period to renew the subscription. During this period the application retains its functionality. The service provider decides whether or not to grant a grace period and, if so, determines the duration of the grace period.

The set of options for managing your subscription may vary depending on your service provider. The service provider might not provide a grace period for renewing the subscription where the application retains its functionality.

To use Kaspersky Endpoint Security under a subscription, you need to use the activation code received from the service provider. After you apply the activation code, an active key corresponding to the license to use the application under subscription is added to the application. A reserve key can only be added when you use an activation code and cannot be added for a key file or subscription.

Activation codes purchased under subscription may not be used to activate previous versions of Kaspersky Endpoint Security.

Comparison of application features across different licenses

The available functionality of the Kaspersky Endpoint Security application depends on the type of the main license.

The main license of the application may cover basic as well as additional functionality of the application. For example, the "Kaspersky Optimum Security" license allows you to activate the main protection and control components, as well as the Kaspersky Endpoint Detection and Response Optimum Integration functionality.

You can use separate licenses for additional functionality of the application, for example, a license to activate the Kaspersky Unified Monitoring and Analysis Platform functionality.

To clarify the range of functionality included in the main license and the additional functionality license, please contact the Kaspersky partner from which you are purchasing the license.

Open the list of solution functions covered by the main application licenses

Application activation and license key management

Activation is the process of giving effect to license that allows you to use a fully functional version of the application until the license expires.

To activate the Kaspersky Endpoint Security application on a protected device, you need to add main license key to the application. If the main license which you are using for the application does not cover the additional Kaspersky Endpoint Security functionality that you need, you also need to add a license key to activate the additional functionality:

- A separate license key, "Kaspersky Endpoint Detection and Response Optimum Add-on" (hereinafter also referred to as the "EDR Optimum key"), to activate the Kaspersky EDR Optimum component.
- A separate license key, "Kaspersky Unified Monitoring and Analysis Platform Add-on" (hereinafter also referred to as the "KUMA key"), to activate the Kaspersky Unified Monitoring and Analysis Platform functionality.
- A separate license key, "Kaspersky Managed Detection and Response Optimum/Expert Add-on" (hereinafter also referred to as the "MDR key"), to activate the Kaspersky MDR component.
- A separate license key, "Kaspersky Endpoint Detection and Response Expert (on-premise) Add-on" (hereinafter also referred to as the "EDR Expert (on-premise) key"), to activate the EDR Expert (on-premise) component.

The EDR Expert (on-premise) key is also used to activate the Kaspersky Endpoint Security application in the Endpoint Detection and Response Agent mode. In this mode, you do not need to add the main license key to the application.

You can add license keys to the application in one of the following ways:

- Using a key file
- Using an activation code

If Kaspersky Endpoint Security is used in Light Agent mode to protect virtual environments, the application does not need to be activated. You only activate Kaspersky Security for Virtualization Light Agent. Activation is performed on the Protection Server side (a component of Kaspersky Security for Virtualization Light Agent) by adding the license key on the SVM. A license key for activating additional functionality is also added to the SVM, if necessary.

If you did not activate the Kaspersky Endpoint Security application during installation (by adding a key to the installation package or by completing the initial configuration), you need to activate the installed application in one of the following ways:

- Remotely, using Kaspersky Security Center:
  - Using the Add key task.
  - By distributing a license key stored on the Administration Server to the client devices.
- On the command line using administration commands.

To add an additional functionality license key to the application, you can also use the Add key task, the procedure for distributing a key to client devices, or license key management commands. Adding a key that provides the additional functionality is no different from adding the main license key for the application.

If Kaspersky Endpoint Security is being used in standard mode, a key for additional functionality can be added only after adding the main license key of the application.

You can also add a reserve key for the basic functionality of the application and a reserve key for the additional functionality. A reserve key becomes active when the license associated with the active key expires or when the active key is deleted. Availability of a reserve key allows you to avoid application functionality limitation when your license expires.

A reserve license key can be added only after adding an active license key.

You can view information about license keys remotely added to the application using Kaspersky Security Center or the command line on a protected device.

You can also use the graphical user interface to activate the application and manage license keys.

Activating the application using Kaspersky Security Center

You can add license keys to the application through Kaspersky Security Center in the following ways:

- Using the Add key task.

  This method allows you to add a license key to a specific device or the devices included in an administration group. When creating a task, it uses the key that is added to the Kaspersky Security Center key store. You can add a license key to the key store in advance or when creating the activation task.

- By distributing a license key stored on Kaspersky Security Center Administration Server to the client devices.

  This method lets you automatically add a key to the client devices that are already connected to Kaspersky Security Center, and to new client devices. To use this method, first add the key to the Kaspersky Security Center key store.

You can use the Kaspersky Security Center Web Console or Kaspersky Security Center Administration Console to create tasks for adding a key to the application, adding a key to the key store, and distributing the key to the client devices.

Adding keys using the Kaspersky Security Center Web Console.

To add a key to Kaspersky Security Center key storage using the Web Console:

1. In the Web Console main window, select **Operations** → **Kaspersky Licenses**.
2. Click the **Add** button.
3. In the window that opens, select how to add the key to the repository:
   - **Enter the activation code** to add a key using an activation code.
   - **Add a key file** to add a key using a key file.
4. Depending on the key adding method you selected at the previous step, do one of the following:
   - Enter the activation code and click **Submit**.
   - Click the **Select key file** button and in the window that opens, select a file with the .key extension.
5. Click the **Close** button.

The added key will appear in the list of keys.

To add a key to the application via the Web Console using an Add Key task:

1. In the main window of the Web Console, select **Assets (Devices)** → **Tasks**.
   The list of tasks opens.
2. Click the **Add** button.
   The Task Wizard starts.
3. Configure the task settings:
   a. In the **Application** drop-down list, select the application name: Kaspersky Endpoint Security.
   b. In the **Task type** drop-down list, select **Add Key**.
   c. In the **Task name** field, enter a brief description, such as `Activation of Kaspersky Endpoint Security`.
   d. In the **Devices to which the task will be assigned** section, select the task scope. Click **Next**.
4. Select devices according to the selected task scope option. Click **Next**.
   The **Kaspersky Security Center key storage** window opens.
5. If you have previously added a key to Kaspersky Security Center key storage, select the key from in the list and click **Next**.

6. If the required key cannot be found in the key storage, click the **Add key** button.

   a. In the window that opens, select how to add the key to the repository:

   - **Enter the activation code** to add a key using an activation code.
   - **Add a key file** to add a key using a key file.

   b. Depending on the key adding method you selected at the previous step, do one of the following:

   - Enter the activation code and click **Submit**.
   - Click the **Select key file** button and in the window that opens, select a file with the .key extension.

   c. Read the information about the key and click **Close**.

   d. The added key will appear in the list of keys. Select it from the list and click **Next**.

7. Read the information about the license and click **Next**.

8. Finish the wizard.

   A new task will be displayed in the list of tasks.

9. Select the check box next to the task. Click the **Start** button.

In the properties of the *Add key* task, you can add a *reserve key* to the application. A reserve key becomes active when the license associated with the active key expires or when the active key is deleted. Availability of a reserve key allows you to avoid application functionality limitation when your license expires.

If you are adding a reserve key but no active key has been added to the application yet, the task ends with an error.

To add a key using the Web Console by distributing a key stored on the Administration Server to the devices:

1. In the Web Console main window, select **Operations** → **Kaspersky Licenses**.

2. Open the key properties using the link with the name of the application for that the key is intended to.

3. On the **General** tab, select the **Automatically distribute a license key to managed devices** check box.

4. Click the **Save** button.

The license key is automatically distributed to the appropriate client devices.

A new license key is added to a device only if the application has not yet been activated on the device or if the license expires in less than 14 days.

During the automatic distribution of a key as an active or a reserve key, the licensing limit on the number of devices (set in the key properties) is taken into account. If the licensing limit is reached, distribution of this key to the devices stops automatically. You can view the number of devices to which the key has been added and other information in the key properties on the **Devices** tab.

Special considerations for the activation process in Kaspersky Security Center Cloud Console

A trial version is provided for the Kaspersky Security Center Cloud Console. The *trial version* is a special version of Kaspersky Security Center Cloud Console designed to familiarize a user with the features of Cloud Console. In this version, you can perform actions in a workspace for a period of 30 days. All managed applications, including Kaspersky Endpoint Security, are automatically activated under Kaspersky Security Center Cloud Console trial license. However, you cannot activate Kaspersky Endpoint Security using its own trial license when the trial license for the Cloud Console expires. For more details about Cloud Console, please refer to Kaspersky Security Center Cloud Console documentation.

The trial version of Kaspersky Security Center Cloud Console does not allow you to subsequently switch to a commercial version. Any trial workspace will be automatically deleted with all its contents after the 30-day period expires.

License key management on the command line

To manage license keys on a device, you can use license key management commands.

License key management commands can be used only if the application is running in standard mode or in Endpoint Detection and Response Agent mode. If Kaspersky Endpoint Security is used in Light Agent mode to protect virtual environments, commands for managing license keys finish with an error. You activate the application as part of Kaspersky Security for Virtualization Light Agent, and therefore do not need to activate the application separately.

To add an active license key to the application, run the following command:

```
kesl-control [-L] --add-active-key <path to key file/activation code>
```

where:

- `<path to the key file>` – path to the key file. If the key file is located in the current directory, it is sufficient to specify only the file name.
- `<activation code>` – activation code.

To add a reserve license key to the application, run the following command:

```
kesl-control [-L] --add-reserve-key <path to key file/activation code>
```

If an active key has not yet been added to the application on the device, the command fails.

You can use the add key command to add main license keys of the application as well as license keys for additional functionality. You do not need to specify the type of the key in the command.

Different commands are provided for removing the main license keys and additional functionality keys.

To remove an active main key, run the following command:

```
kesl-control [-L] --remove-active-key
```

To remove a reserve main key, run the following command:

```
kesl-control [-L] --remove-reserve-key
```

To remove an active EDR Optimum key, run the following command:

```
kesl-control [-L] --remove-active-key --edr-optimum
```

To remove a reserve EDR Optimum key, run the following command:

```
kesl-control [-L] --remove-reserve-key --edr-optimum
```

To remove the active KUMA key, run the following command:

```
kesl-control [-L] --remove-active-key --kuma
```

To remove the reserve KUMA key, run the following command:

```
kesl-control [-L] --remove-reserve-key --kuma
```

To remove the active MDR key, run the following command:

```
kesl-control [-L] --remove-active-key --mdr
```

To remove the reserve MDR key, run the following command:

```
kesl-control [-L] --remove-reserve-key --mdr
```

To remove an active EDR Expert (on-premise) key, run the following command:

```
kesl-control [-L] --remove-active-key --edr-kata
```

To remove a reserve EDR Expert (on-premise) key, run the following command:

```
kesl-control [-L] --remove-reserve-key --edr-kata
```

Viewing information about used license keys

You can view information about the license keys being used by Kaspersky Endpoint Security in the following ways:

- In Kaspersky Security Center, in the properties of the Add key task.

  In the properties of the *Add key task*, you can find information about the key that this task adds to the application.

- In Kaspersky Security Center, in the properties of the relevant Kaspersky application installed on the client device.

  In the properties of the Kaspersky Endpoint Security application on the protected device, you can find information about the active and reserve keys added to the application on this device. You can view the properties of the application using the Web Console as well as the Administration Console.

- In Kaspersky Security Center, in the license key usage report.

  You can view the license key usage report using the Web Console (**Monitoring & reporting → Reports**), as well as the Administration Console (**Reports** tab). To view the report, you need to select the "Report on usage of license keys" template in the list of reports and start generating the report.

- In Kaspersky Security Center, in the Kaspersky Security Center license key store.

  You can open the key store using the Web Console (**Operations → Kaspersky licenses**) or using the Administration Console (**Kaspersky licenses** folder). The store displays information about all keys added to Kaspersky Security Center Administration Server.

- On a device with Kaspersky Endpoint Security installed. You can view information about the license used by the Kaspersky Endpoint Security application on the command line.

You can also use notifications about Kaspersky Security Center events to get information about the used license keys and the licenses associated with them. The application sends information about expired licenses and license violations to the Kaspersky Security Center Administration Server.

If you use the Kaspersky Endpoint Security application in standard mode or in Endpoint Detection and Response Agent mode, and you use Kaspersky Security Center to manage the application, by default, information about license keys being added and removed and about license term expiration is recorded in the operating system log.

Viewing information about license keys on a device using the Web Console

To view information about license keys added to the device in the Web Console:

1. In the main window of the Web Console, select **Assets (Devices) → Managed devices**.

   The list of managed devices opens.

2. Select the administration group containing the necessary device. To do so, click the link in the **Current path** field above the list of managed devices and select an administration group in the window that opens.

   The list displays only the managed devices for the selected administration group.

3. In the list, find the device for which you want to view information and click the device name.

4. This opens a managed device properties window; in that window, go to the **Applications** tab.

5. In the list of applications installed on the device, click Kaspersky Endpoint Security.

6. This opens the application properties window; in that window, select the **General** tab and go to the **Licenses** section.

This section displays information about license keys added to the application and the licenses associated with these keys.

- **License key status** is the status of the key: active or reserve.
- **Application name** is the name of the license associated with the key and information about this license.
- **License key** is the license key, a unique alphanumeric sequence.
- **License type** can be trial, commercial, or subscription.
- **Activation date** is the date when this key was added.
- **Expiration date** is the date when your right to use the application activated by adding this key expires.

Viewing information about license keys on a device using the Administration Console

To view information about the license keys added to the device in Kaspersky Security Center Administration Console:

1. In the Kaspersky Security Center Administration Console tree, in the **Managed devices** folder, select the administration group containing the required device.
2. In the workspace, select the **Devices** tab.
3. In the list of managed devices, select the required device and double-click it to open the **Properties: <Task name>** window.
4. In the displayed window with the properties of the managed device, select the **Applications** section.

   The right part of the window displays a list of Kaspersky applications installed on the device.
5. Select Kaspersky Endpoint Security and double-click it to open the application properties window. Alternatively, you can use the **Properties** button in the lower part of the window.
6. This opens a window; in that window, go to the **License keys** section.

   This section contains information about the active and reserve license keys:

   - **Serial number** – unique alphanumeric sequence.
   - **Status** – The status of the license key, for example active or reserve.
   - **Type**: type of license (commercial or trial).
   - **License validity period** — Number of days during which you can use the application activated by adding this key.
   - **License limit** — Number of devices on which you can use the key.

- **Activation date** (this field is only available for the active key): date when the active key was added.
- **License expiration date** (this field is only available for the active key): date when the application can no longer be used with the current active key.

Viewing information about the license and the key in the command line

In the command line, using the `-L --query` command, you can view information about the active and reserve license keys added to the application, and about the license under which the application has been activated. If a separate key has been added to the application to activate additional functionality, information about the added active and reserve license keys for additional functionality is also displayed.

To view information about the license keys and license on the device, run the following command:

```
kesl-control -L --query [--json]
```

where `--json`: output data in JSON format. If the `--json` option is not specified, the settings are output in the INI format.

As a result of the command execution, the following information will be displayed in the console:

- Information about the active main license key, if this key has been added:
  - Date and time when the license for using the application expires.
  - Number of days before the end of the license term.
  - Information about the limitation of protection functions.
  - Information about the limitation of the function for updating application databases.
  - Information about the status of the license key.
  - The type of license associated with the key.
  - Licensing limitation of the key (the number of licensing units).
  - Name of the application that the key is intended to activate.
  - Active license key (unique alphanumeric sequence).
  - Activation date.
- Information about the reserve main license key. Displayed if the application is being used in standard mode and a reserve key has been added. If the application is used in Light Agent mode for protecting virtual environments, information about the reserve key is not displayed; the reserve key is added to the SVM.
  - Date and time when the license for using the application expires.
  - Information about the limitation of protection functions.

- Information about the limitation of the function for updating application databases.
- Information about the status of the license key.
- The type of license associated with the key.
- Licensing limitation of the key (the number of licensing units).
- Name of the application that the key is intended to activate.
- Reserve license key (unique alphanumeric sequence).
- Date and time when the license associated with the active key expires, in UTC.

- Information about the active key for additional functionality if a separate key has been added:
  - Expiration date and time of the license that activates additional functionality.
  - Number of days before the end of the license term.
  - Information about the limitation of the function for updating application databases.
  - Information about the status of the license key.
  - The type of license associated with the key.
  - Licensing limitation of the key (the number of licensing units).
  - Name of the application that the key is intended to activate.
  - Active license key (unique alphanumeric sequence).
  - Activation date.

- Information about the reserve key for additional functionality. Displayed if the application is being used in Basic mode or in Endpoint Detection and Response Agent mode, and a reserve key has been added for additional functionality. If the application is used in Light Agent mode for protecting virtual environments, information about the reserve key is not displayed; the reserve key is added to the SVM.
  - Expiration date and time of the license that activates additional functionality.
  - Information about the limitation of the function for updating application databases.
  - Information about the status of the license key.
  - The type of license associated with the key.
  - Licensing limitation of the key (the number of licensing units).
  - Name of the application that the key is intended to activate.
  - Reserve license key (unique alphanumeric sequence).
  - Date and time when the license associated with the active key expires, in UTC.

You can also get information about the license under which the application is being used when viewing information about the operation of the application using the `kesl-control --app-info` command.

Data provision

This section describes the information that Kaspersky Endpoint Security may store on the device and automatically send to Kaspersky during its operation.

Kaspersky protects any information thus received in accordance with law and the applicable rules of Kaspersky. Data is transmitted over encrypted channels.

For more detailed information about the processing, storage, and destruction of information obtained during the use of the application and transmitted to Kaspersky, please read the End User License Agreement, the KSN Statement, and refer to the Privacy Policy on the Kaspersky website. The license.<language ID> and ksn_license.<language ID> files containing the End User License Agreement and Kaspersky Security Network Statement are included in the application distribution package.

Data provided when using an activation code

If Kaspersky Endpoint Security is used in standard mode or in Endpoint Detection and Response Agent mode and is activated using an activation code, in order to verify if the application is being used legally and to obtain statistical information on the distribution and use of the application, you agree to automatically provide the following information to Kaspersky:

- Type, version, and localization of the installed application
- Versions of installed application updates
- Device ID and application installation ID on the device
- Activation code that was used to activate the application
- ID of the current license
- Application license key creation date and time
- date and time on the user's device;
- Application license term expiration date and time
- Type, version, and bit size of the operating system

Data provided when downloading updates from Kaspersky update servers

If Kaspersky Endpoint Security is being used in standard mode or Endpoint Detection and Response Agent mode, and you use Kaspersky update servers to download updates, to improve the efficiency of the update procedure and to provide statistical information about the distribution and usage of the application, you agree to automatically provide the following information to Kaspersky:

- Application ID derived from the license
- Full version of the application
- Application license ID
- Type of application license used
- Application installation ID (PCID)
- ID of the application update start
- Web address being processed

Data transferred when using the application in Light Agent mode

If Kaspersky Endpoint Security is used in Light Agent mode to protect virtual environments as part of Kaspersky Security for Virtualization Light Agent, the application saves the following information, which may contain personal and confidential data, and sends it to other solution components during operation of the application.

- For activation, Kaspersky Endpoint Security sends the following data to the Protection Server: the validity period of the license key status confirmation, the BIOS ID of the protected virtual machine, and information about the license that the Light Agent needs to work.
- To update the Light Agent databases, Kaspersky Endpoint Security sends the following data to the Protection Server: software identifier obtained from the license; full version of the software; software license identifier; software installation identifier (PCID); processed web address; type of the license; identifier of the update start.
- To provide protection, Kaspersky Endpoint Security sends the Protection Server the information that is necessary for scanning objects while scan tasks are running. The transmitted information may include the names of files and paths to them in the file system, the checksums of files, web addresses, and the scanned objects or their fragments.
- In an infrastructure managed by a VMware vCenter Server and VMware NSX Manager, Kaspersky Endpoint Security may send to the Integration Server information about security tags that are assigned to a protected virtual machine upon detection of viruses, malware, or activity that is typical of network attacks. The IDs of protected virtual machines are also sent.

- To get information that is used when selecting an SVM for connection, Kaspersky Endpoint Security sends the identifier of the protected virtual machine to the Integration Server and Protection Server.

- When using the Kaspersky Security for Virtualization Light Agent solution in multitenancy mode, the information necessary for generating tenant protection reports may be sent to SVMs from the Kaspersky Endpoint Security Protection Server. The following data may be sent: identifier of the protected virtual machine; type and version of the guest operating system installed on the protected virtual machine; time intervals when Kaspersky Endpoint Security was connected to SVMs.

- To obtain statistics, Kaspersky Endpoint Security sends the following information to the Protection Server: information about the OS version of the protected virtual machine; localization of Kaspersky Endpoint Security; names of active Kaspersky Endpoint Security components; identifier (BIOS ID) of the protected virtual machine.

The specified information is transmitted over encrypted data channels (except for the information necessary for scanning objects, and the information that is used when selecting SVMs). The connection between Kaspersky Endpoint Security and the Protection Servers is not encrypted by default. You can enable encryption of the data channel between the Light Agents and the Protection Servers in the Kaspersky Endpoint Security settings.

Data sent to Kaspersky Security Center

During operation, Kaspersky Endpoint Security saves and submits to Kaspersky Security Center the following information, which may contain personal and confidential data:

- Information about the databases used by the application:
  - List of the database categories required by the application
  - Date and time when the databases were released and loaded into the application
  - Date when the downloaded application database updates were released
  - Time of the last application database update
  - Number of records in the currently used application databases
- Application license information:
  - License serial number and type
  - License validity period in days
  - Number of devices covered by the license
  - Start and end dates of license term
  - License key status
  - Date and time of the last successful synchronization with activation servers if the application was activated using an activation code
  - Identifier of the application for which the license is intended
  - Functionality available under the license

    - Name of the organization for which the license is provided
    - Additional information if the application is used under subscription (subscription flag, subscription expiration date and the number of days available for renewing the subscription, subscription provider web address, current subscription status and the reason for this status), date and time when the application was activated on the device
    - Expiration date and time of the application license on the device
- Information about the application updates:
    - List of updates to be installed or removed
    - Update release date and the sign of the *Critical* status
    - Name, version, and short description of the update
    - Link to the detailed description of the update
    - Identifier and text of the End User License Agreement and the Privacy Policy for the application updates
    - Identifier and text of Kaspersky Security Network Statement for the application updates
    - Indicator showing if the update can be removed
    - Versions of the application policy and management plug-in
    - Web address for downloading the application management plug-in
    - Names, version, and installation dates of the installed application updates
    - Error code and description if the update installation or removal completed with an error
    - Sign and reason for the device or application restart necessity because of the application update
- User agreement or disagreement with the terms and conditions of Kaspersky Security Network Statement, End User License Agreement and Privacy Policy
- List of tags assigned to the device
- List of device statuses and reasons they are assigned.
- The overall status of the application and the status of all its components; information about policy compliance, real-time protection status of the device, application stability status, information about the application stopping.
- Date and time of the last device scan; number of scanned objects; number of detected malicious objects; number of blocked, deleted and disinfected objects; number of objects that cannot be disinfected; number of scan errors; number of detected network attacks
- Data on the currently applied values of the application settings
- Current status and execution results of group tasks and local tasks, and settings of the tasks.
- Information about external devices connected to the client device (ID, name, type, manufacturer, description, serial number, VID/PID)

- Information about backup copies of files in the Backup storage (name, path, size and type of the object, description of the object, name of the detected threat, version of the application database which is used to detect the threat, date and time when the object was moved to the Backup storage), actions on the objects in the Backup storage (removed, restored), and the files by administrator request.

- Information about the operation of each application component and about the execution of each task represented as events:

  - Date and time of event

  - Name and type of event

  - Event severity level

  - Name of the task or the application component running when the event occurred

  - Information about the application that triggered the event: application name, path to the file on the disk, process identifier, setting values (if the application launch or settings modification event is triggered)

  - User ID

  - Name of the initiator (task scheduler, application, Kaspersky Security Center, or a user) whose actions triggered the event

  - Name and identifier of the user who initiated access to the file

  - Object or action processing result (description, type, name, threat level and accuracy, file name and type of operation on the device, application decision on the operation)

  - Information about the object (object name and type, path to the object on the disk, object version, size, information about the performed action, event trigger description, description of the reason for not processing and skipping the object)

  - Device information (manufacturer name, device name, path, device type, bus type, identifier, VID/PID, system device flag, name of the device access rule schedule)

  - Information about blocking and unblocking the device; information about blocked connections (name, description, device name, protocol, remote address and port, local address and port, packet rules, actions)

  - Information about requested web address

  - Information about detected objects

  - Type, method, and ID of the detection

  - Information about the performed action

  - Information about the application databases (date when the downloaded database updates are released, information on the database usage, database usage errors, information on canceling the installed database updates)

  - Information about encryption detection (ransomware name; name of the device where encryption was detected; information about blocking and unblocking the device)

  - Application settings and network settings

    - Information about the triggered Application Control rule (name and type) and the result of applying the rule
    - Information about containers and container images (names of containers or container images, paths to containers or container images, repository URL)
    - Information about active and blocked connections (name, description, and type)
    - Information about blocking and unblocking access to untrusted devices
    - Information about the use of KSN (KSN connection status, KSN infrastructure, identifier of the KSN Statement in extended mode, acceptance of the KSN Statement in extended mode, identifier of the KSN Statement, acceptance of the KSN Statement)
    - Information about certificates (domain name, subject name, issuer name, expiration date, certificate status, certificate type, date certificate was added, issue date, serial number, SHA256 thumbprint)
    - Information about external systems that are part of corporate software solutions (integration server address)
    - Information about enabling and disabling network isolation for the device
    - Information about working in Light Agent mode: name of the virtual machine template, address of the Integration Server
    - Name of the device for which network isolation is enabled or disabled
    - Scan task statistics: number of scanned objects; number of threats found; number of infected objects; number of probably infected objects; number of disinfected objects; number of objects added to Backup; number of deleted objects; number of not disinfected objects; number of scan errors; number of password-protected objects; number of skipped objects; number of scanned containers and images
    - Information about the version of the EDR Optimum component used in the application
    - Information about threat development chains: name of the online list of threat development chains, ID of the threat development chain
- Information about operation of the system integrity scan task (name, type, path) and information about the system baseline
- Information about network activity, packet rules, and network attacks
- User role information:
    - Name and identifier of the user who initiated changing the user role
    - User role
    - Name of the user who has been assigned or revoked the role

- Information about executable files of applications detected on the client device (name, path, type, and hash of the file; list of categories to which the application belongs; KL category to which the application belongs; trust group to which the application belongs; time of the first file launch; name and version of the application; name of the application vendor; information about the certificate used to sign the application: serial number, thumbprint, issuer, subject, release date, expiration date, and public key).

- Information about the online list of threat development chains: threat development chain ID; creation timestamp of the threat development chain; format of the threat development chain (text or archive); body size of the threat development chain in bytes.

Data provided when following links in the application interface

When clicking the links in Kaspersky Endpoint Security interface, you agree to automatically provide the following information to Kaspersky:

- Full version of the application
- Application locale
- Application ID (PID)
- Link name

Data provided when using Kaspersky Security Network

The set of data that Kaspersky Security Network provides to Kaspersky depends on the Kaspersky Security Network mode.

The ksn_license.<language ID> file with the text of the Kaspersky Security Network Statement is included in the application distribution kit.

Data provision in Basic KSN mode

If you are using Kaspersky Security Network in Basic KSN mode (the **Use of Kaspersky Security Network (KSN)** toggle switch is enabled and the **Use Extended KSN mode** check box is cleared in the Web Console, the **Basic KSN mode** option is selected in the Administration Console), by accepting the terms and conditions of the Kaspersky Security Network Statement, you agree to automatically provide the following information to Kaspersky.

Data provision in Extended KSN mode

If you are using Kaspersky Security Network in Extended KSN mode (the **Use of Kaspersky Security Network (KSN)** toggle switch is enabled and the **Use Extended KSN mode** check box is selected in the Web Console, the **Extended KSN mode** option is selected in the Administration Console), by accepting the terms and conditions of the Kaspersky Security Network Statement, you agree to automatically provide the following information to Kaspersky in addition to the information listed above.

Data provision when using Extended KSN mode with Kaspersky Endpoint Detection and Response Expert (on-premise) Integration

If you use Kaspersky Endpoint Security as part of Kaspersky Endpoint Detection and Response Expert (on-premise), as well as Kaspersky Security Network in Extended mode, by accepting the terms of Kaspersky Security Network Statement you agree to automatically provide Kaspersky with the following information, in addition to the listed above.

Data provision when using Kaspersky Endpoint Security in Basic mode or Endpoint Detection and Response Agent mode

If you use Kaspersky Endpoint Security in Basic mode or Endpoint Detection and Response Agent mode, as well as Kaspersky Security Network in Extended mode, by accepting the terms of Kaspersky Security Network Statement you agree to automatically provide Kaspersky with the following information, in addition to the listed above.

Data provided when integrating with Kaspersky Endpoint Detection and Response Optimum

Data transmitted together with *IOC Scan* task results

Kaspersky Endpoint Security automatically sends data about *IOC Scan* task results to Kaspersky Security Center.

IOC Scan task result data may contain the following information:

- Network information:
  - IP address from the Address Resolution Protocol (ARP) table
  - MAC address from the Address Resolution Protocol table
  - Type and name of DNS record
  - IP address of the protected device

    - MAC address of the protected device
    - IP address and port of the remote connection
    - IP address of the local network adapter
    - Number of the open port on the local adapter
    - Protocol number according to the Internet Assigned Numbers Authority (IANA) standard
- Information about processes:
    - Process name
    - Process arguments
    - Path to the executable file of the process
    - Process ID (PID)
    - Parent process ID
    - Name of the user that started the process
    - Date and time when the process was started
- Information about services:
    - Service name
    - Service description
    - Path and name of the service executable file
    - Service ID
    - Service type (kernel driver, adapter, etc.)
    - Service status
    - Service starting mode
    - Name of the user that started the service
- Information about the file system:
    - Volume name
    - Volume letter
    - Volume type

- Information about the operating system:
  - Name and version of the operating system
  - Network name of the protected device
  - Domain or group to which the device belongs
- Information about web activity:
  - Browser name
  - Browser version
  - Time of the last access to the web resource
  - Web address of the HTTP request
  - Name of the user that made the HTTP request
  - Name of the process that made the HTTP request
  - Path to the executable file of the process that made the HTTP request
  - ID of the process that made the HTTP request
  - HTTP referer (web address of the HTTP request source)
  - Web address of the requested resource
  - User agent of the processed web request (HTTP User-Agent)
  - HTTP request execution time
  - Unique ID of the process that made the HTTP request

Data for creating a threat development chain

Data for creating a threat development chain may contain the following information:

- General information about the alert:
  - Alert date and time
  - Object name
  - Scan mode
  - Status of the last action related to the alert
  - Reason why the alert processing failed

- Information about the processed object:
  - Process identifier
  - Parent process ID
  - Process file ID
  - Command line of the process
  - Name of the user that started the process
  - ID of the session in which the process was started
  - Type of the session in which the process was started
  - Integrity level of the processed object
  - Whether the user belongs to privileged groups
  - ID of the processed object
  - Full name of the processed object
  - ID of the protected device
  - Full name of the object (local file or web address)
  - MD5 and SHA256 checksums of the processed object
  - Type of the processed object
  - Date when the object was created and last modified
  - size of the object being processed;
  - file attributes of an object being processed;
  - Information about the organization that signed the object
  - Verification result of the digital certificate of the object
  - Security identifier (SID) of the object
  - Time zone ID of the object
  - Web address from which the object was downloaded (for files only)
  - Name of the application that downloaded the file
  - MD5 and SHA256 checksums of the application that downloaded the file
  - Name of the application that last modified the file
  - MD5 and SHA256 checksums of the application that last modified the file

- Number of times the processed object was started
- Date and time of the first start of the processed object
- Unique ID of the file
- Full name of the file (local file or web address)
- Web address of the processed web request
- Source of the processed web request's links (HTTP referer)
- User agent of the processed web request
- Type of the processed web request (GET or POST)
- Local IP port of the processed web request
- Remote IP port of the processed web request
- Connection direction (inbound or outbound) of the processed web request
- ID of the process into which the malicious code was injected

Data provided when integrating with the Kaspersky Endpoint Detection and Response (KATA) component

When integrating Kaspersky Endpoint Security with Kaspersky Endpoint Detection and Response (KATA), a component of the Kaspersky Anti Targeted Attack Platform solution, Kaspersky Endpoint Security stores the following information, which may contain personal and confidential data:

- Addresses of Central Node servers that provide interaction with Kaspersky Endpoint Detection and Response (KATA) (hereinafter also referred to as *KATA servers*).
- Public key of the certificate of the server for integrating with Kaspersky Endpoint Detection and Response (KATA)
- Client certificate for integrating with Kaspersky Endpoint Detection and Response (KATA)
- Credentials for authenticating on the proxy server.
- Settings for the frequency of synchronization with the KATA server and settings for sending data to the KATA server
- Status of the connection with the KATA server and information about client certificate and server certificate errors
- Settings of tasks received from KATA servers:
  - Task start schedule settings
  - Names and passwords of accounts that must be used to start tasks

    - Versions of settings
    - Type of service start
    - Names of services
    - Command line (including arguments) used to start the process
    - MD5 and SHA256 hashes of objects
    - Paths to objects
    - IOC files
- Isolation settings in accordance with which a device is blocked from connecting to other devices except those specified in the exclusions

When integrating Kaspersky Endpoint Security with Kaspersky Endpoint Detection and Response (KATA), Kaspersky Endpoint Security stores the following information and may send it to the KATA server:

- Information for synchronization requests to the EDR Expert (on-premise) component:
    - Unique identifier
    - Base part of the server address
    - Device name
    - IP address of the device
    - MAC address of the device
    - Local time on the device
    - Name and version of the operating system installed on the device
    - Version of Kaspersky Endpoint Security
    - Release date of the application databases being used
    - License key status
- Information from requests to the EDR Expert (on-premise) component in task execution reports:
    - IP address of the device
    - Unique identifier
    - Base part of the server address
    - MAC address of the device
    - Task execution errors and return codes
    - Task completion statuses

- Task completion time
- Versions of task settings used
- Information about processes started or stopped on the device at the server's request: PID and UniquePID, error code, MD5 and SHA256 checksums of objects
- Files requested by the server
- Information about errors while getting information about objects: full name of the object that was processed with an error; error code
- Network isolation status
- For IOCs, scan results are returned (whether each indicator was detected, objects found, and information about which branch of the indicator was detected).
- For objects in which IOCs were detected, different values are returned depending on the type of indicator:
  - ArpEntry: IP address from the ARP table (including ipv6), physical address from the ARP table.
  - File: MD5 hash of the file, SHA256 hash of the file, full file name (including path), file size.
  - Port: remote IP address and port used to established a connection during scan; IP address and port of the local adapter; protocol type (TCP, UDP, IP, RAWIP).
  - Process: process name; process arguments; path to the process file; system PID of the process; system PID of the parent process; name of the user that started the process; date and time the process started.
  - SystemInfo: OS name; OS version; network name of the device without a domain; domain or workgroup.
  - User: user name.
- For quarantined objects:
  - File path
  - File size
  - File ID that was assigned when quarantining
  - Original file deletion flag
- For files obtained from Quarantine:
  - File ID that was assigned when quarantining
- For prevented executions of executable files or scripts:
  - Process ID
  - Parent process ID
  - System ID

        - Logon session ID
        - Process status
        - Date and time of execution interception
    - For prohibited document openings by office applications:
        - Process ID
        - File ID
        - Date and time of execution interception
- Information about files:
    - Unique ID of the file
    - MD5 hash of the object
    - File contents
- Data in telemetry packets:
    - Information about files:
        - Unique ID of the file
        - File path
        - File name
        - File size
        - File attributes
        - Creation date and time of the file
        - Last modification date and time of the file
        - MD5 and SHA256 hashes of the object
        - Information (name and ID) about the user and group that own the file
    - Information about running processes:
        - Process file ID
        - Process ID
        - Command line options that the process was started with
        - Session ID

    - Date and time when the process was started
    - Information (name and ID) about the user and group that started the process
- Information about the process gaining access to the memory of another process:
    - Process ID
    - Method and address of injection.
    - Command line (including arguments) used to modify the process.
    - System call arguments of the process
- Information about detected and processed threats:
    - Name of the detected threat and the technology that detected the threat, according to the Kaspersky classification
    - Application database version
    - Web address from which the infected object was downloaded
    - Threat processing status
    - The reason why the threat cannot be eliminated
    - Unique ID of the threat file
- File modification data:
    - Unique ID of the modified file
    - Unique ID of the process that made the changes
    - Information about the modification
- Data about changes in the system:
    - Unique ID of the process that made the changes
    - Information about the change that occurred
- User logon information:
    - Session ID
    - User information (name and ID)
    - IP address of the device from which the session was established
- Data about processes being terminated: unique ID of the process
- Information about loading a library into the address space of the process: the ID of the loaded library

- Information about an established network connection:
  - Local IP address
  - Remote IP address
  - Direction of the connection
  - Protocol
- Information about the process that is listening for external network connections on a certain port:
  - Local address (port and IP address)
  - Protocol
- DNS server query information:
  - Domain name of the queried resource
  - IP address of the queried resource
  - DNS server IP address
  - Query type

The information listed here can also be saved in trace files and dump files.

Data provided when integrating with the Kaspersky Endpoint Detection and Response Expert (on-premise) component

When integrating Kaspersky Endpoint Security with Kaspersky Endpoint Detection and Response Expert (on-premise), Kaspersky Endpoint Security stores the following information, which may contain personal and confidential data:

- List of servers for integrating with Kaspersky Endpoint Detection and Response Expert (on-premise).
- Public key of the certificate of the server providing integration with Kaspersky Endpoint Detection and Response Expert (on-premise).
- Client certificate for integrating with Kaspersky Endpoint Detection and Response Expert (on-premise).
- Credentials for authenticating on the proxy server.
- Settings for the frequency of synchronization with the server that is responsible for the integration with Kaspersky Endpoint Detection and Response Expert (on-premise) and data transmission settings for this server.

- The status of the connection to the server that handles integration with Kaspersky Endpoint Detection and Response Expert (on-premise), and information about client and server certificate errors.
- Parameters of tasks coming from servers for integrating with Kaspersky Endpoint Detection and Response Expert (on-premise):
  - Task start schedule settings
  - Names and passwords of accounts that must be used to start tasks
  - Versions of settings
  - Type of service start
  - Names of services
  - Command line (including arguments) used to start the process
  - MD5 and SHA256 hashes of objects
  - Paths to objects
  - IOC files
- Isolation settings in accordance with which a device is blocked from connecting to other devices except those specified in the exclusions

When the Kaspersky Endpoint Security application is integrated with Kaspersky Endpoint Detection and Response Expert (on-premise), the application saves and can transmit the following data to the integration server:

- Information for synchronization requests to the EDR Expert (on-premise) component:
  - Unique identifier
  - Base part of the server address
  - Device name
  - IP address of the device
  - MAC address of the device
  - Local time on the device
  - Name and version of the operating system installed on the device
  - Version of Kaspersky Endpoint Security
  - Release date of the application databases being used
  - License key status

- Information from requests to the EDR Expert (on-premise) component in task execution reports:
  - IP address of the device
  - Unique identifier
  - Base part of the server address
  - MAC address of the device
  - Task execution errors and return codes
  - Task completion statuses
  - Task completion time
  - Versions of task settings used
  - Information about processes started or stopped on the device at the server's request: PID and UniquePID, error code, MD5 and SHA256 checksums of objects
  - Files requested by the server
  - Information about errors while getting information about objects: full name of the object that was processed with an error; error code
  - Network isolation status
  - For IOCs, scan results are returned (whether each indicator was detected, objects found, and information about which branch of the indicator was detected).
  - For YARA rules, search results are returned (whether the rule was triggered or not, found objects, and information about which rule was triggered).
  - For objects in which IOCs were detected, and YARA rules, different values are returned depending on the type:
    - ArpEntry: IP address from the ARP table (including ipv6), physical address from the ARP table.
    - File: MD5 hash of the file, SHA256 hash of the file, full file name (including path), file size.
    - Port: remote IP address and port used to established a connection during scan; IP address and port of the local adapter; protocol type (TCP, UDP, IP, RAWIP).
    - Process: process name; process arguments; path to the process file; system PID of the process; system PID of the parent process; name of the user that started the process; date and time the process started.
    - SystemInfo: OS name; OS version; network name of the device without a domain; domain or workgroup.
    - User: user name.
  - For quarantined objects:
    - File path
    - File size

    - File IDs that were assigned when quarantining
    - Original file deletion flag
- For files received in, restored, or deleted from Quarantine:
    - File IDs that were assigned when quarantining
- For prevented executions of executable files or scripts:
    - Process ID
    - Parent process ID
    - System ID
    - Logon session ID
    - Process status
    - Date and time of execution interception
- For prohibited document openings by office applications:
    - Process ID
    - File ID
    - Date and time of execution interception
- List of files in the specified directory:
    - File name
    - Absolute path to file
    - File size
    - File type
    - Name and ID of the owner user and owner group
    - File access permissions
    - Special file system flags applied to each file
    - File metadata
    - Number of hard links to the file
    - File creation, modification, and last access times

- List of running processes on the device:
  - Process name
  - Process start time
  - Process status
  - Process ID (PID) and parent process ID
  - Current working directory of the process
  - Command line options that the process was started with
  - Environment variables
  - Path to the executable file of the process
  - Session ID of the user that started the process
  - IDs of the user and group that started the process
  - IDs of the user and group with whose rights the process has access to files and resources in the system
- List of autorun points:
  - Type of the autorun point
  - File name
  - Absolute path to file
  - File access permissions
  - Special file system flags applied to each file
  - Name and ID of the owner user and owner group
  - File creation, modification, and last access times
- Process memory image:
  - Process name
  - Full path to process file
  - Process dump file
  - Size of the process dump file
- Device memory image: dump file of the device RAM
- Device disk image

- Information about files:
  - Unique ID of the file
  - MD5 hash of the object
  - File contents
- Data in telemetry packets:
  - Data for telemetry events:
    - Event ID.
    - The number of the event in the sequence of the telemetry packets being sent.
    - Event type.
    - Event time.
  - Information about the protected device:
    - Name of the protected device.
    - ID of the protected device in Kaspersky Security Center.
    - ID of the protected device in Kaspersky Endpoint Detection and Response Expert (on-premise).
    - Name, version, family of the operating system installed on the protected device.
    - Startup and shutdown times of the operating system installed on the protected device.
  - Information about files:
    - Unique ID of the file
    - File path
    - File name
    - File size
    - File attributes
    - Creation date and time of the file
    - Last modification date and time of the file
    - MD5 and SHA256 hashes of the object
    - Information (name and ID) about the user and group that own the file

- Information about running processes:
  - Process file ID
  - Process ID
  - Command line options that the process was started with
  - Session ID
  - Date and time when the process was started
  - Information (name and ID) about the user and group that started the process
- Information about the process gaining access to the memory of another process:
  - Process ID
  - Method and address of injection.
  - Command line (including arguments) used to modify the process.
  - System call arguments of the process
- Information about detected and processed threats:
  - Name of the detected threat and the technology that detected the threat, according to the Kaspersky classification
  - Release date and version of the application databases
  - Web address from which the infected object was downloaded
  - Threat processing status
  - The reason why the threat cannot be eliminated
  - Unique ID of the threat file
- File modification data:
  - Unique ID of the modified file
  - Unique ID of the process that made the changes
  - Information about the modification
- Data about changes in the system:
  - Unique ID of the process that made the changes
  - Information about the change that occurred

- User logon information:
  - Session ID
  - User information (name and ID)
  - IP address of the device from which the session was established
- Data about processes being terminated: unique ID of the process
- Information about loading a library into the address space of the process: the ID of the loaded library
- Information about an established network connection:
  - Local IP address
  - Remote IP address
  - Direction of the connection
  - Protocol
- Information about the process that is listening for external network connections on a certain port:
  - Local address (port and IP address)
  - Protocol
- DNS server query information:
  - Domain name of the queried resource
  - IP address of the queried resource
  - DNS server IP address
  - Query type
- Information about connected external devices:
  - Operation type (device connection)
  - Device type
  - Unique device ID
  - Device name
  - Device path
- Information about the application and its modules:
  - Application version.
  - Time when the application was installed, started, stopped, or uninstalled.

    - Initiator of the action with the application.
    - Reason for stopping the application in case of an abnormal stop.
    - Return codes in case of an abnormal stop.
- Information about interaction with task schedulers (task creation and deletion):
    - Task name.
    - Path to the scheduled command.
    - Task launch schedule.
    - Name of the user that created the task.
    - Name of the user that started the task.
    - Name of the user that deleted the task.
- Information about service creation, deletion, and modification:
    - Service name (including the previous name if changed)
    - Service type (including the previous type if changed)
    - Path to the executable file (including the previous path if changed)
    - Service dependencies (including the previous dependencies if changed)
    - Name of the user that started the service (including the previous user name if changed)
    - Display name of the service (including the previous display name if changed)
    - Name of the user that created, deleted, or modified the service
    - Deferred deletion flag
- Information about console input:
    - ID and type of the process that initiated the console input
    - Content of the console input
- Information about mounted devices:
    - System name of the volume
    - Mount point

- Information about changes in the process memory:
  - System call arguments of the process
  - Information about the process that performed the code injection and about its parent process
    - Process ID and unique ID of the process and parent process
    - The command line that was used to start the process and the parent process
    - Environment variables of the process
    - Type of user account under which the process and parent process were started
    - System call that was used to spawn the process
    - IDs of the user and group that started the process
    - Name and full name of the process and parent process
    - Full path to the process and parent process
    - MD5 and SHA256 hashes of the process and parent process
    - Session ID
    - Name, domain name, and ID of the user that started the process and parent process
  - Information about the process through which the process that performed the code injection was loaded
    - Unique ID of the process through which the process was loaded
    - Name and full name of the file through which the process was loaded
    - Full path to the process through which the process was loaded
    - MD5 hash of the process through which the process was loaded
  - Information about the process that is the initiator of the process
    - Process ID and unique ID of the process that is the initiator of the process
    - Command line of the process that is the initiator of the process
    - Name and domain name of the user that started the process that is the initiator of the process
    - Name and full name of the process that is the initiator of the process
    - Full path to the process that is the initiator of the process
    - MD5 and SHA256 hashes of the process that is the initiator of the process

The information listed here can also be saved in trace files and dump files.

Data provided when integrating with the Kaspersky Network Detection and Response (KATA) component

When integrating Kaspersky Endpoint Security with Kaspersky Network Detection and Response (KATA), a component of the Kaspersky Anti Targeted Attack Platform solution, Kaspersky Endpoint Security stores the following information, which may contain personal and confidential data:

- NDR server addresses
- Public key of the server certificate for integration with Kaspersky Network Detection and Response (KATA)
- Client certificate for integration with Kaspersky Network Detection and Response (KATA)
- Credentials for authenticating on the proxy server.
- Settings for the frequency of synchronization with the NDR server and settings for sending data to the NDR server
- NDR server connection status and information about errors related to the client certificate and server certificate

When Kaspersky Endpoint Security is integrated with the Kaspersky Network Detection and Response (KATA) component, the Kaspersky Endpoint Security application stores and sends the following data to the NDR server:

- Data from synchronization requests to the NDR server:
  - Unique identifier
  - Base part of the server address
  - Device name
  - IP address of the device
  - MAC address of the device
  - Local time on the device
  - Name, family and version of the operating system installed on the device
  - Version of Kaspersky Endpoint Security
  - Release date of the application databases being used
  - License key status
  - Model and manufacturer of the user's device

- Data in telemetry packets:
  - Information about the device and users:
    - Device name and time on the device
    - Family, name, and version of the operating system
    - Information about network interfaces (description, list of IP addresses with subnet mask, MAC address, metric number, DNS domain name, routing information, listening port numbers)
    - Device internal unique ID
    - User names and IDs
    - User group names and IDs
  - Information about the Kaspersky Endpoint Security application:
    - Name and version of the application
    - Date of the last application update
    - Information about license keys (serial number, type, license validity period, key status)
    - Application database version
    - List of supported API versions
  - Information about established connections:
    - Local IP address, port and MAC address
    - Remote IP address, port and MAC address
    - Gateway IP address.
    - Protocol type (according to IANA), protocol number and EtherType
    - Number of received and sent packages
  - Information about processed files:
    - File name and unique ID
    - File type and size
    - Full path to the file image
    - File system attribute mask
    - The time when the file was created and modified

    - Checksums (MD5 and SHA256)
    - File privileges, including inherited and effective
- Information about running and terminating processes:
    - Process UID and PID
    - Process type.
    - Session ID
    - Executed command
    - Environment variables
- Information about detected and processed threats:
    - Name of the detected threat and the technology that detected the threat, according to the Kaspersky classification
    - Application database version
    - Web address from which the infected object was downloaded
    - Threat processing status
    - The reason why the threat cannot be eliminated

The information listed here can also be saved in trace files and dump files.

Data provided when integrating with Kaspersky Unified Monitoring and Analysis Platform

When integrating Kaspersky Endpoint Security with Kaspersky Unified Monitoring and Analysis Platform, Kaspersky Endpoint Security stores the following information, which may contain personal and confidential data:

- KUMA server addresses
- Public key of the server certificate for integration with Kaspersky Unified Monitoring and Analysis Platform (except when the UDP protocol is used to connect to the KUMA server)
- Client certificate for integration with Kaspersky Unified Monitoring and Analysis Platform
- Credentials for authenticating on the proxy server.
- Settings for the frequency of synchronization with the KUMA server and settings for sending data to the KUMA server
- KUMA server connection status and information about errors related to the client certificate and server certificate

When integrating Kaspersky Endpoint Security with Kaspersky Unified Monitoring and Analysis Platform, the Kaspersky Endpoint Security application saves and transmits the following data to the KUMA server in telemetry packets:

- Information about file modifications:
  - Unique ID of the file before the modification
  - Unique ID of the modified file
  - Unique ID of the process that made the changes
  - Type and flag of the file operation
  - Date and time the file was modified
- Information about running and terminating processes:
  - Process file ID
  - Process UID and PID
  - Command line options that the process was started with
  - Session ID
  - Date and time when the process was started
  - Information (name and ID) about the user and group that started the process
- Information about events in the event log:
  - Date and time of event
  - UID of the process associated with the event
  - Type and description of the event
  - Result of performing the operation

Application management concept

To manage Kaspersky Endpoint Security, you can use:

- Kaspersky Security Center
- The command line
- The graphical interface of the application

> If Kaspersky Endpoint Security is used in Light Agent mode to protect virtual environments, it is not possible to manage the application using Kaspersky Security Center Cloud Console and the graphical interface of the application.

The set of actions that you can perform using the Kaspersky Endpoint Security graphical interface is limited.

This section describes the specifics of managing the application via Kaspersky Security Center and the command line, and also describes the main methods of working in the Kaspersky Security Center administration consoles and in the command line.

Managing the application using Kaspersky Security Center

Kaspersky Security Center allows you to remotely and centrally manage the operation of Kaspersky Endpoint Security on client devices. You can remotely install and uninstall, start, and stop Kaspersky Endpoint Security; configure settings for the application, as well as for the individual components and tasks of the application; and start and stop tasks on the managed devices.

You can use the following Kaspersky Security Center administration consoles to manage Kaspersky Endpoint Security via Kaspersky Security Center:

- Kaspersky Security Center Administration Console (hereinafter also referred to as Administration Console). This is a Microsoft Management Console (MMC) snap-in that is installed on the administrator's workstation and provides a user interface for the Administration Server and Network Agent administrative services.

  The interface for managing Kaspersky Endpoint Security via the Kaspersky Security Center Administration Console is provided by an MMC-based management plug-in (hereinafter also referred to as the "MMC plug-in").

- Kaspersky Security Center Web Console (hereinafter also referred to as Web Console). This is a web interface for managing a protection system based on Kaspersky applications. You can work in Kaspersky Security Center Web Console using a browser on any device that has access to the Administration Server.

  The interface for managing Kaspersky Endpoint Security via the Kaspersky Security Center Web Console is provided by a management web plug-in (hereinafter also simply referred to as web plug-in).

- Kaspersky Security Center Cloud Console. This is a cloud-based administration console within the cloud version of the Kaspersky Security Center application, also known as the Kaspersky Security Center Cloud Console. Interface of the Cloud console is similar to Kaspersky Security Center Web Console interface. The interface for managing Kaspersky Endpoint Security via the Kaspersky Security Center Cloud Console is also provided by the web plug-in.

  It is not possible to manage the application using the Kaspersky Security Center Cloud Console if Kaspersky Endpoint Security is used in Light Agent mode for protecting virtual environments.

Kaspersky Endpoint Security is part of the Kaspersky Next Pro View solution. For more information about the available functionality of the application as part of this solution, see the Kaspersky Next Help.

The MMC plug-in and web plug-in allow you to create policies and tasks in Kaspersky Security Center for managing the operation of Kaspersky Endpoint Security:

- A *policy* is a set of settings that is applied on all devices in an administration group. Policies allow you to apply identical application settings to all client devices within an administration group.

  The Kaspersky Endpoint Security policy defines the general settings for the operation of Kaspersky Endpoint Security and the settings for the operation of individual functional components of the application on devices where the policy is applied.

- *Tasks* for Kaspersky Endpoint Security created in Kaspersky Security Center run on the protected devices and implement Kaspersky Endpoint Security functions such as on-demand scan, application activation, and updates to the databases and modules of the application.

  In Kaspersky Security Center, you can create tasks to be performed on an individual device (local tasks), tasks for all devices in the administration group (group tasks), or tasks for a random selection of devices (tasks for sets of devices).

If the application is being used in EDR Agent mode, only a limited subset of application component and tasks is available. You can manage certain protection components, activate the application, and update the databases. Learn more about the special aspects of the EDR Agent mode in the Known issues and limitations article.

Regardless of the Kaspersky Security Center administration console that you use, you must assign the devices on which Kaspersky Endpoint Security is installed to administration groups in order to manage Kaspersky Endpoint Security on these devices using Kaspersky Security Center. You can create administration groups in Kaspersky Security Center before Kaspersky Endpoint Security installation and configure rules to automatically move the devices to administration groups. You can also manually move the devices to the administration groups after installing Kaspersky Endpoint Security (for details, refer to Kaspersky Security Center documentation).

Kaspersky Endpoint Security management plug-ins

The following administration plug-ins are required for managing Kaspersky Endpoint Security using Kaspersky Security Center:

- Kaspersky Endpoint Security management web plug-in (hereinafter also referred to as *web plug-in*) facilitates interaction between Kaspersky Endpoint Security and Kaspersky Security Center using Kaspersky Security Center Web Console and Kaspersky Security Center Cloud Console.

  The web plug-in must be installed on the device that has Kaspersky Security Center Web Console installed. Management of Kaspersky Endpoint Security using the web plug-in is available to all administrators who have access to the Kaspersky Security Center Web Console in a browser.

- The Kaspersky Endpoint Security administration MMC plug-in (hereinafter also referred to as the *MMC plug-in*) facilitates interaction between Kaspersky Endpoint Security and Kaspersky Security Center using the Administration Console.

  The MMC plug-in must be installed on the device where the Kaspersky Security Center Administration Console is installed.

The Kaspersky Endpoint Security management plug-ins allow you to manage Kaspersky Endpoint Security using policies and tasks.

For more details about management plug-ins, refer to Kaspersky Security Center documentation.

If web plug-ins Kaspersky Endpoint Security for Windows (build 12.11.0.2004) and Kaspersky Endpoint Security for Linux (build 12.4.0.1354) are installed in Kaspersky Security Center Web Console 16.0 or Kaspersky Security Center Web Console 16.1, updating the Kaspersky Endpoint Security for Windows web plug-in to version 12.11.0.6004 may lead to malfunctions in Kaspersky Endpoint Security for Linux policies. In this case, go to the **Settings** → **Web plug-ins** window, and remove the Kaspersky Endpoint Security for Windows web plug-in, Kaspersky Endpoint Security for Linux web plug-in, and Unified Protection and Management Plug-in from the list. Then install the Kaspersky Endpoint Security for Linux web plug-in first, followed by the Kaspersky Endpoint Security for Windows web plug-in.

Kaspersky Security Center policies

A *policy* is a set of Kaspersky Endpoint Security settings that are applied to all client devices included in the administration group.

Multiple policies with different values of the settings can be configured for a single application. However, there can be only one active policy at a time for an application within an administration group. When you create a new policy, all other policies within an administration group become inactive. You can change the policy status later.

Policies have a hierarchy, similarly to administration groups. By default, a child policy inherits settings from the parent policy. A *child policy* is a policy of a nested hierarchy level, that is, a policy for nested administration groups and secondary Administration Servers. You can enable inheritance of the settings from the parent policy.

You can locally modify the values of the settings specified by the policy for individual devices within the administration group, if modification of these settings is not prohibited by the policy.

Each policy setting has a "lock" attribute that indicates whether child policy settings and local application settings can be modified. The "lock" status of a setting within policy properties determines whether or not an application setting on a client device can be edited:

- When a setting is "locked" (🔒), you cannot edit its value locally or in the policies of the nested hierarchy level. The setting value specified by the policy is used for all client devices within the administration group and nested groups.

- When a setting is "unlocked" (🔓), you can edit its value locally or in the policies of the nested hierarchy level. If setting values are specified locally or in policy properties of a nested hierarchy level for client devices within an administration group, the setting value specified in the policy properties is not applied.

In the web plug-in and in the MMC plug-in, the number of parameters with "locks" is different. The web plug-in includes "locks" that are not present in the MMC plug-in.

For some lists, you can enable the merging of list items. To merge list items, you need to do the following:

- In the properties of the child policy, on the **General** tab, enable the **Inherit settings from parent policy** setting.

- In the properties of the parent policy, click the padlock (🔒) icon to "lock" it.

- In the properties of the parent policy, enable the merging of settings by selecting the **Merge inherited values** check box. If the check box is selected, items in the list of the parent policy of Kaspersky Security Center are displayed in child policies, and items can be added to the list of child policies. If the check box is cleared, the list items are not merged when inheriting policy settings.

You cannot delete or modify inherited list items in a child policy. List items that have been merged when inherited can be deleted or modified only in the parent policy. List items can be added, modified, or removed at lower levels. Thus, you can configure a list in the parent policy, which will be applied to all child policies, and you can also add to the list in the child policy.

A *policy profile* may contain settings that differ from the "base" policy settings and apply to client devices when the configured conditions (activation rules) are met. Using policy profiles allows you to flexibly configure application settings for different devices. You can create and configure profiles in the **Policy profiles** section of the policy properties.

Profile settings that are locked with a "padlock" override policy settings. That is, if the profile setting locked with a "padlock" is different from the policy setting, the application applies the setting from the profile. However, lists of settings are merged, supplementing each other. That is, if the settings in the list from the profile are missing from the "basic" policy, they are added to the resulting list of settings.

Some lists are not merged. If this happens, the settings from the profile override the settings of the "base" policy:

- Exclusions by process in the File Threat Protection and Behavior Detection components

- Protection scopes in the File Threat Protection and Anti-Cryptor components

- Monitoring scopes in the System Integrity Monitoring component

- List of rules (in the **Application Control rules** window) in the Application Control component

- List of rules in Web Control

- Process memory exclusions in application settings

- Trusted domains in network settings

- Trusted root certificates in network settings
- Monitored ports in network settings
- List of SVM addresses in SVM discovery settings

After the policy is applied for the first time, the application settings change in accordance with the policy settings.

If the application is not running when the policy is deleted, after application is started, this policy continues to be applied on the device and the application continues to operate with the settings specified by this policy.

For more information about policies and policy profiles, as well as the settings inheritance mechanism, see the Kaspersky Security Center Help.

Tasks for Kaspersky Endpoint Security created in Kaspersky Security Center

You can create the following types of tasks in Kaspersky Security Center for Kaspersky Endpoint Security:

- local tasks to run on individual devices;
- group tasks to run on devices within an administration group;
- Tasks for sets of devices to run on multiple devices, regardless of their inclusion in administration groups

  The tasks for the sets of devices are performed only on the devices that are specified in the task settings. If new devices are added to the device selection for which the task is created, this task is not applied to the new devices. To apply the task to these computers, you must create a new task or edit the settings of the existing task.

You can create any number of group tasks, tasks for a sets of devices, or local tasks.

The tasks are executed only if Kaspersky Endpoint Security is running on the devices.

General information about tasks created in Kaspersky Security Center is provided in Kaspersky Security Center Help.

The following tasks are provided for managing Kaspersky Endpoint Security in Kaspersky Security Center:

- *Malware Scan*. During the task execution, the application scans the device areas that are specified in the task settings for viruses and other malware.
- *Critical Areas Scan*. During the task execution, the application scans boot sectors, startup objects, process memory, and kernel memory.
- *Container Scan*. During the task execution, the application scans containers and images for viruses and other malware.

- *Inventory*. During the task execution, the application receives information about all executable files stored on the devices.
- *System Integrity Check*. During the task execution, the application determines changes of each object by comparing the current state of the monitored object to its original state, which was previously established as a baseline.
- *Add Key*. During the task execution, the application adds a key, including a reserve one, to activate the application.
- *Update*. During the task execution, the application updates the databases in accordance with the configured update settings.
- *Rollback*. During the task execution, the application rolls back the last database update.

The set of policy settings and default values for task settings depend on the license type. The *Add Key*, *Update*, and *Rollback* tasks are not applicable if the application is used in Light Agent mode.

Logging in and out of the Web Console and Cloud Console

Kaspersky Security Center Web Console

To log in to the Web Console, you need to know the web address and the port number of the Administration Server specified during the Web Console installation (port 8080 is used by default). JavaScript must also be enabled in your browser.

You can log in to the Kaspersky Security Center Web Console by using one of the following methods:

- Domain authentication (Single Sign-On)
- User name and password of a domain user
- User name and password of an internal user

For more details on logging in and out of the Kaspersky Security Center Web Console, see the Kaspersky Security Center Help.

To log in to the Web Console by specifying a user name and password:

1. In your browser, go to:

   ```
   https://<Kaspersky Security Center Web Console address>:<port number>
   ```

   This opens the page for selecting the Administration Server.

2. If you have added multiple trusted administration servers, select the Administration Server to which you want to connect from the list.

   If you have added only one Administration Server, the list of Administration Servers is not displayed.

The browser is redirected to `https://<Administration Server address>:4444`.

3. Enter the user name and password for your account.

   It is recommended to make sure that the password complexity and anti-bruteforce mechanisms ensure that the password cannot be guessed within 6 months.

4. Click **Log in**.

   If the Administration Server is not responding, or if you enter incorrect credentials, an error message is displayed.

5. Enter the one-time security code generated in the authentication app on your mobile device.

   If logging in for the first time, configure 2-step authentication for your account.

After logging in, a dashboard is displayed with the last language and theme used.

For more details about the Web Console interface, see the Kaspersky Security Center Help.

To log out of Web Console:

select **<Account name>** → **Exit** in the lower left corner of the screen.

The Web Console is closed, and the login page is displayed.

Kaspersky Security Center Cloud Console

For the Kaspersky Security Center Cloud Console, use a web token to log in to your account on the Cloud Console portal.

For detailed information about Kaspersky Security Center Cloud Console, refer to Kaspersky Security Center Cloud Console documentation.

Managing policies in the Web Console

You can perform the following actions with the policies in the Web Console:

- Create a policy.
- Edit policy settings. You can configure policy settings on the **Application settings** tab of the policy properties window. The policy settings in the Web Console are described in Appendix 5.

  If the user account which is used to access the Administration Server does not have permissions to edit the settings of certain functional scopes, the settings of these functional scopes are not available for editing.

- Export and import policy settings.

  Exporting or importing policy settings from Kaspersky Endpoint Security 12.3 for Linux to Kaspersky Endpoint Security 12.4 for Linux is not supported.

- Copy and move a policy.
- Delete a policy.
- Change a policy status.
- Create policy profiles.

For general information about working with policies, refer to the Kaspersky Security Center Help system.

Creating a policy in the Web Console

To create a policy in the Web Console:

1. In the main window of the Web Console, select **Assets (Devices)** → **Policies and policy profiles**.

   A list of policies and policy profiles opens.

2. Select the administration group containing the devices to which the policy should be applied. To do so, click the link in the **Current path** field located above the list of policies and policy profiles, and select the administration group in the window that opens.

3. Click the **Add** button.

   The Policy Wizard starts.

4. In the displayed window, select Kaspersky Endpoint Security from the list.

   Proceed to the next step of the wizard.

5. Specify the Kaspersky Endpoint Security usage mode:

   - In **Standard mode or Endpoint Detection and Response Agent mode**, the application is used to protect Linux devices as a standalone application or as an application that supports Kaspersky Detection and Response solutions and third-party anti-virus solutions working together.
   - **Light Agent mode for protecting virtual environments** – as part of the Kaspersky Security for Virtualization Light Agent solution, the application is used to protect virtual machines running Linux guest operating systems.

6. If you are using the application in Light Agent mode to protect virtual environments, configure the SVM discovery settings:

   a. Select the method that Light Agents use to discover SVMs available for connection.

      - **Use the Integration Server**

        If this option is selected, Light Agent connects to Integration Server to get a list of SVMs available for connection and their details.

- **Use a custom list of SVM addresses**

  If this option is selected, you can specify a list of SVMs that Light Agents managed by this policy can connect to. Light agents will only connect to SVMs specified in the list.

> If you select the **Use a custom list of SVM addresses** option, the Light Agent is using the extended SVM selection algorithm, and large infrastructure protection mode is enabled on an SVM (for more information, see the Kaspersky Security for Virtualization Light Agent Help), then connecting a Light Agent to this SVM is only possible if the SVM path is ignored. In the **SVM selection algorithm** section, you need to set the **SVM path** setting to **Ignore**. If any other value is set, Light Agents will not be able to connect to the SVM.

b. If you select Integration Server, the wizard displays the current settings for connecting Light Agents to the Integration Server: address and port for connecting. If necessary, specify new connection settings:

   a. Click the **Configure** button and specify new connection settings in the window that opens:

      - **Address**

        IP address in IPv4 format or fully qualified domain name (FQDN) of the device on which the Integration Server is installed. If the address is specified as a NetBIOS name, localhost or 127.0.0.1, connection to the Integration Server completes with an error.

      - **Port**

        Port for connecting to the Integration Server. By default, port 7271 is specified.

      If a Linux-based high-availability cluster of Integration Servers is deployed in your infrastructure, you need to specify the address and port of the load balancer as the address and port for connecting to the Integration Server. For more details, refer to the Kaspersky Security for Virtualization Light Agent Help.

   b. Click the **Check** button.

   c. The web plug-in checks the SSL certificate received from the Integration Server. If the certificate contains an error or is not trusted, a corresponding message is displayed in the **Connection to the Integration Server** window.

      You can view information about the certificate received from the Integration Server by clicking on the **View the received certificate** line. If you encounter problems with an SSL certificate, we recommend to make sure that the data transmission channel you are using is secure.

      To save the received certificate and continue connecting to the Integration Server, in the **Select an action** block, select the **Ignore** option.

   d. Specify the password of the Integration Server administrator (password of the `admin` account) and click the **Test** button.

      The New Policy Wizard connects to the Integration Server. If the connection fails, an error message appears in the window. If the connection succeeds, the **Connection to the Integration Server** window closes, and the **Connection to the Integration Server** field of the New Policy Wizard window shows the **Connected** status.

c. If you select a manually defined list of SVM addresses, the window displays a list of SVMs that Light Agents managed by this policy can connect to. To add an SVM to the list, click the **Add** button and, in the window that opens, specify the IP address in IPv4 format or the fully qualified domain name (FQDN) of the SVM. You can enter several IP addresses or full domain names of the SVMs by typing them from a new line.

> Specify only fully qualified domain names (FQDNs) that map to a single IP address. Using a fully qualified domain name that corresponds to multiple IP addresses can lead to errors in the application.

You can delete addresses selected in the list by clicking the **Delete** button.

Proceed to the next step of the wizard.

7. Decide whether you want to use Kaspersky Security Network. Carefully read the Kaspersky Security Network Statement and do one of the following:

   - If you agree with all the terms and conditions of the Statement and want the application to use Kaspersky Security Network, select **I confirm that I have fully read, understand, and accept the terms and conditions of Kaspersky Security Network Statement**.
   - If you do not want to use Kaspersky Security Network, select **I do not accept the terms and conditions of the Kaspersky Security Network Statement** and confirm your decision in the window that opens.

   Refusal to use Kaspersky Security Network does not interrupt the policy creation process. At any time, you can enable or disable use of Kaspersky Security Network or change the KSN mode for managed devices in the policy settings.

   Proceed to the next step of the wizard.

8. The **General** tab of the new policy settings window opens. Specify a name for the new policy.

   You can also configure the following policy settings:

   - Policy status:
     - **Active**. The policy that is currently applied to the device. If this option is selected, this policy becomes active on the device upon the next device synchronization with the Administration Server. This option is selected by default.
     - **Inactive**. If this option is selected, the policy is not applied to the device, but remains in the **Policies** folder. You can activate the inactive policy later.
     - **Out-of-office**. If this option is selected, the policy becomes active when the device leaves the organization network.

       > In the Network Agent policy that is active on the device, in the **Network → Connection profiles** section, the **Enable out-of-office mode when Administration Server is not available** setting must be enabled.

- Policy settings inheritance:
  - **Inherit settings from parent policy**. If this toggle switch is enabled, the policy settings are inherited from the upper-level group policy. Settings that are locked with a "padlock" (🔒) in the parent policy are not editable. The toggle switch is switched on by default.
  - **Force inheritance of settings in child policies**. If this toggle switch is enabled, the policy settings are propagated to child policies. In the properties of the child policy, the **Inherit settings from parent policy** toggle button will be automatically switched on and cannot be switched off. The settings of the child policy are inherited from the parent policy, except for the settings for which the "padlock" (🔓) is open. The toggle button is switched off by default.

For general information about the policy settings, refer to Kaspersky Security Center Help section.

9. If you want to configure other policy settings, go to the **Application settings** tab and make the necessary changes.

   You can also change the policy settings later.

10. Click the **Save** button.

The created policy will be displayed in the list of policies.

For general information about managing policies, please refer to the Kaspersky Security Center Help.

Changing policy settings in the Web Console

To edit policy settings in the Web Console:

1. In the main window of the Web Console, select **Assets (Devices)** → **Policies and policy profiles**.

   The list of policies opens.

2. Select the administration group containing the devices to which the policy is applied. To do so, click the link in the **Current path** field in the upper part of the window and select the administration group in the window that opens.

   The list displays the policies configured for the selected administration group.

3. Click the name of the required policy in the list.

   The policy properties window opens.

4. Modify the policy settings on the **Application settings** tab.

5. Click the **Save** button to save the changes made.

The policy is saved with the updated settings.

Policy settings in the Web Console

The default set of settings and values for the policy settings depend on the license that was used to activate the application. Some policy settings are applied or not applied to the application depending on the application mode.

You can configure policy settings on the **Application settings** tab of the policy properties window.

The policy settings in the Web Console are described in Appendix 5.

Policy settings

Section	Subsections
Host Threat Protection	**File Threat Protection**. In this subsection, you can manage File Threat Protection. **BadUSB Attack Prevention**. In this subsection, you can manage BadUSB Attack Prevention settings. **Removable Drives Scan**. In this subsection, you can configure the settings for scanning removable drives when they are connected to a protected device. **Behavior Detection**. In this subsection, you can manage settings for application behavior detection. **Anti-Cryptor**. In this subsection, you can configure the settings for protection against remote malicious encryption. **Exploit Prevention**. In this subsection, you can manage Exploit Prevention settings.
Communication & Web Protection	**Mail Threat Protection**. In this subsection, you can manage Mail Threat Protection settings. **Web Threat Protection**. In this subsection, you can configure Web Threat Protection settings. **Network Threat Protection**. In this subsection, you can configure Network Threat Protection settings. **Firewall**. In this subsection, you can configure firewall management settings.
Security Controls	**Device Control**. In this subsection, you can configure Device Control settings. **Web Control**. In this subsection, you can configure Web Control settings. **App Control**. In this subsection, you can configure Application Control settings. **System Integrity Monitoring**. In this subsection, you can configure System Integrity Monitoring settings.
Trusted zone	In this section, you can manage the following settings: • Exclusions that are applied by the File Threat Protection component. • Exclusions that are applied by the Web Threat Protection component. • Exclusions that are applied by the Network Threat Protection component. • Exclusions from network traffic scanning. • Excluding mount points from file operation interception. • Trusted devices for the Device Control component.

Section	Subsections
General Settings	**Detection Settings**. In this subsection, you can manage the following settings: • Detection of legitimate applications that threat intruders can use to compromise devices or data. • File operations interception mode. **Kaspersky Security Network**. In this subsection, you can configure the use of Kaspersky Security Network by Kaspersky Endpoint Security. **User Interaction**. In this subsection, you can manage the following settings: • Application startup settings. • Task management permissions for users. **Performance**. In this subsection, you can manage the following settings: • Canceling scheduled tasks on a device running on battery power. • Exclude process memory from scans. • Limit on the use of memory and processor resources for scan tasks. • Limit on the use of resident memory by the application. • Application stability monitoring. **Network Settings**. In this subsection, you can configure the following: • Proxy server settings if the users of the client devices use a proxy server to connect to the internet. • Network traffic scan settings. **Container Scan**. In this subsection, you can manage the Container Monitoring component. **Technical Support**. In this subsection, you can manage the trace and dump settings. **Reports and Storage**. In this subsection, you can manage the settings of Backup and Quarantine. **KSC Integration**. In this subsection, you can manage the settings for sending information to Kaspersky Security Center repository. **OS interaction settings**. In this subsection, you can configure the following: • Select the **system event interception** mechanism that you want the application to use. In the Web Console, you can configure system event interception in the policy properties (**Application settings** → **General Settings** → **OS interaction settings**). The settings are applied only on devices running an operating system that supports the fanotify technology. • Manage advanced telemetry parameters settings. **Notification settings**. In this subsection, you can manage event notification settings.
Built-in Agents Configuration	**Managed Detection and Response**. In this subsection, you can enable and disable integration with Kaspersky Managed Detection and Response and upload the MDR BLOB file required for integration. **Network Detection and Response (KATA)**. In this subsection, you can enable or disable the integration with Kaspersky Network Detection and Response (KATA). **Endpoint Detection and Response**. In this subsection, you can enable or disable the integration with Kaspersky Detection and Response Optimum and manage integration settings. **Endpoint Detection and Response Expert (on-premises)**. In this subsection, you can enable or disable the integration with Kaspersky Endpoint Detection and Response Expert (on-premise) or with Kaspersky Endpoint Detection and Response (KATA) and manage integration settings. **Sandbox**. In this subsection, you can enable or disable the integration with Sandbox and manage integration settings. **KUMA Integration**. In this subsection, you can enable or disable the integration with Kaspersky Unified Monitoring and Analysis Platform and manage integration settings.
Light Agent Mode The settings described in this section apply only if Kaspersky Endpoint Security is used in Light Agent mode for protecting virtual environments.	**SVM discovery settings**. In this subsection, you can select the method that Light Agents use to discover SVMs available for connection. **Integration Server connection settings**. In this subsection, you can configure the connection of Light Agents to the Integration Server, a component of Kaspersky Security for Virtualization Light Agent. **SVM connection tag**. In this subsection, you can enable the Light Agent to use tags and assign a tag that the Light Agent will use for the connection. **SVM selection algorithm**. In this subsection, you can specify which SVM selection algorithm you want Light Agents to use. **Connection protection**. In this window, you can enable encryption of the data link between the Light Agent and the Protection Server.

Managing policies in the Administration Console

You can perform the following actions with the policies in the Kaspersky Security Center Administration Console:

- Create a policy.
- Edit policy settings. You can manage policy settings in the policy properties window.

  If the user account which is used to access the Administration Server does not have permissions to edit the settings of certain functional scopes, the settings of these functional scopes are not available for editing.

- Export and import policy settings.
- Delete a policy.
- Change a policy status.
- Create policy profiles.

For general information about managing policies, please refer to the Kaspersky Security Center Help.

Creating a policy using the Administration Console

To create a policy in the Administration Console:

1. In the Administration Console tree, in the **Managed devices** folder, select the administration group containing the devices to which the policy should be applied.

   You can view the list of devices that are part of an administration group on the **Devices** tab of the folder with the name of this administration group.

2. In the workspace, select the **Policies** tab.
3. Click the **New policy** button to start the New policy wizard.

   You can also start the Wizard by clicking the **Create** → **Policy** item in the context menu in the list of policies.

4. At the first step of the wizard, in the list, select Kaspersky Endpoint Security.

   Proceed to the next step of the wizard.

5. Enter a name for the new policy.
6. To use the settings from the previous version of Kaspersky Endpoint Security policy in the policy being created, select the **Use policy settings for the earlier application version** check box.

   Proceed to the next step of the wizard.

7. Decide whether you want to use Kaspersky Security Network. Carefully read the Kaspersky Security Network Statement and do one of the following:

   - If you agree with all the terms and conditions of the Statement and want the application to use Kaspersky Security Network, select **I confirm that I have fully read, understand, and accept the terms and conditions of Kaspersky Security Network Statement**.

   - If you do not want to use Kaspersky Security Network, select **I do not accept the terms and conditions of the Kaspersky Security Network Statement** and confirm your decision in the window that opens.

   Refusal to use Kaspersky Security Network does not interrupt the policy creation process. At any time, you can enable or disable use of Kaspersky Security Network or change the KSN mode for managed devices in the policy settings.

   Proceed to the next step of the wizard.

8. Specify the mode of Kaspersky Endpoint Security:

   - In **Standard mode or Endpoint Detection and Response Agent mode**, the application is used to protect Linux devices as a standalone application or as an application that supports Kaspersky Detection and Response solutions and third-party anti-virus solutions working together.

   - **Light Agent mode for protecting virtual environments** – as part of the Kaspersky Security for Virtualization Light Agent solution, the application is used to protect virtual machines running Linux guest operating systems.

   Proceed to the next step of the wizard.

9. If you are using the application in Light Agent mode to protect virtual environments, configure the SVM discovery settings:

   a. Select the method that Light Agents use to discover SVMs available for connection.

      - **Use the Integration Server**

        If this option is selected, Light Agent connects to Integration Server to get a list of SVMs available for connection and their details.

      - **Use a custom list of SVM addresses**

        If this option is selected, you can specify a list of SVMs that Light Agents managed by this policy can connect to. Light agents will only connect to SVMs specified in the list.

      If you select the **Use a custom list of SVM addresses** option, the Light Agent is using the extended SVM selection algorithm, and large infrastructure protection mode is enabled on an SVM (for more information, see the Kaspersky Security for Virtualization Light Agent Help), then connecting a Light Agent to this SVM is only possible if the SVM path is ignored. In the **SVM selection algorithm** section, you need to set the **SVM path** setting to **Ignore**. If any other value is set, Light Agents will not be able to connect to the SVM.

   b. If you select Integration Server, the wizard displays the current settings for connecting Light Agents to the Integration Server: address and port for connecting. If necessary, specify new connection settings:

      a. Click the **Edit** button and specify new connection settings in the window that opens:

         - **Address**

IP address in IPv4 format or fully qualified domain name (FQDN) of the device on which the Integration Server is installed.

If the device on which Kaspersky Security Center Administration Console is installed is part of a domain, the field indicates the domain name of this device by default.

If the device on which the Kaspersky Security Center Administration Console is installed is not part of a domain or the Integration Server is installed on another device, the field must be filled in manually.

> If the address is specified as a NetBIOS name, localhost or 127.0.0.1, connection to the Integration Server completes with an error.

- **Port**

  Port for connecting to the Integration Server. By default, port 7271 is specified.

> If a Linux-based high-availability cluster of Integration Servers is deployed in your infrastructure, you need to specify the address and port of the load balancer as the address and port for connecting to the Integration Server. For more details, refer to the Kaspersky Security for Virtualization Light Agent Help.

b. Click **OK**.

c. If the device hosting the Kaspersky Security Center Administration Console does not belong to a domain or your account does not belong to the KLAdmins local or domain group or to the local administrator group, the Integration Server administrator account is used for authentication on the Integration Server.

In the window that opens, enter the password of the Integration Server administrator (password of the `admin` account) and click the **OK** button.

d. The MMC plug-in checks the SSL certificate received from the Integration Server. If the certificate contains an error or is not trusted, the **Verify Integration Server certificate** window opens. You can click the link in the window to view the details of the received certificate.

> If you encounter problems with an SSL certificate, we recommend to make sure that the data transmission channel you are using is secure.

To continue connecting to the Integration Server, click the **Ignore** button. The received certificate will be installed as a trusted certificate on the device where the Kaspersky Security Center Administration Console is installed.

c. If you select a manually defined list of SVM addresses, the window displays a list of SVMs that Light Agents managed by this policy can connect to. To add an SVM to the list, click the **Add** button and, in the window that opens, specify the IP address in IPv4 format or the fully qualified domain name (FQDN) of the SVM. You can enter several IP addresses or full domain names of the SVMs by typing them from a new line.

> Specify only fully qualified domain names (FQDNs) that map to a single IP address. Using a fully qualified domain name that corresponds to multiple IP addresses can lead to errors in the application.

You can delete addresses selected in the list by clicking the **Delete** button.

Proceed to the next step of the wizard.

10. If necessary, configure the general settings for File Threat Protection.

    Proceed to the next step of the wizard.

11. If necessary, edit the File Threat Protection settings that have been configured by default.

    Proceed to the next step of the wizard.

12. If necessary, configure the exclusions from File Threat Protection.

    Proceed to the next step of the wizard.

13. If necessary, modify the default actions for infected objects.

    Proceed to the next step of the wizard.

14. Select a policy state:

    - **Active policy**. The policy that is currently applied to the device. If this option is selected, this policy becomes active on the device upon the next device synchronization with the Administration Server. This option is selected by default.
    - **Inactive policy**. If this option is selected, the policy is not applied to the device, but remains in the **Policies** folder. You can activate the inactive policy later.
    - **Out-of-office policy**. If this option is selected, the policy becomes active when the device leaves the organization network.

      In the Network Agent policy that is active on the device, in the **Network → Connection profiles** section, the **Enable out-of-office mode when Administration Server is not available** setting must be enabled.

15. Complete the New Policy Wizard.

The created policy is displayed in the list of policies of the administration group on the **Policies** tab and in the **Policies** folder of the console tree.

You can change the policy settings later. For general information about managing policies, refer to the Kaspersky Security Center Help.

Changing policy settings in the Kaspersky Security Center Administration Console

To edit policy settings in the Administration Console:

1. In the tree of the Kaspersky Security Center Administration Console, in the **Managed devices** folder, open the folder with the name of the administration group that includes the required devices.
2. In the workspace, select the **Policies** tab.
3. In the list of policies, select the required policy and double-click it to open the **Properties: <Policy name>** window.

   You can also open the policy properties window by using the **Properties** item in the policy context menu or by clicking the **Configure policy settings** link located to the right of the list of policies in the section with the policy settings.

4. Edit the policy settings.

5. In the **Properties: <Policy name>** window, click **OK** to save the changes.

Policy settings in the Administration Console

The default set of settings and values for the policy settings depend on the license that was used to activate the application. Some policy settings are applied or not applied to the application depending on the application mode.

You can configure policy settings in the sections and subsections of the policy properties window. For information about configuring general policy settings and event settings, refer to Kaspersky Security Center Help section.

Policy settings

Section	Subsections
Essential Threat Protection	**File Threat Protection**. In this subsection, you can manage File Threat Protection. **File Threat Protection exclusions**. In this subsection, you can configure exclusions that apply to the File Threat Protection component. **Firewall Management**. In this subsection, you can configure firewall management settings. **Web Threat Protection**. In this subsection, you can configure Web Threat Protection settings. **Mail Threat Protection**. In this subsection, you can manage Mail Threat Protection settings. **Network Threat Protection**. In this subsection, you can configure Network Threat Protection settings. **BadUSB Attack Prevention**. In this subsection, you can manage BadUSB Attack Prevention settings.
Advanced Threat Protection	**Kaspersky Security Network**. In this subsection, you can configure the use of Kaspersky Security Network by Kaspersky Endpoint Security. **Anti-Cryptor**. In this subsection, you can configure the settings for protection against remote malicious encryption. **Behavior Detection**. In this subsection, you can manage settings for application behavior detection.
Detection and Response	**Managed Detection and Response**. In this subsection, you can enable and disable integration with Kaspersky Managed Detection and Response and upload the MDR BLOB file required for integration. **EDR Expert (on-premise)**. In this subsection, you can enable or disable the integration with Kaspersky Endpoint Detection and Response (KATA) and manage integration settings. **Network Detection and Response (KATA)**. In this subsection, you can enable or disable the integration with Kaspersky Network Detection and Response (KATA).
Security Controls	**Application Control**. In this subsection, you can configure Application Control settings. **System Integrity Monitoring**. In this subsection, you can configure System Integrity Monitoring settings. **Device Control**. In this subsection, you can configure Device Control settings. **Web Control**. In this subsection, you can configure Web Control settings.
Local Tasks	**Task Management**. In this subsection, you can configure permissions for users to manage tasks. **Removable Drives Scan**. In this subsection, you can configure the settings for scanning removable drives when they are connected to a protected device.

Section	Subsections
General settings	**Proxy server settings**. In this subsection, you can configure the proxy server settings if users access the internet from client devices through a proxy server. **Application settings**. In this subsection, you can manage the following settings: • Detection of legitimate applications that threat intruders can use to compromise devices or data. • Notification settings. • Limit on the use of memory and processor resources for scan tasks. • Limit on the number of Custom Scan tasks that a non-privileged user can start on a device at the same time. • Application startup settings. • Trace and dump settings. • Application stability monitoring. • Limit on the use of resident memory by the application. • File operations interception mode. **Container Scan settings**. In this subsection, you can manage the Container Monitoring component. **Network settings** In this subsection, you can configure the settings for scanning network traffic. **Global exclusions**. In this subsection, you can configure the following: • Excluding mount points from file operation interception. • Industrial software exclusions to exclude processes, files, and directories associated with a particular type of software. **Excluding process memory**. In this subsection, you can configure exclusion of process memory from scans. **Storage settings**. In this subsection, you can configure the following: • Backup and quarantine. • Settings for the transfer of data to the Kaspersky Security Center storage. **OS interaction settings** In this subsection, you can configure the following: • Select the system event interception mechanism that you want the application to use. • Manage advanced telemetry parameters settings.
KUMA Integration	**KUMA Integration**. In this subsection, you can enable or disable the integration with Kaspersky Unified Monitoring and Analysis Platform and manage integration settings.
Light Agent mode The settings described in this section apply only if Kaspersky Endpoint Security is used in Light Agent mode for protecting virtual environments.	**Connection to the Integration Server**. In this subsection, you can configure the connection of Light Agents to the Integration Server, a component of Kaspersky Security for Virtualization Light Agent. **SVM discovery settings**. In this subsection, you can select the method that Light Agents use to discover SVMs available for connection. **SVM connection tag**. In this subsection, you can enable the Light Agent to use tags and assign a tag that the Light Agent will use for the connection. **SVM selection algorithm**. In this subsection, you can specify which SVM selection algorithm you want Light Agents to use. **Protecting the connection**. In this window, you can enable encryption of the data transmission channel between the Light Agent and the Protection Server

Managing tasks in the Web Console

You can perform the following actions with the tasks for Kaspersky Endpoint Security in the Web Console:

- Create new tasks.
- Edit task settings.

If the user account which is used to access the Administration Server does not have permissions to edit the settings of certain functional scopes, the settings of these functional scopes are not available for editing.

- Start, stop, pause, and resume tasks.

  > The *Update* task cannot be paused or resumed, it can only be started or stopped.

- Export and import tasks.
- Delete tasks.

In the list of tasks, you can monitor the task execution results: view the task status and the statistics for task performance on the devices. You can also create a selection of events to monitor the task execution (**Monitoring and reports** → **Event selections**). For details on event selection, refer to Kaspersky Security Center documentation.

Task execution results are also saved locally on the device and in Kaspersky Security Center reports.

For general information about task management, refer to the Kaspersky Security Center Help system.

> If the device is managed by a policy, it may not be possible to view and manage tasks created in Kaspersky Security Center using the command line or the graphical interface of the application.

Creating tasks in the Web Console

To create a task for a group or set of devices in the Web Console:

1. In the main window of the Web Console, select **Assets (Devices)** → **Tasks**.

   The list of tasks opens.

2. Click the **Add** button.

   The Task Wizard starts.

3. In the first step of the Wizard, perform the following actions:

   a. In the **Application** drop-down list, select the application name: Kaspersky Endpoint Security.

   b. In the **Task type** drop-down list, select the type of task that you want to create.

   c. In the **Task name** field, enter a name for the new task.

   d. In the **Devices to which the task will be assigned** section, select the method for defining the task scope. The task scope comprises the devices on which the task will be run:

   - Select the **Assign task to an administration group** option if the task is to be run on all devices included in a specific administration group.
   - Select the **Specify device addresses manually, or import addresses from a list** option if the task is to be run on the specified devices.
   - Select the **Assign task to a device selection** option if the task is to be run on devices included in the device selection according to a predefined criterion. For information on how to create a device selection, refer to the Kaspersky Security Center Help system.

Proceed to the next step of the wizard.

4. Depending on the selected method for defining the task scope, perform one of the following actions:

   - In the administration group tree, select the check boxes next to the required administration groups.
   - In the list of devices, select the check boxes next to the required devices. If the required devices are not listed, you can add them in the following ways:
     - Using the **Add devices** button. You can add devices by name or IP address, add devices from a specified IP range, or select devices from the list of devices detected by the Administration Server when polling the corporate LAN.
     - Using the **Import devices from file** button. For the import, a TXT file with a list of device addresses is used, where each address must be on a separate line.
   - From the list, select the name of the selection containing the required devices.

   Proceed to the next step of the wizard.

5. To configure the task settings immediately after creation, in the last step of the Wizard, select the **Open task properties window after creation** check box. A task is created with the default settings.

6. Finish the wizard.

A new task will be displayed in the list of tasks.

To create a local task in the Web Console:

1. In the main window of the Web Console, select **Assets (Devices)** → **Managed devices**.

   The list of managed devices opens.

2. Select the administration group containing the necessary device. To do so, click the link in the **Current path** field above the list of managed devices and select an administration group in the window that opens.

   The list displays only the managed devices for the selected administration group.

3. In the list, find the device for which you want to create a task and click the device name.

4. This opens a managed device properties window; in that window, go to the **Tasks** tab.

   The list of tasks created for this device is displayed.

5. Click the **Add** button.

   The Task Wizard starts.

6. In the first step of the Wizard, perform the following actions:

   a. In the **Application** drop-down list, select the application name: Kaspersky Endpoint Security.

   b. In the **Task type** drop-down list, select the type of task that you want to create.

   c. In the **Task name** field, enter a name for the new task.

7. To configure the task settings immediately after creation, in the last step of the Wizard, select the **Open task properties window after creation** check box. A task is created with the default settings.

8. Finish the wizard.

A new task will be displayed in the list of tasks.

Changing task settings in the Web Console

To edit task settings in the Web Console:

1. In the main window of the Web Console, select **Assets (Devices)** → **Tasks**.

   The list of tasks opens.

2. Do one of the following:

   - To edit the settings of a task that is run on all devices included in a specific administration group, click the link in the **Current path** field in the upper part of the window and select the administration group in the window that opens.

     The list displays only tasks configured for the selected administration group.

   - To edit the settings of a task that is run on one or multiple devices (a task for a set of devices), click the link in the **Current path** field in the upper part of the window and select the top node with the name of the Administration Server in the window that opens.

     The list displays all tasks created on the Administration Server.

3. In the list of tasks, select the required task and open the task properties window by clicking the link in the task name.

4. Configure the task settings:

   - On the **General** tab, you can edit the name of the task.

   - On the **Application settings** tab, you can configure specific task settings. The availability of configurable settings depends on the type of task.

   - On the **Schedule** tab, you can configure the task run schedule and additional settings for starting and stopping the task.

   The **General**, **Results**, **Settings**, **Schedule**, and **Revision history** tabs of the task properties window are standard for Kaspersky Security Center; for more details, refer to the Kaspersky Security Center Help system.

5. Click the **Save** button to save the changes made.

Starting, stopping, pausing, and resuming tasks in the Web Console

To start, stop, pause, or resume a task in the Web Console:

1. In the main window of Kaspersky Security Center Web Console, select **Assets (Devices)** → **Tasks**.

   The list of tasks opens.

2. Do one of the following:

   - To start or stop a task that is run on all devices included in a specific administration group, click the link in the **Current path** field in the upper part of the window and select the administration group in the window that opens.

     The list displays only the tasks created for the selected administration group.

   - To start or stop a task that is run on one or multiple devices (a task for a set of devices), click the link in the **Current path** field in the upper part of the window and select the top node with the name of the Administration Server in the window that opens.

     The list displays all tasks created on the Administration Server.

3. In the list of tasks, check the box next to the name of the required task and click the action button above the list of tasks.

Managing tasks in the Administration Console

You can perform the following actions with the tasks for Kaspersky Endpoint Security in the Administration Console:

- Create new tasks.
- Edit task settings.

  If the user account which is used to access the Administration Server does not have permissions to edit the settings of certain functional scopes, the settings of these functional scopes are not available for editing.

- Start, stop, pause, and resume tasks.

  The *Update* task cannot be paused or resumed, it can only be started or stopped.

- Export and import tasks.
- Delete tasks.

In the list of tasks, you can monitor the task execution results: view the task status and the statistics for task performance on the devices.

Information on the progress and results of task execution can be viewed in the list of events that Kaspersky Endpoint Security sends to the Kaspersky Security Center Administration Server (on the **Events** tab in the workspace of the **Administration Server <server name>** node). You can also create a selection of events to monitor the execution of tasks. For details on event selection, refer to Kaspersky Security Center documentation.

Task execution results are also saved locally on the device and in Kaspersky Security Center reports.

For general information about task management, refer to the Kaspersky Security Center Help system.

If the device is managed by a policy, it may not be possible to view and manage tasks created in Kaspersky Security Center using the command line or the graphical interface of the application.

Creating tasks in the Administration Console

To create a task for a group or set of devices in the Administration Console:

1. In the Administration Console, perform one of the following actions:

   - To create a task that will be run on devices included in the selected administration group, select this administration group in the console tree in the **Managed devices** folder, then select the **Tasks** tab in the workspace and click the **New task** button.

     The New task wizard starts for devices of the selected administration group.

   - To create a task that will be performed on one or multiple devices (a task for a set of devices), select the **Tasks** folder in the console tree and click the **New task** button in the workspace.

     The New task wizard starts for the set of devices.

2. At the first step of the wizard, select Kaspersky Endpoint Security and a task type.

   Proceed to the next step of the wizard.

3. If you are creating a task for a set of devices, the Wizard prompts you to define the task scope. The task scope comprises the devices on which the task will be run.

   a. Specify the method for defining the task scope: select devices from the list of devices detected by the Administration Server; set device addresses manually; import a list of devices from a file or specify a previously configured selection of devices (for more details, refer to the Kaspersky Security Center Help system).

   b. Depending on the method you have specified for defining the task scope, in the window that opens, perform one of the following actions:

      - In the list of detected devices, specify the devices on which the task will be run. To do so, select the check box in the list to the left of the device name.

      - Click the **Add** or **Add IP range** button and enter the device addresses manually.

      - Click the **Import** button and select the TXT file containing the list of device addresses in the window that opens.

      - Click the **Browse** button and, in the window that opens, specify the name of the selection containing the devices on which the task will be run.

   Proceed to the next step of the wizard.

4. Configure the available task settings by following the instructions in the Wizard.

5. Enter the name of the new task and proceed to the next step in the Wizard.

6. To start the task immediately after the Wizard finishes, in the final step, select the **Run task after the wizard finishes** check box.

7. Finish the wizard.

   A new task will be displayed in the list of tasks.

To create a local task in the Administration Console:

1. In the Administration Console tree, in the **Managed devices** folder, select the administration group containing the necessary device.

2. In the workspace, select the **Devices** tab.

3. In the list of managed devices, select the required device and double-click it to open the **Properties: <Task name>** window.

4. In the displayed window with the properties of the managed device, select the **Tasks** section.

   The list of tasks created for this device is displayed.

5. Click the **Add** button.

   The Task Wizard starts.

6. At the first step of the wizard, select Kaspersky Endpoint Security and a task type.

   Proceed to the next step of the wizard.

7. Enter a name for the new task and configure the available task settings following the instructions of the wizard.

8. Finish the wizard.

   A new task will be displayed in the list of tasks.

Changing task settings in the Administration Console

To edit task settings in the Administration Console:

1. In the Administration Console, perform one of the following actions:

   - To edit the settings of a task that is run on devices included in the specified administration group, select this administration group in the console tree, then select the **Tasks** tab in the workspace.

   - To edit the settings of a task that is run on one or multiple devices (a task for a set of devices), select the **Tasks** folder in the console tree.

2. In the list of tasks, select the required task and double-click it to open the **Properties: <Task name>** window.

   You can also open the task properties window using the **Properties** item in the task context menu.

3. Edit the task settings. The availability of configurable settings depends on the type of task.

   The **General**, **Notification**, **Schedule**, and **Revision history** tabs of the task properties window are standard for Kaspersky Security Center; for more details, refer to the Kaspersky Security Center Help system.

4. Click **Apply** or **OK** in the **Properties: <Task name>** window to save the changes made.

Starting, stopping, pausing, and resuming tasks in the Administration Console

To start, stop, pause, or resume a task in the Administration Console:

1. In the Administration Console, perform one of the following actions:

   - To start or stop a task that is run on devices included in the specified administration group, select this administration group in the console tree, then select the **Tasks** tab in the workspace.

     The list of tasks created for the selected administration group opens.

   - To start or stop a task that is run on one or multiple devices (a task for a set of devices), select the **Tasks** folder in the console tree.

     The list of all tasks created on the Administration Server opens.

2. In the list of tasks, select the required task, open the context menu of the task, and select the action that you want to perform.

Managing the application using the command line

Using the command line, you can install, uninstall, start, and stop Kaspersky Endpoint Security on the device, and also manage the application locally.

The functional components of the application are supported by *Kaspersky Endpoint Security local tasks* that are run in the operating system. You can enable or disable functional components of the application on a device by starting or stopping Kaspersky Endpoint Security tasks in the command line. One-time device scans are also performed by starting Kaspersky Endpoint Security tasks. You can define the settings for functional components on the device and the device scan settings by configuring the Kaspersky Endpoint Security *task settings*.

In addition to the task settings, the following settings are provided for configuring the application:

- General Container Scan settings.
- Network traffic scan settings.
- General application settings that define the operation of the application as a whole and the operation of individual functions.

In the command line, Kaspersky Endpoint Security is managed using *Kaspersky Endpoint Security management commands*.

If the application is being used in EDR Agent mode, only a limited subset of application component and tasks is available. You can manage certain protection components, activate the application, and update the databases. Learn more about the special aspects of the EDR Agent mode in the Known issues and limitations article.

Enabling automatic addition of kesl-control commands (bash completion)

Automatic addition of kesl-control commands can be disabled for the bash shell.

To enable automatic addition of kesl-control commands in the current bash shell session, run the following command:

```
source /opt/kaspersky/kesl/shared/bash_completion.sh
```

To enable automatic addition for all new bash shell sessions, run the following command:

```
echo "source /opt/kaspersky/kesl/shared/bash_completion.sh" >> ~/.bashrc
```

Task management on the command line

The following application tasks are provided for managing Kaspersky Endpoint Security using the command line:

- *File Threat Protection*. This task allows you to enable or disable File Threat Protection in real time and defines the settings for the File Threat Protection component. The task starts automatically when the application starts.
- *Malware Scan*. This task allows you to scan file system objects for malware on demand and defines the settings for the scan. You can use this task to perform a full or custom scan of the device.
- *Critical Areas Scan*. This task allows you to run a critical areas scan of the operating system on demand and defines the settings for the scan.
- *Custom file scan*. This task is designed for configuring and storing settings that are used when scanning the specified files and directories using the `kesl-control --scan-file` command. As a result of the command execution, the application creates and starts a temporary file scan task.
- *Container Scan*. This task allows you to scan containers and images on demand and defines the settings for the scan.
- *Custom Container Scan*. This task is designed for configuring and storing settings that are used when scanning the specified containers and images using the `kesl-control [-T] --scan-container` command. As a result of the command execution, the application creates and starts a temporary Container Scan task.
- *Removable Drives Scan*. This task allows you to monitor the connection of removable media to the device in real time and defines the settings of the Removable Drives Scan and the scan of its boot sectors for malware.
- *Web Threat Protection*. This task allows you to enable or disable Web Threat Protection and defines the settings for the Web Threat Protection component.
- *Network Threat Protection*. This task allows you to enable or disable Network Threat Protection and defines the settings for the Network Threat Protection component.
- *Anti-Cryptor*. This task allows you to enable or disable the protection of files from remote malicious encryption and defines the settings for the Anti-Cryptor component.

- *Firewall Management*. This task allows you to enable or disable firewall management and defines the network connection control settings on the device.
- *Application Control*. This task allows you to enable or disable Application Control and defines the settings of the Application Control component.
- *Inventory*. The task allows you to obtain information about all the application executable files stored on the device.
- *Device Control*. This task allows you to enable or disable Device Control and defines the settings for the Device Control component. The task starts automatically when Kaspersky Endpoint Security starts.
- *Web Control*. This task allows you to enable or disable Web Control and defines the settings of the Web Control component.
- *Behavior Detection*. This task allows you to monitor malicious activity of applications in the operating system. The task starts automatically when Kaspersky Endpoint Security starts.
- *System Integrity Monitoring*. This task allows you to perform real-time monitoring of the actions performed with objects from the monitoring scope specified in the System Integrity Monitoring component settings.
- *System Integrity Check*. This task allows you to check for changes in files and directories that you have included in the monitoring scope, by comparing the current state of the monitored object with a previously recorded state.
- *Licensing*. This task provides the capability to activate an application installed on the device. The task starts automatically when the application starts, and it resides in the device operating memory. The task has no settings; license keys are managed using special management commands. The task cannot be started, stopped, or deleted.
- *Update*. You can use this task to perform scheduled and on-demand application database and module updates and edit update settings.
- *Rollback*. You can use this task to roll back the last update of application databases and modules.
- *Kaspersky Endpoint Detection and Response Expert (on-premise) Integration*. This task allows enabling or disabling the integration with Kaspersky Endpoint Detection and Response Expert (on-premise) or with Kaspersky Endpoint Detection and Response (KATA) and managing integration settings.
- *Kaspersky Network Detection and Response (KATA) Integration* This task allows you to enable or disable integration with Kaspersky Network Detection and Response (KATA) and specifies the integration settings.
- *Integration with Sandbox*. This task enables and disables integration with Sandbox and specifies the integration settings.
- *KUMA Integration*. This task enables and disables integration with Kaspersky Unified Monitoring and Analysis Platform and specifies the integration settings.
- *Execution Prevention for objects (EDR Expert (on-premise))*. This task lets you enable and disable the use of Endpoint Detection and Response Expert (on-premise) execution prevention rules and also view a list of these rules.
- *Execution prevention for objects (EDR Optimum)*. This task lets you enable and disable the use of Endpoint Detection and Response Optimum execution prevention rules and also view a list of these rules.

Each application task has a name used on the command line, an ID, and a type (see the table below).

IDs are unique for all tasks, including deleted tasks. The application does not reuse the identifiers of the deleted tasks. The identifier of a new task is the next successive number to the identifier of the latest created task.

Task names are not case-sensitive.

During installation of the application, *predefined tasks* are created. These tasks cannot be deleted. Each predefined task has a name and ID.

Tasks that you create while working with the application are called *user tasks*. When you create the task, you specify the name for it. IDs for user tasks are defined and assigned by the application when the task is created. IDs for user tasks are starting from 100.

During operation, the application creates *temporary scan tasks*. Temporary task names and IDs are assigned by the application. Temporary tasks are automatically deleted when completed.

Application tasks

Task	Task name in command line	Task ID	Task type
File Threat Protection	File_Threat_Protection	1	OAS
Malware Scan	Scan_My_Computer	2	ODS
Malware Scan (user task)	user-defined	starting from 100	ODS
Custom file scan	Scan_File	3	ODS
Critical Areas Scan	Critical_Areas_Scan	4	ODS
Update	Update	6	Update
Update (user task)	user-defined	starting from 100	Update
Rollback	Rollback	7	Rollback
Rollback (user task)	user-defined	starting from 100	Rollback
Licensing	License	9	License
System Integrity Monitoring	System_Integrity_Monitoring	11	OAFIM
System Integrity Monitoring (user task)	user-defined	starting from 100	ODFIM
Firewall Management	Firewall_Management	12	Firewall
Anti-Cryptor	Anti_Cryptor	13	AntiCryptor
Web Threat Protection	Web_Threat_Protection	14	WTP
Device Control	Device_Control	15	DeviceControl
Removable Drives Scan	Removable_Drives_Scan	16	RDS
Network Threat Protection	Network_Threat_Protection	17	NTP
Container Scan	Container_Scan	18	ContainerScan
Container Scan (user task)	user-defined	starting from 100	ContainerScan
Custom Container Scan	Custom_Container_Scan	19	ContainerScan
Behavior Detection	Behavior_Detection	20	BehaviorDetection
Application Control	Application_Control	21	AppControl
Inventory	Inventory_Scan	22	InventoryScan
Inventory (user task)	user-defined	starting from 100	InventoryScan

Task	Task name in command line	Task ID	Task type
Kaspersky Endpoint Detection and Response Expert (on-premise) Integration	KATAEDR	24	KATAEDR
Web Control	Web_Control	26	WebControl
Sandbox Integration	Standalone_Sandbox	29	StandaloneSandbox
Execution Prevention for objects (EDR Expert (on-premise))	KATAEDR_Prevention	30	KATAEDRPrevention
Kaspersky Network Detection and Response (KATA) Integration	KATANDR	31	KATANDR
Execution prevention for objects (EDR Optimum)	EDRO_Prevention	32	Prevention
KUMA Integration	KUMA	33	KUMA
Mail Threat Protection	Mail_Monitoring	35	MailMonitoring
BadUSB Attack Prevention	Bad_USB	37	BadUSB

You can perform the following actions with tasks:

- Start and stop all predefined and user tasks except the *License* task.
- Suspend and resume *ODS*, *ODFIM*, and *InventoryScan* tasks.
- Create and delete user tasks. Depending on the application usage mode, you can create the following types of tasks:
  - Standard mode: *ODS*, *Update*, *Rollback*, *ODFIM*, *ContainerScan*, and *InventoryScan*;
  - Light Agent mode for protecting virtual environments: *ODS*, *ODFIM*, *ContainerScan*, and *InventoryScan*.
- Change the settings for all user tasks and all predefined tasks, except for *Rollback* and *License* tasks.

  If the application is used in Light Agent mode to protect virtual environments, the settings of the predefined *Update* task also cannot be edited.

- Configure the task start schedule.

Viewing a list of tasks in the command line

To view the list of application tasks, execute the following command:

```
kesl-control --get-task-list [--json]
```

where:

`--json` – output format for the list of application tasks. If a file format is not specified, the output will be an INI file.

The list of Kaspersky Endpoint Security tasks will be displayed.

The following information will be displayed for each task:

- `Name`: the task name
- `ID`: the task ID
- `Type`: the task type
- `State`: the current state of the task

If the Kaspersky Security Center policy prohibits users from viewing and editing local tasks, information about the Scan_My_Computer, Critical_Areas_Scan, Container_Scan, Inventory_Scan, Update (in Standard mode) and Rollback (in Standard mode) tasks is not available.

Viewing the status of a task in the command line

To view a task state, execute the following command:

```
kesl-control --get-task-state <task ID/name> [--json]
```

where:

- `<task ID/name>` is the ID assigned to the task at the time of its creation, or the name of the task in the command line.
- `--json` is specified to output the settings in JSON format.

Application tasks can take the following main states:

- `Started`—Task is running.
- `Starting`—Task is being launched.
- `Stopped`—Task has been stopped.
- `Stopping`—Task is stopping.

The *ODS*, *ODFIM*, and *InventoryScan* tasks can also have one of the following states:

- `Pausing` — Task is pausing.
- `Suspended` — Task is suspended.
- `Resuming` — Task is resuming.

Creating a task in the command line

If the application is being used in standard mode, you can create the following types of tasks: *ODS*, *Update*, *Rollback*, *ODFIM*, *ContainerScan*, and *InventoryScan*.

If the application is used in Light Agent mode to protect virtual environments, you can create the following types of tasks: *ODS*, *ODFIM*, *ContainerScan*, and *InventoryScan*.

You can create tasks with default settings or with settings specified in a configuration file.

To create a task with default settings, execute the following command:

```
kesl-control --create-task <task name> --type <task type>
```

where:

- `<task name>` is the name that you specify for the new task.
- `<task type>` is the designation of the type of the task you are creating.

To create a task with the settings specified in the configuration file, execute the following command:

```
kesl-control --create-task <task name> --type <task type> --file <path to
configuration file> [--json]
```

where:

- `<task name>` is the name that you specify for the new task.
- `<task type>` is the identifier for the type of the task you are creating.
- `<path to file>` is the full path to the configuration file with the settings that will be used for creating the task.
- `--json` is specified to import the settings from the configuration file in JSON format. If the `--json` option is not specified, the application attempts to import from an INI file. If the import fails, an error is displayed.

Starting, stopping, pausing, and resuming tasks in the command line

You can start and stop predefined and user tasks, except for tasks of the License type.

You can pause and resume ODS, ODFIM, and InventoryScan tasks.

Start a task

```
kesl-control --start-task <task ID|name> [-W] [--progress]
```

where:

- `<task ID|name>` is the ID assigned to the task at the time of its creation, or the name of the task on the command line.
- `[-W]` enables the output of current events related to this task.
- `[--progress]` enables the display of task progress.

Example of running a task with ID 1 and enabling the display of current events associated with the task

```
kesl-control --start-task 1 -W
```

If an error occurs when starting a task and the task does not start, then after the application is restarted, an attempt is made to start the task again.

Stop a task

```
kesl-control --stop-task <task ID|name> [-W]
```

where:

- `<task ID|name>` is the ID assigned to the task at the time of its creation, or the name of the task on the command line.
- `[-W]` enables the output of current events related to this task.

Suspend a task

```
kesl-control --suspend-task <task ID|name>
```

Resume a task

```
kesl-control --resume-task <task ID|name>
```

Deleting a task in the command line

You can delete only user tasks. Predefined tasks cannot be deleted.

To delete a task, execute the following command:

```
kesl-control --delete-task <task ID/name>
```

where `<task ID/name>` is the ID assigned to the task at the time of its creation, or the name of the task in the command line.

Displaying task settings in the command line

You can display the current values of settings for all user tasks and all predefined tasks, except for *Rollback* and *License* tasks (these tasks have no settings).

You can output the current values of task settings to the console or to a configuration file that you can use to change task settings.

To output the current values of task settings to the console, execute the following command:

```
kesl-control --get-settings <task ID/name> [--json]
```

where:

- `<task ID/name>` is the ID assigned to the task at the time of its creation, or the name of the task in the command line.
- `--json` is specified to output the settings in JSON format. If the `--json` option is not specified, the settings are output in the INI format.

To output the current values of task settings to a configuration file, execute the following command:

```
kesl-control --get-settings <task ID/name> --file <path to configuration file> [--json]
```

where:

- `<task ID/name>` is the ID assigned to the task at the time of its creation, or the name of the task in the command line.
- `--file <configuration file path>` is the path to the configuration file where the task settings will be written. If you specify the name of a file without its path, the file will be created in the current directory. If a file already exists in the specified path, it will be overwritten. If the specified directory does not exist, the configuration file will not be created.
- `--json` is specified to output the settings in JSON format. If the `--json` option is not specified, the settings are output in the INI format.

Editing task settings in the command line

You can edit the settings for all user tasks and all predefined tasks, except for *Rollback* and *License* tasks.

> If the application is used in Light Agent mode to protect virtual environments, the settings of the predefined *Update* task also cannot be edited.

On the command line, you can edit the settings of tasks using the `kesl-control --set-settings` command:

- You can edit all task settings using the configuration file that contains the task settings. You can get the configuration file using the command for displaying task settings.
- You can edit individual task settings using command line options in the `< setting name >=< setting value >` format. You can get the current values of task settings using the command for displaying task settings.
- You can restore the task settings to their default values.

You can add or remove scan scopes and exclusion scopes using a configuration file that contains task settings or command line options. Configuring scan scopes and exclusion scopes is available for tasks with the *OAS*, *ODS*, *OAFIM*, *ODFIM*, and *AntiCryptor* types.

In order to optimize the operation of scan tasks, it is recommended to add the path with snapshots mounted by the system in the read-only mode to the exclusions for the systems with the btrfs file system and enabled active snapshots. For example, for the systems based on SUSE/OpenSUSE, you can add the following exclusion for the path: `/.snapshots/*/snapshot/`.

For some tasks, separate management commands are also provided that allow you to edit task settings.

Editing task settings using a configuration file

To edit values of task settings using a configuration file:

1. Output the task settings to the configuration file using the command `kesl-control --get-settings`.
2. Open the configuration file and edit the values of the necessary settings.

   For tasks of the *OAS*, *ODS*, *OAFIM*, *ODFIM*, and *AntiCryptor* types, you can add or remove scan scopes and exclusion scopes.

   If you want to add a scan scope, add a `[ScanScope.item_#]` section with the following settings to the file:

   - `AreaDesc` is a description of the scan scope, which contains additional information about this scope.
   - `UseScanArea` enables scanning of the specified scope.
   - `Path` is a path to the directory with the objects to be scanned. You can specify a path to a local directory or enable scanning of remote directories mounted on a client device.
   - `AreaMask.item_#` is a limitation of the scan scope. You can specify a mask for the name of the files to be scanned. Scanning is enabled by default for all objects in the scan scope. You can specify multiple `AreaMask.item_#` items.

   If you want to add an exclusion scope, add an `[ExcludedFromScanScope.item_#]` section with the following settings to the file:

   - `AreaDesc` – a description of the exclusion scope, which contains additional information about the exclusion scope.
   - `UseScanArea` enables exclusion of the specified scope.

- `Path` is a path to the directory with the objects to be excluded. You can specify a path to a local directory or exclude remote directories mounted on a client device. Possible values for the setting depend on the type of task.

- `AreaMask.item_#` is a limitation of the exclusion scope. You can specify a mask for the name of the files that you want to exclude from the scan scope. By default, all objects in the scope are excluded.

  Example:

  ```
  [ExcludedFromScanScope.item_0000]
  AreaDesc=
  UseScanArea=Yes
  Path=/tmp/notchecked
  AreaMask.item_0000=*
  ```

You can specify multiple `[ScanScope.item_#]` and `[ExcludedFromScanScope.item_#]` sections. The application processes the scopes by index in ascending order.

3. Save the configuration file.

4. Execute the command:

   `kesl-control --set-settings <task ID/name> --file <path to configuration file> [--json]`

   where:

   - `<task ID/name>` is the ID assigned to the task at the time of its creation, or the name of the task in the command line.

   - `--file <configuration file path>` is the full path to the configuration file from which the task settings will be imported.

   - Specify the `--json` option if you are importing settings from a JSON configuration file. If the `--json` option is not specified, the application attempts to import from an INI file. If the import fails, an error is displayed.

   All values of task settings defined in the file will be imported into the application.

If you change the allowlist, or prohibit launch of all applications or applications that affect the operation of Kaspersky Endpoint Security in the Application Control task settings, run the `--set-settings` command with the `--accept` option.

Editing task settings using the command line options

Using the `kesl-control --set-settings` command options, you can edit individual values of task settings, as well as add or remove scan scopes and exclusion scopes for tasks of the *OAS*, *ODS*, *OAFIM*, *ODFIM*, and *AntiCryptor* types.

Configuring individual task settings

To edit individual values of task settings using command line options, execute the following command:

```
kesl-control --set-settings <task ID/name> <setting name>=<setting value> [<setting name>=<setting value>]
```

where:

- `<task ID/name>` is the ID assigned to the task at the time of its creation, or the name of the task in the command line.
- `<setting name>=<setting value>` is the name and value of one of the task settings. You can get the current values of task settings using the command for displaying task settings.

The values of the specified task settings will be changed.

If you change the allowlist, or prohibit launch of all applications or applications that affect the operation of Kaspersky Endpoint Security in the Application Control task settings, run the `--set-settings` command with the `--accept` option.

Adding and removing a scan scope

To add a scan scope using command line options, execute the following command:

```
kesl-control --set-settings <task ID/name> --add-path <path>
```

where:

- `<task ID/name>` is the ID assigned to the task at the time of its creation, or the name of the task in the command line.
- `--add-path <path>` adds a path to a directory with objects to be scanned.

A new `[ScanScope.item_#]` section will be added to the task settings. The application scans the objects in the directory specified by the `Path` setting. The remaining settings of the scan scope take default values.

If the task settings already contain an `[ScanScope.item_#]` section with the specified value for the `Path` setting, a duplicate section is not added.

If the `UseScanArea` setting is set to `No` its value will change to `Yes` after this command is executed and the objects located in this directory will be scanned.

Example:
Adding a scan scope for a task with ID=100:

```
kesl-control --set-settings 100 ScanScope.item_0001.UseScanArea=Yes ScanScope.item_0001.Path=/home
```

The following scan scope settings will be added to the task:

```
[ScanScope.item_0001]

AreaDesc=

UseScanArea=Yes

Path=/home

AreaMask.item_0000=*
```

To delete a scan scope using command line options, execute the following command:

```
kesl-control --set-settings <task ID/name> --del-path <path>
```

where:

- `<task ID/name>` is the ID assigned to the task at the time of its creation, or the name of the task in the command line.
- `--del-path <path>` removes a path to a directory with objects to be scanned.

The `[ScanScope.item_#]` section that contains the specified path will be deleted from the task settings. The application will not scan the objects in the specified directory.

Adding and removing an exclusion scope

To add an exclusion scope using command line options, execute the following command:

```
kesl-control --set-settings <task ID/name> --add-exclusion <path>
```

where:

- `<task ID/name>` is the ID assigned to the task at the time of its creation, or the name of the task in the command line.
- `--add-exclusion <path>` adds a path to a directory with objects that you want to exclude from the scan.

A new `[ExcludedFromScanScope.item_#]` section will be added to the task settings. The application will exclude objects in the directory specified by the `Path` setting from scans. The remaining settings of the exclusion scope take default values.

If the task settings already contain an `[ExcludedFromScanScope.item_#]` section with the specified value for the `Path` setting, a duplicate section is not added.

If the `UseScanArea` setting is set to `No` its value will change to `Yes` after this command is executed and the objects located in this directory will be excluded from scans.

To delete an exclusion scope using command line options, execute the following command:

```
kesl-control --set-settings <task ID/name> --del-exclusion <path>
```

where:

- `<task ID/name>` is the ID assigned to the task at the time of its creation, or the name of the task in the command line.
- `--del-exclusion <path>` removes a path to a directory with objects to be excluded from scanning.

The `[ExcludedFromScanScope.item_#]` section that contains the specified path will be deleted from the task settings. The application will not exclude the objects in the specified directory from the scan.

Restoring default task settings in the command line

You can restore the default settings for all user tasks and all predefined tasks, except for tasks of the *Rollback* and *License* types (these tasks have no settings).

To reset task settings to their default values, execute the following command:

```
kesl-control --set-settings <task ID/name> --set-to-default
```

where `<task ID/name>` is the ID assigned to the task at the time of its creation, or the name of the task in the command line.

The application changes the setting values to their defaults.

Configuring task schedule in the command line

If the application is being used in standard mode, you can configure the run schedule for the following types of tasks: *ODS*, *Update*, *Rollback*, *ODFIM*, *ContainerScan*, and *InventoryScan*.

If the application is used in Light Agent mode to protect virtual environments, you can configure the run schedule for the following types of tasks: *ODS*, *ODFIM*, *ContainerScan*, and *InventoryScan*.

You can output the current values of the settings for the task run schedule to the console or to a configuration file.

To output the current settings for the task run schedule to the console, execute the following command:

```
kesl-control --get-schedule <task ID/name> [--json]
```

where:

- `< task ID/name >` is the ID assigned to the task at the time of its creation, or the name of the task in the command line.
- `--json` is specified to output the settings in JSON format. If the `--json` option is not specified, the settings are output in the INI format.

To output the current settings for the task run schedule to a configuration file, execute the following command:

```
kesl-control --get-schedule < task ID/name > --file < path to configuration file > [--
json]
```

where:

- `< task ID/name >` is the ID assigned to the task at the time of its creation, or the name of the task in the command line.
- `--file < configuration file path >` is the path to the configuration file where the task schedule settings will be written. If you specify the name of a file without its path, the file will be created in the current directory. If a file already exists in the specified path, it will be overwritten. If the specified directory does not exist, the configuration file will not be created.
- `--json` is specified to output the settings in JSON format. If the `--json` option is not specified, the settings are output in the INI format.

  Examples:
  Save the update task settings to a file named update_schedule.ini and save the created file in the current directory:

  ```
  kesl-control --get-schedule 6 --file update_schedule.ini
  ```

  Display the update task schedule in the console:

  ```
  kesl-control --get-schedule 6
  ```

You can edit the settings for the task run schedule in the following ways:

- Import the settings from a configuration file that contains all schedule settings.
- Using the command line, specify individual settings of the task schedule in the `< setting name >=< setting value >` format.

To edit the values of the settings for task run schedule using a configuration file, perform the following actions:

1. Output the task settings to the configuration file using the `kesl-control --get-schedule` command.
2. Edit the values of the necessary settings in the file and save the changes.
3. Execute the command:

   ```
   kesl-control --set-schedule < task ID/name > --file < path to configuration file > [--
   json]
   ```

where:

- `< task ID/name >` is the ID assigned to the task at the time of its creation, or the name of the task in the command line.
- `--file < configuration file path >` is the full path to the configuration file from which the task schedule settings will be imported.
- Specify the `--json` option if you are importing settings from a JSON configuration file. If the `--json` option is not specified, the application attempts to import from an INI file. If the import fails, an error is displayed.

All values of the settings for the task run schedule defined in the file will be imported into the application.

Example:
Import the schedule settings from the configuration file named /home/test/on_demand_schedule.ini into the task with ID=2:

```
kesl-control --set-schedule 2 --file /home/test/on_demand_schedule.ini
```

To edit the individual values of the settings for the task run schedule using the command line, execute the following command:

```
kesl-control --set-schedule < task ID/name > < setting name >=< setting value > [< setting name >=< setting value >]
```

where:

- `< task ID/name >` is the ID assigned to the task at the time of its creation, or the name of the task in the command line.
- `< setting name >=< setting value >` is the name and value of one of the task schedule settings.

The values of the specified settings for the task run schedule are modified.

Examples:

To schedule the task to start every ten hours, specify the following settings:

```
RuleType=Hourly

RunMissedStartRules=No

StartTime=2021/May/30 23:05:00;10

RandomInterval=0
```

To schedule the task to start every ten minutes, specify the following settings:

```
RuleType=Minutely

RunMissedStartRules=No

StartTime=23:10:00;10

RandomInterval=0
```

To schedule the task to start on the 15th of every month, specify the following settings:

```
RuleType=Monthly

RunMissedStartRules=No

StartTime=23:25:00;15

RandomInterval=0
```

To schedule the task to start on every Tuesday, specify the following settings:

```
RuleType=Weekly

StartTime=18:01:30;Tue

RandomInterval=99

RunMissedStartRules=No
```

To schedule the task to start every 11 days, specify the following settings:

```
RuleType=Daily

RunMissedStartRules=No

StartTime=23:15:00;11

RandomInterval=0
```

Managing general application settings on the command line

General application settings define the operation of the application as a whole and the operation of individual functions.

You can manage general application settings using special management commands:

- Output the current values of general application settings to the console or to a configuration file.
- Edit general application settings using a configuration file containing all general settings, or using command line options in < `setting name` >=< `setting value` >. format.

Using general settings, you can:

- Configure the use of Kaspersky Security Network and the light version of anti-malware databases in the application.
- Configure the use of a proxy server in the application.
- Select the file operation interception mode (block/do not block files during a scan).
- Configure exclusions from the mount points scan (global exclusions).
- Configure exclusions from the process memory scan.
- Enable or disable Container Scan in real time.
- Enable or disable the detection of legitimate applications that intruders can use to compromise devices or data.
- Enable or disable integration with Kaspersky Managed Detection and Response.
- Configure the use of event logs.
- Configure a limit on CPU resource usage by scan tasks (of the ODS type).
- Limit the number of user scan tasks that a non-privileged user can start simultaneously.

Displaying general application settings

You can output the current values of general application settings to the console or to a configuration file that you can use to edit application settings.

To output the current values of general application settings to the console, execute the following command:

```
kesl-control --get-app-settings [--json]
```

where `--json` is specified to output the settings in JSON format. If the `--json` option is not specified, the settings are output in the INI format.

To output the current values of general application settings to a configuration file, execute the following command:

```
kesl-control --get-app-settings --file <path to configuration file> [--json]
```

where:

- `--file <configuration file path>` is the path to the configuration file where the application general settings will be written. If you specify the name of a file without its path, the file will be created in the current directory. If a file already exists in the specified path, it will be overwritten. If the specified directory does not exist, the configuration file will not be created.

- `--json` is specified to output the settings in JSON format. If the `--json` option is not specified, the settings are output in the INI format.

Example:
Display the general application settings to a file named kesl_config.ini.Save the created file in the current directory:

```
kesl-control --get-app-settings --file kesl_config.ini
```

Editing general application settings

On the command line, you can edit the general application settings using the command `kesl-control --set-app-settings`:

- You can edit all general settings using the configuration file that contains the general application settings. You can get the configuration file using the command for displaying general settings.

- You can edit individual settings using command line options in the format `<setting name>=<setting value>`. You can get the current values of general application settings using the command for displaying general settings.

To edit values of general application settings using a configuration file:

1. Output the general application settings to a configuration file.

2. Edit the values of the necessary parameters in the file and save the changes.

3. Execute the command:

   ```
   kesl-control --set-app-settings --file <path to configuration file> [--json]
   ```

   where:

   - `--file <path to configuration file>` is the full path to the configuration file with the general application settings. If you delete any parameter in the configuration file, the default value for that parameter will be displayed after the command is executed.

   - Specify the `--json` option if you are importing settings from a JSON configuration file. If the `--json` option is not specified, the application attempts to import from an INI file. If the import fails, an error is displayed.

   All the values of the general settings defined in the file will be imported into the application.

To edit values of general application settings using command line options, execute the following command:

```
kesl-control --set-app-settings <setting name>=<setting value> [<setting name>=<setting value>]
```

where < `setting name` >=< `setting value` > is the name and value of one of the general application settings.

The values of the specified general settings will be changed.

Examples:

Import general settings into the application from the configuration file /home/test/kesl_config.ini:

```
kesl-control --set-app-settings --file /home/test/kesl_config.ini
```

Set the detail level for the trace file to low:

```
kesl-control --set-app-settings TraceLevel=NotDetailed
```

Add a mount point that you want to exclude from interception of file operations:

```
kesl-control --set-app-settings ExcludedMountPoint.item_0000="/data"
```

Using filters to limit results of queries

A filter allows you to limit the query results when executing application management commands.

Filter conditions are specified using one or more *logical expressions*, which are combined using the logical operator `and`. Filter conditions must be enclosed in quotation marks:

"< `field` > < `comparison operator` > '< `value` >'"

"< `field` > < `comparison operator` > '< `value` >' and < `field` > < `comparison operator` > '< `value` >'"

where:

- < `field` > is the name of the database field.
- < `comparison operator` > is one of the following comparison operators:
  - > is "greater than"
  - < is "less than"
  - `like` matches the specified value When specifying a value, you can use % masks: for example, the logical expression "FileName like '%etc%'" sets the limitation "contains the text "etc" in the FileName field"

    > The `like` comparison operation works only with fields that are stored in the database as text. The `like` operation is not suitable for fields with dates, times, numbers, or other data types other than text.

  - == is "equal to"
  - `!=` is "not equal to"
  - >= is "greater than or equal to"
  - <= is "less than or equal to"

- < value > is the value of the field. The value must be enclosed in single quotation marks (').

  You can specify a date value as UNIX™ time (the number of seconds that have elapsed since 00:00:00 (UTC), January 1, 1970) or in YYYY-MM-DD hh:mm:ss format. The user specifies the date and time in the user's local time zone, and the application displays them in the same time zone.

You can use a filter in the following application management commands:

- Output information about certain current application events (Viewing events on the command line, Viewing events in Kaspersky Security Center):

  ```
  kesl-control -W --query "< filter conditions >"
  ```

- Output information about certain application events (Viewing events on the command line, Viewing events in Kaspersky Security Center) in the event log:

  ```
  kesl-control -E --query "< filter conditions >"
  ```

- Display information about certain objects in the Backup:

  ```
  kesl-control -B --query "< filter conditions >"
  ```

- Delete certain objects from the Backup:

  ```
  kesl-control -B --mass-remove --query "< filter conditions >"
  ```

  Examples:

  Get information about events that contain the text "etc" in the FileName field:

  ```
  kesl-control -E --query "FileName like '%etc%'"
  ```

  Display information about events with the ThreatDetected type:

  ```
  kesl-control -E --query "EventType == 'ThreatDetected'"
  ```

  Display information about events with the ThreatDetected type, created by tasks of the ODS type:

  ```
  kesl-control -E --query "EventType == 'ThreatDetected' and TaskType == 'ODS'"
  ```

  Get information about the events generated after the date specified in the UNIX time stamp system (the number of seconds that have elapsed since 00:00:00 (UTC), 1 January 1970):

  ```
  kesl-control -E --query "Date > '1583425000'"
  ```

  Get information about the events generated after the date specified in YYYY-MM-DD hh:mm:ss format:

  ```
  kesl-control -E --query "Date > '2022-12-22 18:52:45'"
  ```

  Get information about files in the Backup storage that have the High severity level:

  ```
  kesl-control -B --query "DangerLevel == 'High'"
  ```

Exporting and importing application settings

If Kaspersky Endpoint Security is managed via Kaspersky Security Center, importing settings is not supported.

If Kaspersky Endpoint Security is used in Light Agent mode to protect virtual environments, the settings of the predefined task of the *Update* type cannot be exported or imported.

Kaspersky Endpoint Security allows you to export and import all application settings for troubleshooting, verifying settings, or simplifying the application's configuration on other user devices. When exporting settings, all application settings (including general Container Scan settings, network traffic scan settings, general application settings, and task settings) are saved in a configuration file. You can use this configuration file to import settings into the application.

The application must be launched when settings are imported or exported. After the settings are imported, the application must be restarted.

When importing or exporting settings from an older application version, new settings are set to default values. Importing settings to an older application version is not supported.

To export the application settings, execute the following command:

```
kesl-control --export-settings --file <path to configuration file> [--json]
```

where:

- `--file <configuration file path>` is the full path to the configuration file where the application settings will be saved.
- `--json` is specified to export the settings to the configuration file in JSON format. If the `--json` options is not specified, the settings will be exported to an INI file.

To import the application settings from the file, execute the following command:

```
kesl-control --import-settings --file <path to configuration file> [--json]
```

where:

- `--file <configuration file path>` is the full path to the configuration file from which the settings will be imported into the application.
- `--json` is specified to import the settings from the configuration file in JSON format. If the `--json` option is not specified, the application attempts to import from an INI file. If the import fails, an error is displayed.

When importing settings from a file, the `UseKSN` and `CloudMode` settings are set to `No`, and integration with MDR is disabled. To start or resume the use of Kaspersky Security Network, set the value of the `UseKSN` setting to `Basic` or `Extended`. To enable cloud mode, you must set the `CloudMode` setting to `Yes`. Cloud mode is available if use of KSN is enabled. To enable MDR integration, you must first enable the Extended mode of Kaspersky Security Network, and then set `UseMDR` to `Yes`.

After application settings are imported, internal task IDs may change. It is recommended to use task names to manage tasks.

The following policy settings cannot be imported from version 12.3 of the application web plug-in into version 12.4 of the application:

- Protection scope and exclusion scope of File Threat Protection and Anti-Cryptor
- Exclusions of processes from scanning for Behavior Analysis
- Trusted devices for Device Control
- Scan scope and exclusion scope of System Integrity Monitoring
- Web Control rules
- Proxy server settings
- Exclusion from process memory scan
- Global exclusions (mount points excluded from scanning)

Managing user roles using the command line

Access to Kaspersky Endpoint Security functions via the command line is provided to users in accordance with their roles. A *role* is a set of rights and privileges for managing the application.

Four groups of system users are created in the operating system: *kesladmin*, *kesluser*, *keslaudit*, and *nokesl*. When you assign an application role to a system user, the user is added to the corresponding group (see the *Roles* table below). When you revoke a role from a user, this user is removed from the corresponding group.

If no application role is assigned to a system user, that user belongs to a separate group of *users without rights*.

Thus, the roles correspond to the four groups of operating system users:

- kesladmin – the Administrator role
- kesluser – the User role
- keslaudit – the Auditor role
- nokesl is assigned to a user if no other roles are assigned. In this case, the user belongs to a separate group of *users without privileges*

The application needs elevated privileges in the operating system to protect devices. The application requires root privileges to perform some of its basic security functions.

The role-based access model of the application includes the Administrator (admin) role. In certain cases, the actions of users with the Administrator role may lead to operations being performed with privileges of the operating system superuser (root).

The Administrator role should only be granted to trusted users. Compromise or abuse of this Administrator role leads to the compromise of the entire device and can impact the security, integrity, or performance of your organization's infrastructure, as well as user data.

Granting the Administrator role is the responsibility of the owner of the system and should be carried out in accordance with the access control policy of your organization and the level of trust towards the relevant users.

User roles

Role name	Role in application	OS user group	Permissions
Administrator	admin	kesladmin	Managing application settings and task settings in the graphical interface of the application and on the command line without using the `sudo` command. Managing application licensing. Assigning roles to users. Revoking user roles (the administrator has no right to revoke the admin role from self). View and manage users' Storages.
User	user	kesluser	Manage only user file scan tasks. Start and stop Update tasks. View reports for the tasks created by this user. View specific events that are common for all application users.
Auditor	audit	keslaudit	Viewing application settings View application status. View all tasks, their settings, and start schedules. View all events. View all objects in Backup.
—	—	nokesl	No role is assigned in the application, no permissions.

Viewing a list of users and roles

To view a list of users and their roles, execute the following command:

```
kesl-control [-U] --get-user-list
```

Assigning a role to a user

To assign a role to a specific user, execute the following command:

```
kesl-control [-U] --grant-role <role> <user>
```

Example:
To assign the audit role to the user test15:

```
kesl-control --grant-role audit test15
```

Revoking a user role

To revoke a role from a specific user, execute the following command:

```
kesl-control [-U] --revoke-role <role> <user>
```

Example:
To revoke the audit role from the user test15:

```
kesl-control --revoke-role audit test15
```

Starting and stopping the application

After installing Kaspersky Endpoint Security to a device, the application is started automatically. By default, the application then starts automatically when the operating system is booted (at the default level of execution for each operating system).

By default, when Kaspersky Endpoint Security is started, the following functional components of the application are started automatically:

- File Threat Protection.
- Device Control.
- Behavior Detection.
- Web Threat Protection—only if one of the supported browsers is installed in the operating system and local management of Web Threat Protection settings is allowed on the device (a policy is not applied or the "lock" is not set in the policy properties).
- Network Threat Protection—only if the Network Threat Protection settings on the device are defined through a policy. Network Threat Protection is enabled in the policy properties by default. If locally configured settings are applied on the device, Network Threat Protection is disabled by default.

When the application is started, service tasks are automatically started on the device to ensure the operation of additional application functions: the application activation function and the Backup function.

By default, the application also starts user tasks configured on the command line, for which the "after application startup" run mode (PS run mode) is configured.

If you stop the application, all tasks running on the device will be interrupted. Interrupted user tasks are not resumed automatically after the application is restarted.

Starting and stopping the application using the Web Console

To start or stop the application remotely:

1. In the main window of the Web Console, select **Assets (Devices)** → **Managed devices**.

   The list of managed devices opens.

2. In the list, select the device on which you want to start or stop the application, and click the link with the device name to open the device properties window.

3. Select the **Applications** tab.

4. Select the Kaspersky Endpoint Security check box.

5. Do one of the following:

   - To start the application, click the **Start** button.
   - To stop the application, click the **Stop** button.

You can monitor the application operation status by using the **Protection status** widget in the **Monitoring and reports / Dashboard** window.

Starting and stopping the application using the Administration Console

To start or stop the application on a client device:

1. In the Administration Console tree, in the **Managed devices** folder, select the administration group containing the necessary device.
2. In the workspace, select the **Devices** tab.
3. In the list of managed devices, select the device for which you want to start or stop the application. In the device context menu, select **Properties**.
4. In the **Properties: <Device name>** window, select the **Applications** section.

   The right part of the window displays a list of Kaspersky applications installed on the device.
5. Select Kaspersky Endpoint Security.
6. Do one of the following:

   - To run the application, click the button to the right of the list of Kaspersky applications or select **Start** in the application context menu.
   - To stop the application, click the button to the right of the list of Kaspersky applications or select **Stop** in the application context menu.

Starting and stopping the application using the command line

To run the application, the root account must be the owner of the following directories and only the owner must have write access to them: /var, /var/opt, /var/opt/kaspersky, /var/log/kaspersky, /opt, /opt/kaspersky, /usr/bin, /usr/lib, /usr/lib64.

Starting, restarting, and stopping Kaspersky Endpoint Security

To start the application, run the following command:

```
systemctl start kesl
```

To stop the application, run the following command:

```
systemctl stop kesl
```

To restart the application, run the following command:

```
systemctl restart kesl
```

Monitoring the status of Kaspersky Endpoint Security

The Kaspersky Endpoint Security status is monitored by the watchdog service. The watchdog service is automatically launched when the application starts.

In the event of an application crash, a dump file is generated and the application is restarted automatically.

To export application settings, run the following command:

```
systemctl status kesl
```

View device protection status and application performance information

You can view information about the protection status of a device, as well as the status of Kaspersky Endpoint Security and its components on the device.

You can get information about the protection status of a device in the following ways:

- In the Web Console or in the Administration Console, using the statuses of the client devices (*OK*, *Critical*, *Warning*). The device on which Kaspersky Security Center Network Agent is installed is a client device for Kaspersky Security Center. The status of a client device can change to *Critical* or *Warning* for the following reasons:

  - In accordance with the rules defined in Kaspersky Security Center. For example, the status changes if a security application is not installed on the device, a virus scan has not been performed in a long time, application databases are outdated, the license has expired, or the application is unstable. For more details on the reasons for changing statuses and configuring conditions for assigning statuses, refer to the Kaspersky Security Center Help system.

  - Kaspersky Security Center receives the device status from the managed application, i.e., from Kaspersky Endpoint Security.

    > Receiving device status from a managed application must be enabled in Kaspersky Security Center in the lists of conditions for assigning the *Critical* and *Warning* statuses. Conditions for assigning device statuses are configured in the properties window of an administration group.

  For more details on client device statuses, refer to the Kaspersky Security Center Help system.

- In the Web Console or in the Administration Console, using the statuses of functional components of Kaspersky Endpoint Security on the device. In the properties of Kaspersky Endpoint Security installed on the device, a list of the functional components of the application is displayed. For each component, its status is displayed.

- On the command line using the following management commands:

  - The `kesl-control --app-info` command, which displays information about application performance and the status of functional components and tasks of the application.

  - The `kesl-control --supported-tech-info` command, which displays a list of application functions, information about their status (used or not used), and the Linux technologies that these application features are implemented with.

  - The `kesl-control --get-statistic` command, which outputs application performance statistics and the list of mount points.

  - The `kesl-control --export-metrics` command, which outputs operating system status metrics.

Viewing the protection status of a device in the Web Console

To view the protection status of a device in the Web Console:

1. In the main window of the Web Console, select **Assets (Devices)** → **Managed devices**.

   The list of managed devices opens.

2. Select the administration group containing the necessary device. To do so, click the link in the **Current path** field above the list of managed devices and select an administration group in the window that opens.

   The list displays only the managed devices for the selected administration group.

3. In the list, find the device for which you want to view information and click the device name.

4. In the properties window of the managed device that opens, on the **General** tab, select the **Protection** section.

The **Protection** section displays the following information about the device:

- **Visible in the network** is the visibility of the selected device in the network: *Yes* or *No*.
- **Device status** is the status of the client device generated based on the protection status criteria set by the administrator for the selected device and the device activity in the network: *OK*, *Critical*, or *Warning*.
- **Status description** represents the reasons for changing the status of the device to *Critical* or *Warning*.
- **Protection status** represents the current status of File Threat Protection on the selected device, such as *Running*, *Stopped*, or *Paused*.
- **Last full check** represents date and time when the last full scan task was completed on the selected device.
- **Viruses detected** represents a total number of malicious objects detected on the selected device (detected threat counter) since Kaspersky Endpoint Security was installed.
- **Objects that failed disinfection** represents a number of infected objects that Kaspersky Endpoint Security was unable to disinfect.

Viewing the protection status of a device in the Administration Console

To view the protection status of a device in the Administration Console:

1. In the Administration Console tree, in the **Managed devices** folder, select the administration group containing the necessary device.

2. In the workspace, select the **Devices** tab.

3. In the list of managed devices, select the required device and double-click it to open the **Properties: <Task name>** window.

4. In the window that opens with the properties for the managed device, select the **Protection** section.

The **Protection** section displays the following information about the device:

- **Device status**: status of the client device generated based on the criteria set by the administrator for the protection status of the selected device and the device activity in the network.
- **All problems**: complete list of problems detected by the managed applications installed on the selected device. Each problem has a status that the application prompts to assign to the device.
- **Real-Time Protection status**: current status of File Threat Protection on the selected device, such as *Running* or *Stopped*. When the protection status changes, the new status is displayed in the device properties window only after the device is synchronized with the Administration Server.
- **Last on-demand scan**: date and time when the last malware scan was performed on the selected device.
- **Total threats detected**: total number of threats detected on the selected device since the installation of the application (first scan) or since the last reset of the threat counter.

  To reset the counter, click the **Reset** button.
- **Active threats**: the number of unprocessed files on the selected device.

Viewing information about the operation of an application in the Web Console

To view information about the application operation in the Web Console:

1. In the main window of the Web Console, select **Assets (Devices)** → **Managed devices**.

   The list of managed devices opens.

2. Select the administration group containing the necessary device. To do so, click the link in the **Current path** field above the list of managed devices and select an administration group in the window that opens.

   The list displays only the managed devices for the selected administration group.

3. In the list, find the device for which you want to view information and click the device name.

4. This opens a managed device properties window; in that window, go to the **Applications** tab.

5. In the list of applications installed on the device, click Kaspersky Endpoint Security.

   The application properties window opens.

This window displays the following information about Kaspersky Endpoint Security:

- The **General** tab in the **Information** section displays general information about the installed application:
  - **Name** is the name of the application.
  - **Version** is the version number of the application.

- **Installed** is the date and time when the application was installed on the device.
- **Last software update**: date and time when Kaspersky Endpoint Security software modules were last updated.
- **Last synchronization** is the date and time of the last connection of the device to the Kaspersky Security Center Administration Server.
- **Current status**: status of File Threat Protection on the device, such as *Running* or *Paused*.
- The **Installed updates** block contains information about installed versions of application updates.
- Under **Application databases**, you can find information about the date and time of the application database update release and the date and time of the last update.

- On the **General** tab, the **Licenses** section contains information about license keys added to the application and the licenses corresponding to these keys.
- On the **General** tab, the **Components** section contains a list of functional components of the application. The status (for example, *Stopped, Suspended, Not Installed*) and version of each component is displayed.

  In the **Light Agent mode for protecting virtual environments** line, you can see information about the application usage mode:
  - The *Running* status means that the application is being used in Light Agent mode.
  - The *Not installed* status means that the application is being used in standard mode.
- The **Events** tab displays a list of application events on the device.
- The **Event settings** tab displays the types of events that the application stores in event storage and how long they are stored.
- On the **Application settings** tab, you can do the following:
  - In the **Detection and Response** section, you can manage network isolation of a device.
  - In the **Application Control** section, you can export configured component settings and application categories to a file, and import them from a file.
  - In the **Statistics** section, you can view application statistics and the list of mount points.

Viewing information about the operation of an application in the Administration Console

To view information about the application operation in the Kaspersky Security Center Administration Console:

1. In the Kaspersky Security Center Administration Console tree, in the **Managed devices** folder, select the administration group containing the required device.
2. In the workspace, select the **Devices** tab.

3. In the list of managed devices, select the required device and double-click it to open the **Properties: <Task name>** window.

4. In the displayed window with the properties of the managed device, select the **Applications** section.

   The right part of the window displays a list of Kaspersky applications installed on the device.

5. Select Kaspersky Endpoint Security and double-click it to open the application properties window. Alternatively, you can use the **Properties** button in the lower part of the window.

   The application properties window opens.

This window displays the following information about Kaspersky Endpoint Security:

- The **General** section contains general information about the installed application:
  - **Version number**: the version number of the application.
  - **Installed** is the date and time when the application was installed on the device.
  - **Current status** is the status of File Threat Protection on the device, such as *Running* or *Paused*.
  - **Last software update**: date and time when Kaspersky Endpoint Security software modules were last updated.
  - **Installed updates** is the information about installed versions of application updates.
  - **Application databases** is the date and time when the application database update was released.
- In the **Application Control** section, you can export configured component settings and application categories to a file, and import them from a file.
- The **Statistics** section displays application statistics and information about mount points.
- The **Components** section contains a list of standard application components. The status (for example, *Stopped, Suspended, Not Installed*) and version of each component is displayed.

  In the **Light Agent mode for protecting virtual environments** line, you can see information about the application usage mode:
  - The *Running* status means that the application is being used in Light Agent mode.
  - The *Not installed* status means that the application is being used in standard mode.
- The **License keys** section contains information about the active and reserve license keys.
- The **Event settings** section displays the types of events that the application stores in event storage and how long they are stored.
- The **Advanced** section contains information about the application management plug-in.

Viewing information about the operation of an application in the command line

To view information about the application, run the following command:

```
kesl-control --app-info [--json]
```

where `--json`: output data in JSON format. If the `--json` option is not specified, the settings are output in the INI format.

As a result of the command execution, the following information will be displayed in the console:

- **Name**. Application name.
- **Version**. Current application version.
- **Policy**. Information about whether a Kaspersky Security Center policy is applied on the device.
- Extended information about the policy applied on the device:
  - Policy name.
  - The date and time when the policy was last applied or updated on the device.
  - Kaspersky Security Center administration group to which the device belongs.
  - List of policy profiles applied on the device (if any).

  Extended policy information is displayed if the **Application is allowed to retrieve policy's extended data on device** setting of the Network Agent that is installed on the device allows retrieving of extended policy data from Kaspersky Endpoint Security. This setting is disabled by default. For details about Network Agent settings, please refer to the Kaspersky Security Center Help.
- Information about the main license under which the application is being used:
  - **Application license information** Application license information or application license key status.
  - **Kaspersky Endpoint Security license expiration date**. Application license expiration date and time (UTC).
- License information about the license that activates additional functionality of the application. These fields are displayed if any additional functionality keys have been added to the protected device:
  - **EDR Optimum license information**. Information about the license under which the Endpoint Detection and Response Optimum component is activated, or the status of the EDR Optimum license key.
  - **EDR Optimum license expiration date.** License expiration date and time (UTC).
  - **KUMA license information**. Information about the license under which the Kaspersky Unified Monitoring and Analysis Platform functionality is being used, or the status of the KUMA license key.

- **KUMA license expiration date**. License expiration date and time (UTC).
- **MDR license information**. Information about the license under which the Managed Detection and Response component is activated, or the status of the MDR license key.
- **MDR license expiration date**. License expiration date and time (UTC).
- **EDR Expert (on-premise) license information**. Information about the license that the Endpoint Detection and Response Expert (on-premise) component is activated with, or the EDR Expert (on-premise) license key status.
- **License expiration date** for **EDR Expert (on-premise)**. License expiration date and time (UTC).

- **Subscription status**. Subscription status. This field is displayed if the application is started under a subscription.
- **MDR BLOB file status**. Status of the MDR BLOB file for integration with Kaspersky Managed Detection and Response.
- **Expiration date of license from MDR BLOB file**. Kaspersky Managed Detection and Response license expiration date and time (UTC). This field is displayed if a BLOB configuration file has been loaded for the Kaspersky Managed Detection and Response integration.
- **Backup state**. Information about the status of Backup.
- **Backup usage**. Backup size.
- **Last run date of the Scan_My_Computer task**. Time of the last Malware Scan task.
- **Last release date of databases**. Date and time the application databases were last released.
- **Application databases**. Information about whether the application databases were downloaded.
- **Updatable kernel module status**. Information about the status of the updatable kernel module.
- **Using Kaspersky Security Network**. Information about using Kaspersky Security Network: `Extended KSN mode`, `Basic KSN mode` or `Disabled`.
- **Light Agent mode for protecting virtual environments**. Information about the application being used in Light Agent mode for protecting virtual environments. If the application is being used in Standard mode or in Endpoint Detection and Response Agent mode, this line is not displayed.
- **Endpoint Detection and Response Agent mode**. Indication of the application being used in Endpoint Detection and Response Agent mode. If the application is being used in Basic mode or Light Agent mode, this line is not displayed.
- **Kaspersky Security Network infrastructure**. Information about the infrastructure solution used to work with Kaspersky reputation databases: `Kaspersky Security Network` or `Kaspersky Private Security Network`.
- **Integration with Kaspersky Managed Detection and Response**. Status of integration with Kaspersky Managed Detection and Response: `Enabled`, `Disabled`.
- **Kaspersky Endpoint Detection and Response Optimum Integration**. Status of integration with Kaspersky Endpoint Detection and Response Optimum.

- **File Threat Protection**. Real-time File Threat Protection status.
- **Container monitoring**. Real-time Container Scan status (Container Scan, Container Monitoring).
- **System Integrity Monitoring**. System Integrity Monitoring component status.
- **Firewall Management**. Firewall Management component status.
- **Anti-Cryptor**. Anti-Cryptor component status.
- **Web Threat Protection**. Web Threat Protection component status.
- **Device Control**. Device Control component status.
- **Removable Drives Scan**. Removable Drives Scan component status.
- **BadUSB Attack Prevention**. BadUSB Attack Prevention component status.
- **Network Threat Protection**. Network Threat Protection component status.
- **Behavior Detection**. Behavior Detection component status.
- **Application Control**. Application Control component status.
- **Web Control**. Web Control component status.
- **Kaspersky Endpoint Detection and Response Expert (on-premise) Integration**. Status of the integration with Kaspersky Endpoint Detection and Response Expert (on-premise) or with Kaspersky Endpoint Detection and Response (KATA).
- **Integration with Sandbox**. Sandbox Integration status.
- **Kaspersky Unified Monitoring and Analysis Platform Integration**. Kaspersky Unified Monitoring and Analysis Platform Integration status.
- **Kaspersky Network Detection and Response (KATA) Integration** Kaspersky Network Detection and Response (KATA) integration status.
- **Mail Threat Protection**. Mail Threat Protection component status.
- **Post-update actions**. Application update actions and the actions to be performed by the user.
- **Unstable application operation**. Information about application failure and dump file creation. This field is displayed if a failure occurred the last time the application was launched.

Viewing application statistics

To improve performance, you can exclude the files that are most frequently scanned by the File Threat Protection component, the paths to processes that are most frequently scanned by the Behavior Detection component, and the mount points detected on the device.

> On devices with operating systems that support fanotify, the most effective way to improve performance is to exclude mount points.

You can view statistics about the most frequently scanned files and started processes, as well as a list of detected mount points in the following ways:

- in the Web Console
- in the Administration Console
- in the command line

You can configure the parameters for how the application calculates and displays statistics in the kesl.ini configuration file in the `[ScannerImpactStats]` section.

Viewing application statistics in the Web Console

To view application statistics in the Web Console:

1. In the main window of the Web Console, select **Assets (Devices)** → **Managed devices**.

   The list of managed devices opens.

2. Select the administration group containing the necessary device. To do so, click the link in the **Current path** field above the list of managed devices and select an administration group in the window that opens.

   The list displays only the managed devices for the selected administration group.

3. In the list, find the device for which you want to view information and click the device name.

4. This opens a managed device properties window; in that window, go to the **Applications** tab.

5. In the list of applications installed on the device, click Kaspersky Endpoint Security.

6. In the application properties window that opens, on the **Application settings** tab, select **Statistics** → **Scan statistics**.

   The **Scan statistics** window will open.

The **Scan statistics** window displays the following application statistics:

- The **Most frequently scanned applications (File Threat Protection)** block displays the paths to the applications that the File Threat Protection component scans most frequently, and the number of times the component accesses these applications. Files are displayed in descending order of the number of times they are accessed.

- Under **Most frequently started processes**, you can find paths to the processes that Kaspersky Endpoint Security detects most often and the number of such process starts. Paths to processes are displayed in descending order of the number of process starts.

Using the **Export** buttons located at the top of each block, you can export the statistics displayed in that block to a text file.

Viewing application statistics in the Administration Console

To view application statistics in the Administration Console:

1. In the Kaspersky Security Center Administration Console tree, in the **Managed devices** folder, select the administration group containing the required device.

2. In the workspace, select the **Devices** tab.

3. In the list of managed devices, select the required device and double-click it to open the **Properties: <Task name>** window.

4. In the window that opens with the properties of the managed device, select the **Applications** section.

   The right part of the window displays a list of Kaspersky applications installed on the device.

5. Select Kaspersky Endpoint Security and double-click it to open the application properties window. Alternatively, you can use the **Properties** button in the lower part of the window.

6. In the window that opens, select **Statistics** → **Scan statistics**.

   The following application statistics is displayed in the window on the right:

   - The **Most frequently scanned applications (File Threat Protection)** block displays the paths to the applications that the File Threat Protection component scans most frequently, and the number of times the component accesses these applications. Files are displayed in descending order of the number of times they are accessed.

   - Under **Most frequently started processes**, you can find paths to the processes that Kaspersky Endpoint Security detects most often and the number of such process starts. Paths to processes are displayed in descending order of the number of process starts.

   Using the **Export** buttons under each block, you can export the statistics displayed in that block to a text file.

Viewing a list of mount points in the Web Console

To view the list of mount points in the Web Console:

1. In the main window of the Web Console, select **Assets (Devices)** → **Managed devices**.

   The list of managed devices opens.

2. Select the administration group containing the necessary device. To do so, click the link in the **Current path** field above the list of managed devices and select an administration group in the window that opens.

   The list displays only the managed devices for the selected administration group.

3. In the list, find the device for which you want to view information and click the device name.

4. This opens a managed device properties window; in that window, go to the **Applications** tab.

5. In the list of applications installed on the device, click Kaspersky Endpoint Security.

6. In the application properties window that opens, on the **Application settings** tab, select **Statistics** → **Mount points**.

   The **Mount points** window opens.

   The **Mount points** window displays a table with the following columns:

   - **Mount point path** is the path to the mount point detected on the device.
   - **Namespace** indicates whether the mount point is found in a namespace.
   - **Excluded** indicates whether the mount point has been added to scan exclusions.

   Mount point paths are sorted as follows:

   - Static, system, service and other mount points
   - Mounted snap packages and mount points in their namespaces
   - Mount points created by the Docker container management system

   By clicking the **Export** button, located at the top of the window above the list, you can export the list of mount points to a text file. The file contains a list of mount point paths, as well as the `[Namespace]` and `[Excluded]` tags.

Viewing the list of mount points in the Administration Console

To view the list of mount points in the Administration Console:

1. In the Kaspersky Security Center Administration Console tree, in the **Managed devices** folder, select the administration group containing the required device.

2. In the workspace, select the **Devices** tab.

3. In the list of managed devices, select the required device and double-click it to open the **Properties: <Task name>** window.

4. In the window that opens with the properties of the managed device, select the **Applications** section.

   The right part of the window displays a list of Kaspersky applications installed on the device.

5. Select Kaspersky Endpoint Security and double-click it to open the application properties window. Alternatively, you can use the **Properties** button in the lower part of the window.

6. In the window that opens, select **Statistics** → **Mount points**.

   The **List of mount points** table is displayed in the right part of the window and contains the following columns:

   - **Mount point path** is the path to the mount point detected on the device.
   - **Namespace** indicates whether the mount point is found in a namespace.
   - **Excluded** indicates whether the mount point has been added to scan exclusions.

   Mount point paths are sorted as follows:

   - Static, system, service and other mount points
   - Mounted snap packages and mount points in their namespaces
   - Mount points created by the Docker container management system

   By clicking the **Export** button below the list, you can export the list of mount points to a file in text format. The file contains a list of mount point paths, as well as the `[Namespace]` and `[Excluded]` tags.

Viewing application statistics and the list of mount points in the command line

To view application statistics and the list of mount points, run the following command:

```
kesl-control [-S] --get-statistic [--files] [--processes] [--mountpoints]
```

where:

- `--files`: statistics of files most frequently scanned by the File Threat Protection component, and the number of times the component accesses these files.
- `--processes`: statistics of process starts most frequently detected by Kaspersky Endpoint Security, and the number of such starts.

  > Excluding processes from scanning by the Behavior Detection component does not remove these processes from statistics, but it improves the performance of the Kaspersky Endpoint Security application.

- `--mountpoints`: list of mount points.

The output includes the following information:

- `[excluded]` indicates whether the mount point has been added to scan exclusions.
- `[namespace]`, indicating whether the mount point is found in a namespace.
- Path to the mount point found on the device.

Mount point paths are sorted as follows:

- Static, system, service and other mount points
- Mounted snap packages and mount points in their namespaces
- Mount points created by the Docker container management system

You can specify one or more options in any combination or no options at all. If you do not specify any options, the application displays three lists: statistics on the most frequently scanned files, statistics on the most frequently started processes, and the list of mount points found on the device.

Obtaining system performance metrics

Kaspersky Endpoint Security affects the operating system. To help you analyze the impact, the application can obtain metrics associated with application performance.

You can analyze metrics in data visualization tools, such as Grafana. You can publish exported metrics to monitoring systems such as Prometheus and Zabbix.

To configure the application to get metrics for operating system resources that are used by the application, run the following command:

```
kesl-control [-J] --export-metrics [--period <interval between exports in seconds>|--interactive]
```

where:

- `--period` enables periodic output of results.
- `--interactive` enables interactive output (on the **`Enter`** key being pressed).

This command outputs the list of metrics to the console.

List of metrics

Internal name of the metric; label and type of the metric	Description and recommended threshold setting
lfs_system_descriptor_opened_count Sensor	Number of descriptors currently opened by the kesl process. If the number of descriptors grows faster than 250 per hour, we recommend contacting Technical Support.
lfs_system_uptime_milliseconds Counter	Number of milliseconds from the startup of the operating system to now.

Internal name of the metric; label and type of the metric	Description and recommended threshold setting
lfs_system_memory_usage_bytes 'type=virtual' label Sensor	Amount of virtual memory currently used by the kesl process. We recommend taking steps to set a threshold based on the system information. You can get this information manually or using a script. For an example script, you can contact Technical Support.
lfs_system_memory_usage_bytes 'type=resident' label Sensor	Amount of resident memory currently used by the kesl process. We recommend taking steps to set a threshold based on the system information. You can get this information manually or using a script. For an example script, you can contact Technical Support.
lfs_system_memory_usage_bytes 'type=swap' label Sensor	Amount of swap memory currently used by the kesl process. We recommend taking steps to set a threshold based on the system information. You can get this information manually or using a script. For an example script, you can contact Technical Support.
lfs_system_cpu_usage_milliseconds 'type=user' label Counter	Milliseconds of CPU time used by the kesl process in user space, from the start of the kesl process to now. We recommend taking steps to set a threshold based on the system information. You can get this information manually or using a script. For an example script, you can contact Technical Support.
lfs_system_cpu_usage_milliseconds 'type=kernel' label Counter	Milliseconds of CPU time used by the kesl process in kernel space, from the start of the kesl process to now. We recommend taking steps to set a threshold based on the system information. You can get this information manually or using a script. For an example script, you can contact Technical Support.
lfs_system_cpu_usage_milliseconds 'type=total' label Counter	Milliseconds of CPU time used by the kesl process in user space and kernel space, from the start of the kesl process to now. If the CPU time used by the kesl process exceeds the rest of the workload, we recommend contacting Technical Support.
lfs_tcpSynInterceptor_connection_hanging_count Counter	Total number of network connections hanging at the handshake stage in the TCP network between the server and the client from the start of the kesl process to now (network connections are considered hanging if they have been waiting for the remote server to allow the connection for a time between 1 second to 2 minutes, depending on the system setting in /proc/sys/net/ipv4/tcp_syn_retries). An increase of this metric may be caused by the remote server being inaccessible or missing. If the number of hanging network connections grows by more than 10 per minute, we recommend contacting Technical Support.
lfs_tcpSynInterceptor_connection_count Sensor	Number of network connections currently waiting to connect to the remote server.
lfs_tcpSynInterceptor_verdict_count "verdict=allow" label Counter	Total number of intercepted connections that have been established from the start of the kesl process to the present.
lfs_tcpSynInterceptor_verdict_count 'verdict=drop' label Counter	Total number of intercepted connections that have not been established, counting from the start of the kesl process to now.
lfs_tcpSynInterceptor_verdict_count 'verdict=unknown' label Counter	Total number of network connections from the start of the kesl process to the present moment with a solution of the remote server that cannot be processed.
lfs_tcpSynInterceptor_verdict_latency_milliseconds Histogram	Histogram of the time the remote server takes to make a solution on a connection from the time when the SYN packet is intercepted to the time when resolution is issued for it.
lfs_tproxy_connection_count 'direction=inbound' label Sensor	Current number of intercepted inbound network connections.
lfs_tproxy_connection_count 'direction=outbound' label Sensor	Current number of intercepted outbound network connections.

Internal name of the metric; label and type of the metric	Description and recommended threshold setting
lfs_tproxy_connection_orphaned_count Counter	The total number of connections (from the start of Web Threat Protection, Network Threat Protection, and Web Control protection components) intercepted by Kaspersky Endpoint Security despite their interception not being intended (for example, due to an incompatible iptables configuration or the fact that the application did not have time to process a new interception configuration). Such connections are rejected. If the total number of such connections exceeds 10, which may indicate incorrect operation of the application or the system, we recommend contacting Technical Support.
lfs_tproxy_threadPool_task_count Counter	Total number of tasks (new connection, new batch of data, data sent, and so on) that have been added to the thread pool since the start of the Web Threat Protection, Network Threat Protection, and Web Control protection components. If the total number of created but uncompleted tasks keeps growing, you need to add resources, configure exclusions, or contact Technical Support.
lfs_tproxy_threadPool_task_duration_milliseconds Histogram	Histogram of the execution time of tasks that process intercepted connections. If the execution time of 95% of tasks exceeds 1 second, you need to add resources, configure exclusions, or contact Technical Support.
lfs_tproxy_socket_count Sensor	Current number of sockets (listening sockets and connection sockets). An intercepted connection has 2 connection sockets.
lfs_trafficScanning_object_hanging_count Sensor	Current number of hanging object scans in intercepted traffic (scans with a duration over 1 minute are considered hanging). The total number of hanging object scans exceeding 35 indicates a problem with the application databases. In such cases, we recommend contacting Technical Support.
lfs_trafficScanning_object_duration_milliseconds Histogram	Histogram of durations of intercepted traffic object scans. If the scan time for 95% of objects exceeds 1 second, you need to add resources, update application databases, or contact Technical Support. If the growth rate of packet scans in the intercepted traffic is 0 and the value of the lfs_tproxy_threadPool_task_count metric is not 0, you need to update the application databases or contact Technical Support.
lfs_fileMonitor_cache_size Sensor	Current size of the File Monitor (file revision cache), which monitors file modification. If the current File Monitor cache size is greater than 50,000, we recommend contacting Technical Support.
lfs_fileMonitor_cache_hit_count Counter	Hit count of the File Monitor cache (file revision cache), which monitors file modification.
lfs_fileMonitor_cache_miss_count Counter	Miss count of the File Monitor cache (file revision cache), which monitors file modification.
lfs_faCache_file_count Sensor	Current size of the cache of fanotify interceptor files that do not need to be scanned. If the current file cache size is greater than 100,000, we recommend contacting Technical Support.
lfs_faCache_file_hit_count Counter	Hit count of the cache of fanotify interceptor files that do not need to be scanned.
lfs_faCache_file_miss_count Counter	Miss count of the cache of fanotify interceptor files that do not need to be scanned.
lfs_faCache_volume_count Sensor	Current size of the fanotify interceptor mount point cache.
lfs_oas_cache_file_count Sensor	Current size of the cache of File Threat Protection files that do not need to be scanned. If the current file cache size is greater than 100,000, we recommend contacting Technical Support.

Internal name of the metric; label and type of the metric	Description and recommended threshold setting
lfs_oas_cache_file_hit_count Counter	Hit count of the cache of File Threat Protection files that do not need to be scanned.
lfs_oas_cache_file_miss_count Counter	Miss count of the cache of File Threat Protection files that do not need to be scanned.
lfs_oas_cache_volume_count Sensor	Current size of the File Threat Protection mount point cache.
lfs_processManager_cache_size Sensor	Current number of active processes in the system that are cached.
lfs_processManager_cache_hit_count Counter	Hit count for the system process cache.
lfs_processManager_cache_miss_count Counter	Miss count for the system process cache.
lfs_blockingProcessInterceptor_cache_size Sensor	Current size of the cache of interpreters that can be used to start processes. This number depends on how intensely scripts are run on a specific device. If the current file cache size is greater than 10000, we recommend contacting Technical Support.
lfs_blockingProcessInterceptor_cache_hit_count Counter	Hit count of the interpreter cache.
lfs_blockingProcessInterceptor_cache_miss_count Counter	Miss count of the interpreter cache.
lfs_prevention_cache_file_count Sensor	Current size of the "Execution prevention for objects" task's file cache for objects that do not need scanning.
lfs_prevention_cache_file_hit_count Counter	Number of hits in the "Execution prevention for objects" task's file cache for objects that do not need scanning.
lfs_prevention_cache_file_miss_count Counter	Number of misses in the "Execution prevention for objects" task's file cache for objects that do not need scanning.
lfs_prevention_cache_volume_count Sensor	Current size of the "Execution prevention for objects" task's mount point cache.
eka_telemetry_metrics_registry_callbacks_exec_duration_milliseconds Sensor	How long the current metrics update took for all clients registered in the registry (in milliseconds).
eka_telemetry_metrics_registry_registered_callbacks Sensor	Current number of metric update callbacks that the MetricsRegistry has performed for all registered clients.
eka_telemetry_metrics_registry_scrape_duration_milliseconds Sensor	How long it took to get all registry metrics (in milliseconds). If 99% of the values of this metric exceed 1 second for a 10-minute period, we recommend contacting Technical Support.

Updating application databases and modules

The update functionality (including anti-virus signature updates and code base updates) may not be available in the application in the territory of the USA.

Updating the databases and application modules of Kaspersky Endpoint Security ensures up-to-date protection on your device. New viruses, malware, and other types of threats appear worldwide on a daily basis. The application databases contain information about the threats and the ways to neutralize them. To detect threats quickly, you are urged to regularly update the application databases and modules.

Current application license is required for regular database updates. If there is no current license, you will only be able to perform one update.

During the update process, the databases and application modules are downloaded and installed on your device. You can obtain updates for databases and application modules from Kaspersky update servers, from the Administration Server repository, from local or network directories, and from other update sources.

If Kaspersky Endpoint Security is used in Light Agent mode to protect virtual environments, the directory on the SVM is used as an update source.

During an update, the application modules and databases on your device are compared with the up-to-date version at the update source. If your current databases and application modules differ from their respective up-to-date versions, the missing portions of the updates will be installed on your device.

If the databases are obsolete, the update package may be large, which may cause additional Internet traffic (up to several dozen MB). The amount of the disk space can be up to 3 GB.

Updates are downloaded from Kaspersky update servers or from other FTP, HTTP, or HTTPS servers over standard network protocols. By default, Internet connection settings are determined automatically. If you are using a proxy server, specify the proxy server settings in the general settings of the application.

Regardless of the update source, the update package is downloaded and the database and application module updates are installed on the device using the *Update* task. An *Update* predefined task is created in the application. Using this task, you can perform scheduled and on-demand updates of databases and application modules and configure update settings.

If Kaspersky Endpoint Security is used in Light Agent mode to protect virtual environments, databases on protected virtual machines are updated using a special *Update* local task, where the directory on the SVM is specified as the update source. The update task starts automatically. You cannot delete this task or change its settings. Updating databases and application modules using tasks created in Kaspersky Security Center is not supported.

If Kaspersky Endpoint Security is used in standard mode or Endpoint Detection and Response Agent mode, in Kaspersky Security Center, you can use the *Update* group task that the Initial Configuration Wizard creates after installing the administration MMC plug-in or the Kaspersky Endpoint Security administration web plug-in. You can also create update user tasks in the command line and in Kaspersky Security Center.

You can configure the following settings for updating databases and application modules:

- Select the source from which the application will receive updates, depending on the update scenario used.
- Configure the response timeout of a selected update source when attempting to connect to it. If an update source does not respond within the specified time, the application contacts the next update source in the list.
- Configure the task run schedule for updates. By default, the application updates the databases once every 60 minutes.

You can also receive automatically installed application updates (autopatches). In the update task settings, you can select how you want autopatches to be downloaded and installed: download and install, only download, or do not download.

Updating databases and modules

During an update, the following objects are downloaded and installed on your device:

- Application databases. Application databases include databases of malware signatures, a description of network attacks, databases of malicious and phishing web addresses, databases of banners, spam databases, and other data.

  If the database update on the device is interrupted or finishes with an error, the application continues to use the previously installed database version. If application databases were not installed before, the application continues functioning in "without databases" mode. Database and application module updates are still available.

  If the database update is successful, but the databases themselves are corrupted and the application terminates with an error several times in a row, the databases are automatically deleted. The application continues to work in the "without databases" mode; the database and application module update functionality remains available.

  The database is up-to-date if it was downloaded less than three days ago. By default, the application generates the *Application databases are out of date* event if the last installed database updates were published on the Kaspersky servers more than three but less than seven days ago. If the databases have not been updated for seven days, the application generates the *Application databases are totally out of date* event.

- Application modules. Module updates are intended to eliminate vulnerabilities in the application and to improve methods of protecting devices. Module updates may change the behavior of application components and add new capabilities.

  The application module can be installed regardless of the state of the application (started or stopped, managed by a Kaspersky Security Center policy) and the update schedule. Kaspersky Endpoint Security continues protecting your device during the application modules update procedure. During the update, application settings and the application log file are migrated to the new version of the application.

  If the transfer of application settings fails for any reason, the application is set to the default values.

  Changes to the application settings made after the update is complete and before the application restarts are not saved.

  If the application does not work properly after the update, it automatically rolls back to the previous version. It is recommended to contact Kaspersky Technical Support.

Updating sources and update scenarios

An *update source* is a resource that contains updates for Kaspersky Endpoint Security databases and application modules. Update sources can be FTP, HTTP, or HTTPS servers (such as Kaspersky update servers), as well as local or network directories mounted by the user.

If Kaspersky Endpoint Security is used in Light Agent mode to protect virtual environments, the databases on the protected virtual machines are updated from the directory on the SVM.

The main application update sources are Kaspersky update servers. You can specify other update sources in the *Update* task settings. If an update cannot be performed from an update source, Kaspersky Endpoint Security switches to the next update source.

Kaspersky Endpoint Security supports the following scenarios for updating databases and application modules:

- Update from Kaspersky update servers. Kaspersky update servers are located in different countries around the world, which ensures a high reliability of updates. If an update cannot be performed from one server, the application switches over to the next server. Updates are downloaded via HTTPS protocol.

- Centralized update Centralized update reduces external Internet traffic, and provides for convenient monitoring of the update.

  Centralized update consists of the following steps:

  1. Download the update package to a repository within the organization's network.

     You can use the repository of the Kaspersky Security Center Administration Server as the repository.

     The update package is downloaded to the Administration Server repository via the *Download updates to Administration Server repository* task of the Administration Server.

     If you manage the application using Kaspersky Security Center Cloud Console, you can use the repositories of the distribution points (devices with Network Agent installed) as the repository. For more details about distribution points, refer to Kaspersky Security Center Help.

  2. Distribute the update package to client devices

     The update package is distributed to the client devices by the *Update* task of Kaspersky Endpoint Security. In the task settings, select Kaspersky Security Center as the update source.

- Updating from a local or network directory (SMB/NFS) mounted by a user, or from an FTP, HTTP, or HTTPS server. You can specify a custom update source in *Update* task settings.

Updating application databases and modules in the Web Console

In the Web Console, you can update databases and application modules using the *Update* task. You can use the automatically created *Update* group task, as well as create user tasks for updating.

To configure update settings in the Web Console:

1. In the main window of the Web Console, select **Assets (Devices)** → **Tasks**.

   The list of tasks opens.

2. Do one of the following:

   - If you want to edit the settings of a task that is run on all devices included in a specific administration group, click the link in the **Current path** field in the upper part of the window and select the administration group in the window that opens.

     The list displays only tasks configured for the selected administration group.

   - If you want to edit the settings of a task that is run on one or multiple devices (a task for a set of devices), click the link in the **Current path** field in the upper part of the window and select the top node with the name of the Administration Server in the window that opens.

     The list displays all tasks created on the Administration Server.

3. In the list of tasks, select the required **Update** task and open the task properties window by clicking the link in the task name.

4. In the task properties window, select **Application settings** tab. Select the **Update sources** section in the list on the left.

5. In the table, select the update source from which the application will receive updates for databases and modules, depending on the update scenario used.

   The list of update sources contains two sources: Kaspersky update servers and Kaspersky Security Center. The **Status** column indicates whether the application is using this update source when running the task. You can add other update sources to the list by clicking the **Add** button. You can specify FTP-, HTTP-, or HTTPS servers as update sources. If an update cannot be performed from an update source, Kaspersky Endpoint Security switches to the next update source. The application accesses update sources in the order in which they appear in the table.

6. Select the **Settings** section and configure other update settings.

7. Select the **Schedule** tab and configure the schedule for running the update task.

   If you have selected **Kaspersky Security Center** as the update source, select **When downloading updates to the repository** from the **Start task** drop-down list. For more details about scheduling tasks, refer to the Kaspersky Security Center Help system.

8. Click the **Save** button to save the changes made.

The task will start according to the configured schedule. You can also run the task manually.

Update sources for the Update task section

Setting	Description

Table of update sources	This table contains a list of database update sources. During the update process, the application accesses update sources in the order they appear in the table.
	The table contains the following columns:
	• **Update source** is the address of the update source:
	  • **Kaspersky update servers**, where database updates for Kaspersky applications are published (default value).
	  • **Kaspersky Security Center** – Kaspersky Security Center Administration Server.
	  • Other sources from the local or global network added by the user: HTTP, HTTPS, or FTP servers or directories on local network servers.
	• **Status** indicates whether the source is used in the task (**Enabled** or **Disabled**). You can change the status by enabling or disabling the **Use this source** toggle switch in the **Update source** window, which you can open by clicking the link with the name of the source.
	You can **add**, **edit**, delete, **move up**, or **move down** update sources in the table.
	Clicking the **Move down** button moves the selected item down in the table.
	This button is available if only one item is selected in the table.
	Clicking the **Move up** button moves the selected item up in the table.
	This button is available if only one item is selected in the table.
	The selected element's settings are changed in a separate window.
	Clicking the **Add** button opens a window where you can specify the new item settings.

Update task settings section

Setting	Description
Timeout for response from the update source (sec)	The maximum period of time that the application waits for a response from the selected update source (in seconds). When no response has arrived by this time, an event involving a loss of communication with the update source is logged in the task log. Possible values: 0–120. If 0 is specified, the period of time that the application waits for a response from the selected source is unlimited. Default value: 10 seconds.
Application update download mode	In the drop-down list, you can select how you want the automatically installed updates (autopatches) to be downloaded: • **Do not download**. When this item is selected, autopatches are not automatically downloaded. • **Download only**. When this list item is selected, autopatches are automatically downloaded, but not installed on client devices (default setting). • **Download and install**. When this list item is selected, autopatches are automatically downloaded and installed on client devices. After an autopatch is installed, the application restarts automatically.

Updating application databases and modules in the Administration Console

In the Administration Console, you can update databases and application modules using the *Update* task. You can use the automatically created *Update* group task, as well as create user tasks for updating.

To configure update settings in the Administration Console:

1. In the Administration Console, perform one of the following actions:

   - To edit the settings of a task that is run on devices included in the specified administration group, select this administration group in the console tree, then select the **Tasks** tab in the workspace.

   - To edit the settings of a task that is run on one or multiple devices (a task for a set of devices), select the **Tasks** folder in the console tree.

2. In the list of tasks, select the required **Update** task and double-click it to open the task properties window.

3. In the task properties window, select the **Update sources** section in the list on the left.

4. In the table, select the update source from which the application will receive updates for databases and modules, depending on the update scenario used.

   The list of update sources contains two sources: Kaspersky update servers and Kaspersky Security Center. The **Status** column indicates whether the application is using this update source when running the task. You can add other update sources to the list by clicking the **Add** button. You can specify FTP-, HTTP-, or HTTPS servers as update sources. If an update cannot be performed from an update source, Kaspersky Endpoint Security switches to the next update source. The application accesses update sources in the order in which they appear in the table.

5. Select the **Settings** section and configure other update settings.

6. Select the **Schedule** section and configure the schedule for running the update task.

   If you have selected **Kaspersky Security Center** as the update source, select **When downloading updates to the repository** from the **Scheduled start** drop-down list. For more details about scheduling tasks, refer to the Kaspersky Security Center Help system.

7. Click **Apply** or **OK** in the **Properties: <Task name>** window to save the changes made.

The task will start according to the configured schedule. You can also run the task manually.

Update sources for the Update task section

Setting	Description

Update source	This table contains a list of database update sources. During the update process, the application accesses update sources in the order they appear in the table.
	The table contains the following columns:
	• **Source address** is the address of the update source:
	  • **Kaspersky update servers**, where database updates for Kaspersky applications are published (default value).
	  • **Kaspersky Security Center** – Kaspersky Security Center Administration Server.
	  • Other sources from the local or global network added by the user: HTTP, HTTPS, or FTP servers or directories on local network servers.
	• **Status** indicates whether the update source is used in the task (**In use** or **Not in use**). You can change the status by selecting or clearing the **Use this source** check box in the **Update source** window that opens when you click the **Edit** button.
	You can **add**, **edit**, delete, **move up**, or **move down** update sources in the table.
	Clicking the **Move down** button moves the selected item down in the table.
	This button is available if only one item is selected in the table.
	Clicking the **Move up** button moves the selected item up in the table.
	This button is available if only one item is selected in the table.
	The selected element's settings are changed in a separate window.
	Clicking the **Add** button opens a window where you can specify the new item settings.

Update task settings section

Setting	Description
Timeout for response from the update source (sec)	The maximum period of time that the application waits for a response from the selected update source (in seconds). When no response has arrived by this time, an event involving a loss of communication with the update source is logged in the task log. Possible values: 0–120. If 0 is specified, the period of time that the application waits for a response from the selected source is unlimited. Default value: 10 seconds.

Setting	Description
Application update download mode	In the drop-down list, you can select how you want the automatically installed updates (autopatches) to be downloaded: • **Do not download**. When this item is selected, autopatches are not automatically downloaded. • **Download only**. When this list item is selected, autopatches are automatically downloaded, but not installed on client devices (default setting). • **Download and install**. When this list item is selected, autopatches are automatically downloaded and installed on client devices. After an autopatch is installed, the application restarts automatically.

Updating application databases and modules in the command line

On the command line, you can update databases and application modules in the following ways:

- Using the *Update* predefined task. You can manually start, stop, pause, or resume this task and configure the task run schedule. You can manage update settings by editing the settings of this task.
- Using user tasks for updating (tasks of the *Update* type). You can manually start user tasks and configure the task schedule.

Update task settings

Setting	Description	Values
`ConnectionTimeout`	Response timeout (in seconds) of an update source while attempting to connect to it. If an update source does not respond within the specified time interval, the application contacts the next update source in the list.	You can use only integers within the range from 0 to 120. Default value: 10.
`ApplicationUpdateMode`	How automatically installed application updates (autopatches) are downloaded and installed.	`Disabled`: do not download or install autopatches. `DownloadOnly` (default): download autopatches, but do not install them. `DownloadAndInstall`: automatically download and install autopatches. After an autopatch is installed, the application restarts automatically.
The **[Sources.item_#]** section contains the following settings:		
`Enabled`	Use of the update source specified in the `SourceType` setting. To run the task, at least one update source needs to be enabled.	`Yes` (default) – the application is using the update source. `No` – the application is not using the update source.
`SourceType`	Source from which the application receives updates.	`KLServers` (default value) — The application receives updates from one of the Kaspersky update servers. Updates are downloaded via HTTPS protocol. `SCServer`. The application downloads updates to the protected device from the Administration Server installed on the local network. You can select this update source if you use Kaspersky Security Center for centralized administration of device protection in your organization. `Custom`. The application downloads updates from a custom source specified in the `URL` setting. You can specify directories on FTP, HTTP, and HTTPS servers or directories on any device mounted on the protected client device, including directories on remote devices mounted via the Samba or NFS protocols.

Setting	Description	Values
URL	Address of the custom update source on the local area network or the Internet.	The default value is not defined. Examples: `URL=http://example.com/bases/` – address of the HTTP server with the directory that contains updates. `URL=/home/bases/` – directory on the protected computer that contains application databases.

Updating using Kaspersky Update Utility

To reduce Internet traffic, you can configure updates of application databases and modules on devices of the organization's LAN from a shared directory by using the Kaspersky Update Utility. For this purpose, one of the devices in the organization's LAN must receive update packages from the Kaspersky Security Center Administration Server or from Kaspersky update servers and use the utility to copy the received update packages to the shared directory. Other devices on the organization's LAN will be able to receive the update package from this shared directory.

To configure Kaspersky Security Center to update databases from a shared directory using the Kaspersky Update Utility:

1. Install Kaspersky Update Utility on one of the devices of the organization's LAN.

   You can download the Kaspersky Update Utility distribution kit from the Kaspersky Technical Support website.

2. Configure copying of the update package to the shared directory in the Kaspersky Update Utility settings.

   Select the update source (for example, the Administration Server repository) and the shared directory to which the Kaspersky Update Utility will copy update packages. For detailed information about using Kaspersky Update Utility, refer to Kaspersky Knowledge Base.

3. Configure updates of application databases and modules from the specified shared directory on other devices in the organization's local network:

   a. Open the properties of the **Update** task that will be performed on the required device using the Web Console or using the Administration Console.

   b. In the task properties, go to the **Update sources** section.

   c. In the **Update sources** section, select the **Other sources on the local or global network** option.

   d. In the table of update sources, click the **Add** button and specify the path to the shared directory.

   > The address of the update source must match the address specified in the Kaspersky Update Utility settings.

   e. Select the **Use this source** check box and click **OK**.

   f. In the table, set the order of the update sources using the **Up** and **Down** buttons.

   g. Save the changes to the task settings.

To configure Kaspersky Security Center to update databases from a shared directory using the command line:

1. Install Kaspersky Update Utility on one of the devices of the organization's LAN.

   You can download the Kaspersky Update Utility distribution kit from the Kaspersky Technical Support website.

2. Configure copying of the update package to the shared directory in the Kaspersky Update Utility settings.

   Select the update source (for example, the Administration Server repository) and the shared directory to which the Kaspersky Update Utility will copy update packages. For detailed information about using Kaspersky Update Utility, refer to Kaspersky Knowledge Base.

3. Configure updates of application databases and modules from the specified shared directory on other devices in the organization's local network: in the `Update` task settings, set `SourceType=Custom` and specify the path to the shared directory in the `[Sources.item_#]` section.

   The address of the update source must match the address specified in the Kaspersky Update Utility settings.

Rolling back application database and module updates

If Kaspersky Endpoint Security is used in Light Agent mode to protect virtual environments, the task cannot be used to rollback database updates.

After the application databases are updated for the first time, the rollback of the application databases to their previous versions becomes available.

Every time a user starts the update process, Kaspersky Endpoint Security creates a backup copy of the current application databases. This allows you to roll back the application databases to a previous version if needed.

Rolling back the last database update may be useful, for example, if the new application database version contains invalid signatures, which causes Kaspersky Endpoint Security to block safe applications.

In the command line, to roll back updates, you can run the *Rollback* predefined task or create and run user tasks for rolling back updates (tasks of the *Rollback* type).

In Kaspersky Security Center, you can create rollback tasks for administration groups or for individual devices using the Web Console or the Administration Console.

The *rollback* task does not have any settings.

File Threat Protection

File Threat Protection component prevents infection of the device file system. The component is enabled automatically with the default settings when Kaspersky Endpoint Security starts. It resides in the device operating memory and scans all files that are opened, saved, and launched in real time.

Upon detecting malware, Kaspersky Endpoint Security may remove the infected file and terminate the malware process started from this file.

The operation of the component is affected by the file operation interception mode, which you can select in the general settings of the application. By default, access to the file is blocked for the duration of the scan.

If the root user does not have access to a remote directory mounted on the device over the NFS4 protocol, the application blocks access to such a file for all users.

If File Threat Protection is enabled and Container Monitoring (Container Scan, Container Monitoring) is enabled, the application also scans all namespaces and containers on all supported operating systems.

You can enable or disable File Threat Protection, and also configure the protection settings:

- Select the file scan mode (when opened, or when opened and modified).
- Enable or disable scanning of archives, mail databases, email messages in text format.
- Temporarily exclude files in text format from rescans.
- Limit the size of an object to be scanned and the duration of the object scan.
- Select the actions to be performed by the application on the infected objects.
- Configure the *scan scopes*. The application will scan objects in the specified area of the file system.
- Configure exclusions of objects from scans. *Scan exclusion* is a set of conditions. When these conditions are met, the application does not scan the objects for viruses and other malware. You can exclude from scans:
  - Objects by name or mask
  - Objects by the name of the threats detected in them
  - Files and directories in specified areas of the file system
  - Processes and files being modified by the specified process

  The application also automatically excludes some internal processes from the scan, for example, the process of the Watchdog server.

- Configure the use of the heuristic analyzer and iChecker technology during a scan.
- Enable or disable the logging of information about scanned non-infected objects, about scanning objects in archives, and about unprocessed objects.

To optimize the File Threat Protection component, you can exclude from scans any files being copied from network directories. Files are scanned only after the process of copying to a local directory is finished. To exclude files located in network directories from scans, configure exclusion based on processes for the utility used for copying from network directories (for example, for the `cp` utility). If you manage the application using Kaspersky Security Center, you can configure exclusion based on processes in the Web Console or the Administration Console. If you are administering the application using the command line, you can configure an exclusion by process by adding an `[ExcludedForProgram.item_#]` section to the settings of the OAS task.

Configuring File Threat Protection in the Web Console

In the Web Console, you can manage File Threat Protection settings in the policy properties (**Application settings** → **Host Threat Protection** → **File Threat Protection**).

Configuring File Threat Protection in the Administration Console

In the Administration Console, you can manage File Threat Protection settings in the policy properties (Managing policies in the Administration Console, Creating a policy using the Administration Console) (**Essential Threat Protection** → **File Threat Protection**).

File Threat Protection component settings

Setting	Description
Enable File Threat Protection	This check box enables or disables File Threat Protection component on all managed devices. This check box is selected by default.
File Threat Protection mode	In this drop-down list, you can select the File Threat Protection component mode: • **Smart check** (default value) – scan a file when there is an attempt to open it and scan it again when there is an attempt to close it if the file has been modified. If a process accesses and modifies a file multiple times in a certain period, the application scans the file again only when the process closes it for the last time. • **When opened** – scan the file on an attempt to open it for reading, execution, or modification. • **When opened and modified** – scan a file on an attempt to open it, and scan it again on an attempt to close it if the file has been modified.
Scan	This group of settings contains buttons that open windows where you can configure the scan scopes and scan settings.
Actions on threat detection	This group of settings contains the **Configure** button. Clicking this button opens the **Actions on threat detection** window, where you can configure the actions that the application performs on detected infected objects.

Scan scopes window

The table contains the scan scopes. The application will scan files and directories located in the paths specified in the table. By default, the table contains one scan scope that includes all directories of the local file system.

Scan scope settings

Setting	Description
Merge inherited values	This check box enables or disables the merging of the list when inherited in child policies. If the check box is selected, items in the list of the parent policy are displayed in child policies, and items can be added to the list of the child policy. If the check box is cleared, the list items are not merged when inheriting policy settings. This check box is cleared by default.
Scope name	Scan scope name.
Path	Path to the directory that the application scans.
Status	The status indicates whether the application scans this scope.

You can add, edit, delete, move up, and move down items in the table.

Kaspersky Endpoint Security scans objects in the specified scopes in the order they appear in the list of scopes. If necessary, place the subdirectory higher in the list than its parent directory, to configure security settings for a subdirectory that are different from the security settings of the parent directory.

<New scan scope> window

In this window, you can add and configure scan scopes.

Scan scope settings

Setting	Description
Scan scope name	Field for entering the scan scope name. This name will be displayed in the table in the **Scan scopes** window. The entry field must not be blank.
Use this scope	This check box enables or disables scans of this scope by the application. If this check box is selected, the application processes this scan scope. If this check box is cleared, the application does not process this scan scope. You can later include this scope in the component settings by selecting the check box. This check box is selected by default.

Setting	Description
File system, access protocol, and path	The settings block lets you set the scan scope. You can select the file system type in the drop-down list of file systems: • **Local** (default value) – local directories. If this item is selected, you need to indicate the path to the local directory. • **Mounted** – Mounted remote or local directories. If this item is selected, you need to indicate the protocol or name of the file system. • **Shared** — The protected server's file system resources accessible via the Samba or NFS protocol. • **All remote mounted** – all remote directories mounted on the device using the Samba and NFS protocols. • **All shared** — All of the protected server's file system resources accessible via the Samba and NFS protocols.
	If **Shared** or **Mounted** is selected in the drop-down list of file systems, you can select the remote access protocol in the drop-down list on the right: • **NFS**: remote directories mounted on a device using the NFS protocol. • **Samba**: remote directories mounted on a device using the Samba protocol. • **Custom** – resources of the device's file system specified in the field below.
	If **Local** is selected in the drop-down list of file systems, then in the input field you can enter a path to a directory that you want to add to the scan scope. You can use **masks** and **tags** to specify the path. You can use special tags to specify a container or image: • `[container-id:<id>]/<path to local directory>` • `[container-name:<name>]/<path to local directory>` • `[image-id:<id>]/<path to local directory>` • `[image-name:<name>]/<path to local directory>` Where: `<id>` is the container ID. `<name>` is a container name `<path to local directory>` is the path to the local directory. You can also use unique combinations of tags: `[container-id:<id>]`, `[container-name:<name>]`, `[image-id:<id>]`, and `[image-name:<name>]/path to local directory>`. Any combination of 1 to 4 unique tags within one area is allowed. The order they are listed in is not important. For example: • `[container-name:<name>][image-name:<name>]/path to local directory>` • `[container-id:<id>][image-name:<name>]/<path to local directory>` • `[image-name:<name>][image-id:<id>]/<path to local directory>` • `[container-name:<name>][container-id:<id>][image-name:<name>]/<path to local directory>` • `[container-name:<name>][image-id:<id>][container-id:<id>][image-name:<name>]/path to local directory>` You can use masks (`?` and `*` characters) in names and identifiers. You can use the `*` (asterisk) character to create a file or directory name mask. You can indicate a single `*` character to represent any set of characters (including an empty set) preceding the `/` character in the file or directory name. For example, `/dir/*/file` or `/dir/*/*/file`. You can indicate two consecutive `*` characters to represent any set of characters (including an empty set and the `/` character) in the file or directory name. For example, `/dir/**/file*/` or `/dir/file**/`. The `**` mask can be used only once in a directory name. For example, `/dir/**/**/file` is an incorrect mask. You can use a single `?` character to represent any one character in the file or directory name. The **/** path is specified by default – the application scans all directories of the local file system. If the **Local** type is selected in the drop-down list of file systems, and the path is not specified, the application scans all directories of the local file system.

Setting	Description
Filesystem name	The field for entering the name of the file system where the directories that you want to add to the scan scope are located. The field is available if the **Mounted** type is selected in the drop-down list of file systems and the **Custom** item is selected in the drop-down list on the right.
Masks	The list contains name masks for the objects that the application scans. By default the list contains the * mask (all objects). You can add, edit, or delete masks.

Scan settings window

In this window, you can configure file scan settings while File Threat Protection is enabled.

File Threat Protection settings

Setting	Description
Scan archives	This check box enables or disables scan of archives. If this check box is selected, Kaspersky Endpoint Security scans archives. To scan an archive, the application has to unpack it first, which may slow down scanning. You can reduce the duration of archive scans by enabling and configuring the **Skip file that is scanned for longer than (sec)** and **Skip file larger than (MB)** settings in the **General scan settings** section. If this check box is cleared, Kaspersky Endpoint Security does not scan archives. This check box is cleared by default.
Scan SFX archives	This check box enables or disables *self-extracting archive* scans. Self-extracting archives are archives that contain an executable extraction module. If this check box is selected, Kaspersky Endpoint Security scans self-extracting archives. If this check box is cleared, Kaspersky Endpoint Security does not scan self-extracting archives. This check box is available if the **Scan archives** check box is unchecked. This check box is cleared by default.
Scan mail databases	This check box enables or disables scans of mail databases of Microsoft Outlook, Outlook Express, The Bat!, and other mail applications. If this check box is selected, Kaspersky Endpoint Security scans mail database files. If this check box is cleared, Kaspersky Endpoint Security does not scan mail database files. This check box is cleared by default.
Scan mail format files	This check box enables or disables scan of files of plain-text email messages. If this check box is selected, Kaspersky Endpoint Security scans plain-text messages. If this check box is cleared, Kaspersky Endpoint Security does not scan plain-text messages. This check box is cleared by default.
Skip text files	Temporary exclusion of files in text format from scans. If the check box is selected, Kaspersky Endpoint Security does not scan text files if they are used by the same process within 10 minutes after the most recent scan. This setting makes it possible to optimize scans of application logs. If this check box is unselected, Kaspersky Endpoint Security scans text files. This check box is cleared by default. This setting is applied if you use system event interception mechanism based on fanotify. When using an updatable kernel module, the scan is optimized by using the scan result cache.

Setting	Description
Skip database journal files	Temporarily excluding database journal files from scanning. If this check box is selected, the application does not scan database journal files if the journal file is reused by the same process within 10 minutes after the most recent scan. This setting makes it possible to optimize scans of database journal files. If this check box is cleared, the application scans database journal files. This check box is cleared by default. This setting is applied if you use system event interception mechanism based on fanotify. When using an updatable kernel module, the scan is optimized by using the scan result cache.
Skip file that is scanned for longer than (sec)	In this field, you can specify the maximum time to scan a file, in seconds. After the specified time, Kaspersky Endpoint Security stops scanning the file. Possible values: 0–9999. If the value is set to 0, the scan time is unlimited. Default value: 60.
Skip file larger than (MB)	In this field, you can specify the maximum size of a file to scan, in megabytes. Possible values: 0–999999. If the value is set to 0, Kaspersky Endpoint Security scans files of any size. Default value: 0.
Log clean objects	This check box enables or disables the logging of *ObjectProcessed* type events. If this check box is selected, Kaspersky Endpoint Security logs *ObjectProcessed* type events for all scanned objects. If this check box is cleared, Kaspersky Endpoint Security does not log *ObjectProcessed* type events. This check box is cleared by default.
Log unprocessed objects	This check box enables or disables the logging *ObjectNotProcessed* type events if a file cannot be processed during a scan. If this check box is selected, Kaspersky Endpoint Security logs *ObjectNotProcessed* type events. If this check box is cleared, Kaspersky Endpoint Security does not log *ObjectNotProcessed* type events. This check box is cleared by default.
Log packed objects	This check box enables or disables the logging of *PackedObjectDetected* type events for all packed objects that are detected. If this check box is selected, Kaspersky Endpoint Security logs *PackedObjectDetected* type events. If this check box is cleared, Kaspersky Endpoint Security does not log *PackedObjectDetected* type events. This check box is cleared by default.
Use iChecker technology	This check box enables or disables scan of only new and modified since the last scan files. If the check box is selected, Kaspersky Endpoint Security scans only new or modified since the last scan files. If the check box is cleared, Kaspersky Endpoint Security scans files regardless to the date of creation or modification. This check box is selected by default.
Use heuristic analysis	This check box enables or disables heuristic analysis during file scans. This check box is selected by default.
Heuristic analysis level	If the **Use heuristic analysis** check box is selected, you can select the heuristic analysis level in the drop-down list: • **Light** is the least detailed scan with minimal system load. • **Medium** is a medium scan with balanced system load. • **Deep** is the most detailed scan with maximum system load. • **Recommended** (default value) is the optimal level recommended by Kaspersky experts. It ensures an optimal combination of protection quality and impact on the performance of the protected devices.

Actions on threat detection window

In this window, you can configure actions to be performed by Kaspersky Endpoint Security on detected infected objects:

File Threat Protection settings

Setting	Description
Actions on threat detection	You can select the actions that the application performs on a detected infected object: • **Disinfect; delete if disinfection is not possible** (default). If you select this action, the application attempts to disinfect the infected object by saving a copy of the object in Backup. If disinfection is not possible (for example, if the type of object or the type of threat in the object cannot be disinfected), then the application deletes the infected object. • **Disinfect; block if disinfection fails**. If you select this action, the application attempts to disinfect the infected object by saving a copy of the object in Backup. If disinfection is not possible (for example, if the type of object or the type of threat in the object cannot be disinfected), then the application blocks access to the infected object. • **Block**. If you select this action, the application blocks access to the infected object. When an infected object is disinfected or deleted, a copy of the infected object is placed in Backup.

File Threat Protection exclusions

A *protection exclusion* is a set of conditions under which Kaspersky Endpoint Security will not scan objects for viruses and other malware. You can also exclude objects by masks and threat names, and configure exclusions for processes.

In the Administration Console, you can manage File Threat Protection exclusions in the policy properties (Managing policies in the Administration Console, Creating a policy using the Administration Console) (**Essential Threat Protection → File Threat Protection exclusions**).

Settings of scan exclusions

Group of settings	Description
Exclusions	This group of settings contains the **Configure** button. Clicking this button opens the **Exclusion scopes** window. In this window, you can define the list of scopes to be excluded from scan.
Exclusions by mask	This group of settings contains the **Configure** button, which opens the **Exclusions by mask** window. In this window, you can configure the exclusion of objects from scans by name mask.
Exclusions by threat name	This group of settings contains the **Configure** button, which opens the **Exclusions by threat name** window. In this window, you can configure the exclusion of objects from scans based on threat name.
Exclusions by process	This group of settings contains the **Configure** button, which opens the **Exclusions by process** window. In this window, you can exclude the activity of processes.

Exclusion scopes window

This window contains scan exclusion scopes. The application does not scan files and directories located at the paths specified in the table.

Exclusion scope settings

Setting	Description
Merge inherited values	This check box enables or disables the merging of the list when inherited in child policies. If the check box is selected, items in the list of the parent policy are displayed in child policies, and items can be added to the list of the child policy. If the check box is cleared, the list items are not merged when inheriting policy settings. This check box is cleared by default.
Exclusion scope name	Exclusion scope name.
Path	Path to the directory excluded from scan.
Status	The status indicates whether the application uses this exclusion.

By default, the table of exclusion scopes is empty. You can add, edit, and delete items in the table.

You can also import the list of exclusions from a file by clicking **Advanced** -> **Import** and export the list of added exclusions to a file by clicking **Advanced** -> **Export selected** or **Advanced** -> **Export all**.

<New exclusion scope> window

In this window, you can add and configure scan exclusion scopes.

Exclusion scope settings

Setting	Description
Exclusion scope name	Field for entering the exclusion scope name. This name will be displayed in the table in the **Exclusion scopes** window. The entry field must not be blank.
Use this scope	The check box enables or disables exclusion of the scope from scan when the application is running. If this check box is selected, the application excludes this area during scans. If this check box is cleared, the application includes this area in the scan scope. You can later exclude this scope by selecting the check box. This check box is selected by default.

Setting	Description
File system, access protocol, and path	The settings block lets you set the exclusion scope. In the drop-down list of file systems, you can select the type of file system of the directories to be excluded from scans: • **Local**, for local directories. • **Mounted** – mounted directories. • **All remote mounted** – all remote directories mounted on the device using the Samba and NFS protocols.
	If **Mounted** is selected in the drop-down list of file systems, you can select the remote access protocol in the drop-down list on the right: • **NFS**: remote directories mounted on a device using the NFS protocol. • **Samba**: remote directories mounted on a device using the Samba protocol. • **Custom** – resources of the device's file system specified in the field below.
	If **Local** is selected in the drop-down list of file systems, then in the input field you can enter a path to a directory that you want add to the exclusion scope. You can use **masks** and **tags** to specify the path. You can use special tags to specify a container or image: • `[container-id:<id>]/<path to local directory>` • `[container-name:<name>]/<path to local directory>` • `[image-id:<id>]/<path to local directory>` • `[image-name:<name>]/<path to local directory>` Where: `<id>` is the container ID. `<name>` is a container name `<path to local directory>` is the path to the local directory. You can also use unique combinations of tags: `[container-id:<id>]`, `[container-name:<name>]`, `[image-id:<id>]`, and `[image-name:<name>]/path to local directory>`. Any combination of 1 to 4 unique tags within one area is allowed. The order they are listed in is not important. For example: • `[container-name:<name>][image-name:<name>]/path to local directory>` • `[container-id:<id>][image-name:<name>]/<path to local directory>` • `[image-name:<name>][image-id:<id>]/<path to local directory>` • `[container-name:<name>][container-id:<id>][image-name:<name>]/<path to local directory>` • `[container-name:<name>][image-id:<id>][container-id:<id>][image-name:<name>]/path to local directory>` You can use masks (`?` and `*` characters) in names and identifiers. You can use the `*` (asterisk) character to create a file or directory name mask. You can indicate a single `*` character to represent any set of characters (including an empty set) preceding the `/` character in the file or directory name. For example, `/dir/*/file` or `/dir/*/*/file`. You can indicate two consecutive `*` characters to represent any set of characters (including an empty set and the `/` character) in the file or directory name. For example, `/dir/**/file*/` or `/dir/file**/`. The `**` mask can be used only once in a directory name. For example, `/dir/**/**/file` is an incorrect mask. To exclude the mount point `/dir`, you need to specifically indicate `/dir` (no asterisk). The mask `/dir/*` excludes all mount points at the level below `/dir` but not `/dir` itself. The `/dir/**` mask excludes all mount points below the level of `/dir` but not `/dir` itself. You can use a single `?` character to represent any one character in the file or directory name. The **/** path is specified by default. The application excludes all directories of the local file system from scan.

Setting	Description
Filesystem name	The field for entering the name of the file system where the directories that you want to add to the exclusion scope are located. The field is available if the **Mounted** type is selected in the drop-down list of file systems and the **Custom** item is selected in the drop-down list on the right.
Masks	The list contains name masks of the objects that the application excludes from scan. Masks are only applied to objects in the directory specified in the path field. By default the list contains the * mask (all objects). You can add, edit, or delete masks.

Exclusions by mask window

You can configure scan exclusions for objects by name mask. The application will not scan files whose names contain the specified mask. By default, the list of masks is empty.

You can add, edit, or delete masks.

Clicking the **Add** button opens the **Object mask** window. In this window, in the **Define object mask** field, you can specify the name template for files that Kaspersky Endpoint Security excludes from scans.

Examples:
The `*.txt` mask refers to all text files.
The `*_my_file_??.html` mask refers to html files starting with any characters, and ending with `_my_file_` followed by any two characters (for example, 2020_my_file_09.html).

You can enable the merging of the list of exclusions when inherited by child policies. If you want to merge list items, select the **Merge inherited values** check box. If the check box is selected, items in the list of the parent policy are displayed in child policies, and items can be added to the list of the child policy. If the check box is cleared, the list items are not merged when inheriting policy settings. This check box is cleared by default.

Exclusions by threat name window

You can configure the exclusion of objects from scans based on threat name. The application will not block the specified threats. By default, the list of threat names is empty.

You can add, edit, and delete threat names.

You can enable the merging of the list of exclusions when inherited by child policies. If you want to merge list items, select the **Merge inherited values** check box. If the check box is selected, items in the list of the parent policy are displayed in child policies, and items can be added to the list of the child policy. If the check box is cleared, the list items are not merged when inheriting policy settings. This check box is cleared by default.

Exclusions by process window

This window contains per-process exclusion scopes. The exclusion scope for exclusion by process lets you exclude from scans the activity of the indicated process and files modified by the indicated process. By default, the list includes two exclusion scopes that contain paths to the Network Agents. You can remove these exclusions, if necessary.

Exclusion scope settings for exclusion by process

Setting	Description
Merge inherited values	This check box enables or disables the merging of the list when inherited in child policies. If the check box is selected, items in the list of the parent policy are displayed in child policies, and items can be added to the list of the child policy. If the check box is cleared, the list items are not merged when inheriting policy settings. This check box is cleared by default.
Exclusion scope name	Exclusion scope name.
Path	Full path to excluded process.
Status	The status indicates whether the application uses this exclusion.

You can add, edit, or delete items in the table.

You can also import the list of exclusions from a file by clicking **Advanced** -> **Import** and export the list of added exclusions to a file by clicking **Advanced** -> **Export selected** or **Advanced** -> **Export all**.

Trusted process window

In this window, you can add and configure exclusion scopes for exclusion by process.

Exclusion scope settings for exclusion by process

Setting	Description
Exclusion scope name	Field for entering the exclusion scope name. This name will be displayed in a table in the **Exclusions by process** window. The entry field must not be blank.
Path to excluded process	Full path to the process you want to exclude from scans. If the updatable kernel module is used for system event interception, the specified process is excluded from interception in all namespaces.
Apply to child processes	Exclude child processes of the excluded process indicated by the **Path to excluded process** setting. This check box is cleared by default.
Use this scope	The check box enables or disables this exclusion scope. If this check box is selected, the application excludes this area during scans. If this check box is cleared, the application includes this area in the scan scope. You can later exclude this scope by selecting the check box. This check box is selected by default.

Setting	Description
Path to modified files	This group of settings lets you set scan exclusions for files modified by the process. In the drop-down list of file systems, you can select the type of file system of the directories to be excluded from scans: • **Local**, for local directories. If this item is selected, you need to indicate the path to the local directory. • **Mounted** – Mounted remote or local directories. If this item is selected, you need to indicate the protocol or name of the file system. • **Shared** — The protected server's file system resources accessible via the Samba or NFS protocol. • **All remote mounted** – all remote directories mounted on the device using the Samba and NFS protocols. • **All shared** — All of the protected server's file system resources accessible via the Samba and NFS protocols.
	If **Mounted** or **Shared** is selected in the drop-down list of file systems, then you can select the remote access protocol in the drop-down list of access protocols: • **NFS**: remote directories mounted on a device using the NFS protocol. • **Samba**: remote directories mounted on a device using the Samba protocol. • **Custom** – resources of the device's file system specified in the field below.
	If **Local** is selected in the drop-down list of file systems, then in the input field you can enter a path to a directory that you want add to the exclusion scope. You can use **masks** to specify the path. The entry field must not be blank. You can use the `*` (asterisk) character to create a file or directory name mask. You can indicate a single `*` character to represent any set of characters (including an empty set) preceding the `/` character in the file or directory name. For example, `/dir/*/file` or `/dir/*/*/file`. You can indicate two consecutive `*` characters to represent any set of characters (including an empty set and the `/` character) in the file or directory name. For example, `/dir/**/file*/` or `/dir/file**/`. The `**` mask can be used only once in a directory name. For example, `/dir/**/**/file` is an incorrect mask. You can use a single `?` character to represent any one character in the file or directory name.
Filesystem name	The field for entering the name of the file system where the directories that you want to add to the exclusion scope are located. The field is available if the **Mounted** type is selected in the drop-down list of file systems and the **Custom** item is selected in the drop-down list on the right.
Masks	The list contains name masks of the objects that the application excludes from scan. Masks are only applied to objects in the directory specified in the **Path to modified files** field. You can add, edit, or delete masks.

Configuring File Threat Protection on the command line

In the command line, you can manage File Threat Protection using the File Threat Protection predefined task (*File_Threat_Protection*).

The File Threat Protection task is started by default. You can start and stop this task manually.

Administrator role privileges are required to start and stop the File Threat Protection task from the command line.

You can configure File Threat Protection settings by editing the settings of the File Threat Protection predefined task.

File Threat Protection task settings

The table describes all possible values and default values of all the settings that you can specify for the File Threat Protection task.

Setting	Description	Values
`ScanArchived`	Enables scanning of archives (including SFX self-extracting archives). The application scans the following archives: .zip; .7z*; .7-z; .rar; .iso; .cab; .jar; .bz; .bz2; .tbz; .tbz2; .gz; .tgz; .arj. The list of supported archive formats depends on the application databases being used. We do not recommend enabling this setting because scanning archives impacts performance due to the fact that access to the archive file is blocked while the file is being unpacked to a temporary directory and scanned.	`Yes` —Scan archives. If `ActionOnThreat` is set to `DisinfectDeleteIfNotPossible`, and disinfection is impossible, then, depending on the archive type, the application deletes either the infected object or the entire archive that contains the threat. `No` (default value) — Do not scan archives.
`ScanSfxArchived`	Enables scanning of self-extracting archives only (archives that contain an executable extraction module).	`Yes` — Scan self-extracting archives. `No` (default value) — Do not scan self-extracting archives.
`ScanMailBases`	Enables scanning email databases of Microsoft Outlook, Outlook Express, The Bat, and other mail clients.	`Yes` — Scan files of email databases. `No` (default value) — Do not scan files of email databases.
`ScanPlainMail`	Enables scanning of plain text email messages.	`Yes` — Scan plain text email messages. `No` (default value) — Do not scan plain text email messages.
`SkipPlainTextFiles`	Temporary exclusion of files in text format from scans. This setting makes it possible to optimize scans of application logs. This setting is applied if you use system event interception mechanism based on fanotify. When using an updatable kernel module, the scan is optimized by using the scan result cache.	`Yes` – Do not scan text files if they are reused by the same process for 10 minutes after the most recent scan. `No` (default value) – scan files in plain text format.
`SkipDatabaseJournals`	Temporarily excluding database journal files from scanning. This setting makes it possible to optimize scans of database journal files. This setting is applied if you use system event interception mechanism based on fanotify. When using an updatable kernel module, the scan is optimized by using the scan result cache.	`Yes` – Do not scan database journal files if they are reused by the same process within 10 minutes after the most recent scan. `No` (default) – Scan database journal files.
`SizeLimit`	Maximum size of an object to be scanned (in megabytes). If the object to be scanned is larger than the specified value, the application skips this object.	0 to 999999 0 — The application scans objects of any size. Default value: 0.
`TimeLimit`	Maximum object scan duration (in seconds). The application stops scanning the object if it takes longer than the time specified by this setting.	0 to 9999 0 — The object scan time is unlimited. Default value: 60.

Setting	Description	Values
`ActionOnThreat`	Selection of the action to be performed by the application on the infected objects.	`DisinfectDeleteIfNotPossible` (disinfect; delete if not possible) means the application tries to disinfect the infected object after saving a copy of the object in Backup. If disinfection is not possible (for example, if the type of object or the type of threat in the object cannot be disinfected), then the application deletes the infected object. `DisinfectBlockIfNotPossible` (disinfect; block if not possible) means the application tries to disinfect the infected object after saving a copy of the object in Backup. If disinfection is not possible (for example, if the type of object or the type of threat in the object cannot be disinfected), then the application blocks access to the infected object. `Block` – The application blocks access to an infected object. Default value: `DisinfectDeleteIfNotPossible`.
`UseExcludeMasks`	Enables exclusion of the objects specified by the `ExcludeMasks.item_#` setting from the scan.	`Yes` — Exclude objects specified by the `ExcludeMasks.item_#` setting from scans. `No` (default value) — Do not exclude objects specified by the `ExcludeMasks.item_#` setting from the scan.

`ExcludeMasks.item_#`	Excludes objects from being scanned by name or mask.
	You can use this setting to exclude an individual file from the specified scan scope by name or exclude several files at once using masks in the shell format.
		The default value is not defined.
		Example:
		`UseExcludeMasks=Yes`
		`ExcludeMasks.item_0000=eicar1.*`
		`ExcludeMasks.item_0001=eicar2.*`

`UseExcludeThreats`	Enables exclusion of objects containing the threats specified by the `ExcludeThreats.item_#` setting from scans.	`Yes` — Exclude objects containing the threats specified by the `ExcludeThreats.item_#` setting from the scan. `No` (default value): do not exclude objects containing the threats specified by the `ExcludeThreats.item_#` setting from the scan.

`ExcludeThreats.item_#`	Excludes objects from scans by the name of the threats detected in them. Before specifying a value for this setting, make sure that the `UseExcludeThreats` setting is enabled.
	In order to exclude an object from scans, specify the full name of the threat detected in this object – the string containing the application's decision that the object is infected.
	For example, you may be using a utility to obtain information about your network. To keep the application from blocking it, add the full name of the threat contained in it to the list of threats excluded from scans.
	You can find the full name of the threat detected in an object in the application log or on the website https://threats.kaspersky.com.
		The setting value is case-sensitive.
		The default value is not defined.
		Example:
		`UseExcludeThreats=Yes`
		`ExcludeThreats.item_0000=EICAR-Test-*`
		`ExcludeThreats.item_0001=?rojan.Linux`

`ReportCleanObjects`	Enables logging of information about scanned objects that the application reports as not being infected. You can enable this setting, for example, to make sure that a particular object was scanned by the application.	`Yes` — Log information about non-infected objects. `No` (default value) — Do not log information about non-infected objects.
`ReportPackedObjects`	Enables logging of information about scanned objects that are part of compound objects. You can enable this setting, for example, to make sure that an object within an archive has been scanned by the application.	`Yes` — Log information about scanned objects within archives. `No` (default value) — Do not log information about scanned objects within archives.
`ReportUnprocessedObjects`	Enables logging of information about objects that have not been processed for some reason.	`Yes` — Log information about unprocessed objects. `No` (default value) — Do not log information about unprocessed objects.

Setting	Description	Values
`UseAnalyzer`	Enables heuristic analysis. Heuristic analysis helps the application to detect threats even before they become known to virus analysts.	`Yes` (default value) — Enable Heuristic Analyzer. `No` — Disable Heuristic Analyzer.
`HeuristicLevel`	Specifies the heuristic analysis level. The heuristic analysis level sets the balance between the thoroughness of searches for threats, the load on the operating system's resources, and the scan duration. The higher the heuristic analysis level, the more resources and time are required for scanning.	`Light` — The least thorough scan with minimum load on the system. `Medium` — A medium heuristic analysis level with a balanced load on the system. `Deep` — The most thorough scan with maximum load on the system. `Recommended` (default value) — The recommended value.
`UseIChecker`	Enables usage of the iChecker technology.	`Yes` (default value) — Enable use of the iChecker technology. `No` — Disable use of the iChecker technology.
`ScanByAccessType`	File Threat Protection task operation mode. The `ScanByAccessType` setting only applies to the File Threat Protection task.	`SmartCheck` (default value) — Scan a file on attempts to open it, and scan it again on attempts to close it if the file has been modified. If a process accesses an object multiple times in the course of its operation and modifies it, the application scans the object again only when the process closes it for the last time. `OpenAndModify` — Scan a file on attempts to open it, and scan it again on attempts to close it if the file has been modified. `Open` — Scan a file on attempts to open it for reading, execution, or modification.
The **[ScanScope.item_#]** section contains the following settings:		
`AreaDesc`	Description of the scan scope, which contains additional information about the scan scope. The maximum length of the string specified using this setting is 4096 characters.	Default value: `All objects`. Example: `AreaDesc=" Scanning of email databases "`
`UseScanArea`	Enables scans of the specified scope. To run the task, enable scans of at least one scope.	`Yes` (default value) — Scan the specified scope. `No` — Do not scan the specified scope.
`AreaMask.item_#`	Scan scope limitation. With this scan scope, the application only scans files that are specified using masks in the shell format. If this setting is not specified, the application scans all the objects in the scan scope. You can specify several values for this setting.	The default value is `*` (scan all objects). Example: `AreaMask_item_< item number >=*doc`

Setting	Description	Values
Path	Path to the directory with objects to be scanned.	< path to local directory > — scan objects in the specified directory. You can use **masks** and **tags** to specify the path. You can use special tags to specify a container or image: • [container-id:<id>]/<path to local directory> • [container-name:<name>]/<path to local directory> • [image-id:<id>]/<path to local directory> • [image-name:<name>]/<path to local directory> Where: <id> is the container ID. <name> is a container name <path to local directory> is the path to the local directory. You can also use unique combinations of tags: [container-id:<id>], [container-name:<name>], [image-id:<id>], and [image-name:<name>]/path to local directory>. Any combination of 1 to 4 unique tags within one area is allowed. The order they are listed in is not important. For example: • [container-name:<name>][image-name:<name>]/path to local directory> • [container-id:<id>][image-name:<name>]/<path to local directory> • [image-name:<name>][image-id:<id>]/<path to local directory> • [container-name:<name>][container-id:<id>] [image-name:<name>]/<path to local directory> • [container-name:<name>][image-id:<id>] [container-id:<id>][image-name:<name>]/path to local directory> You can use masks (? and * characters) in names and identifiers. You can use the * (asterisk) character to create a file or directory name mask. You can indicate a single * character to represent any set of characters (including an empty set) preceding the / character in the file or directory name. For example, /dir/*/file or /dir/*/*/file. You can indicate two consecutive * characters to represent any set of characters (including an empty set and the / character) in the file or directory name. For example, /dir/**/file*/ or /dir/file**/. The ** mask can be used only once in a directory name. For example, /dir/**/**/file is an incorrect mask. You can use a single ? character to represent any one character in the file or directory name. Shared:NFS — Scan the device file system resources that are accessible via the NFS protocol. Shared:SMB – Scan the device file system resources that are accessible via the Samba protocol. Mounted:NFS – Scan the remote directories mounted on a device using the NFS protocol. Mounted:SMB – Scan the remote directories mounted on a device using the Samba protocol.

Setting	Description	Values
		`AllRemoteMounted` – Scan all remote directories mounted on the device using the Samba and NFS protocols. `AllShared` – Scan all the device file system resources that are accessible via the Samba and NFS protocols. `<file system type>` – Scan all resources of the specified file system device.
The **[ExcludedFromScanScope.item_#]** section contains the following settings:		
`AreaDesc`	Description of the scan exclusion scope, which contains additional information about the exclusion scope.	The default value is not defined.
`UseScanArea`	Excludes the specified scope from scans.	`Yes` (default value) — Exclude the specified scope. `No` — Do not exclude the specified scope.
`AreaMask.item_#`	Limitation of scan exclusion scope. In the exclusion scope, the application excludes from scans only files that are specified using masks in the shell format. If this setting is not specified, the application does not scan any of the objects within the exclusion scope. You can specify several values for this setting.	Default value: `*` (exclude all objects from scan)

Setting	Description	Values
Path	Path to the directory with objects to be excluded.	< path to local directory > – exclude objects in the specified directory (including subdirectories) from scans. You can use **masks** and **tags** to specify the path. You can use special tags to specify a container or image: • [container-id:<id>]/<path to local directory> • [container-name:<name>]/<path to local directory> • [image-id:<id>]/<path to local directory> • [image-name:<name>]/<path to local directory> Where: <id> is the container ID. <name> is a container name <path to local directory> is the path to the local directory. You can also use unique combinations of tags: [container-id:<id>], [container-name:<name>], [image-id:<id>], and [image-name:<name>]/path to local directory>. Any combination of 1 to 4 unique tags within one area is allowed. The order they are listed in is not important. For example: • [container-name:<name>][image-name:<name>]/path to local directory> • [container-id:<id>][image-name:<name>]/<path to local directory> • [image-name:<name>][image-id:<id>]/<path to local directory> • [container-name:<name>][container-id:<id>] [image-name:<name>]/<path to local directory> • [container-name:<name>][image-id:<id>] [container-id:<id>][image-name:<name>]/path to local directory> You can use masks (? and * characters) in names and identifiers. You can use the * (asterisk) character to create a file or directory name mask. You can indicate a single * character to represent any set of characters (including an empty set) preceding the / character in the file or directory name. For example, /dir/*/file or /dir/*/*/file. You can indicate two consecutive * characters to represent any set of characters (including an empty set and the / character) in the file or directory name. For example, /dir/**/file*/ or /dir/file**/. The ** mask can be used only once in a directory name. For example, /dir/**/**/file is an incorrect mask. You can use a single ? character to represent any one character in the file or directory name. Mounted:NFS – Exclude the remote directories mounted on a device using the NFS protocol from scan. Mounted:SMB – Exclude the remote directories mounted on a device using the Samba protocol from scan. AllRemoteMounted – Exclude all remote directories mounted on the device using the Samba and NFS protocols from scan.

Setting	Description	Values
		`<file system type>` — Exclude all the resources of the specified device file system from scans.
The **[ExcludedForProgram.item_#]** section contains the following settings:		
`ProgramPath`	Path to excluded process. If the updatable kernel module is used for system event interception, the specified process is excluded from interception in all namespaces.	`< full path to process >` – Do not scan the process in the specified local directory.
`ApplyToDescendants`	Exclude child processes of the excluded process specified by the `ProgramPath` setting from scans.	`Yes` – exclude the specified process and all its child processes from scans. `No` (default value) – exclude only the specified process from scans, do not exclude its child processes from scans.
`AreaDesc`	Description of the process exclusion scope.	Default value: `All objects`.
`UseExcludedForProgram`	Excludes the specified scope from scans.	`Yes` (default value) — Exclude the specified scope. `No` — Do not exclude the specified scope.
`AreaMask.item_#`	Limitation of the process exclusion scope. In the process exclusion scope, the application excludes from scans only the files that are specified using masks in the shell format. If this setting is not specified, the application excludes from scans all the objects within the process exclusion scope. You can specify several values for this setting.	Default value: `*` (exclude all objects from scan)
`Path`	Path to a directory with files that are modified by the process.	`< path to local directory >` excludes objects in the specified directory from the scan. You can use **masks** to specify the path. You can use the `*` (asterisk) character to create a file or directory name mask. You can indicate a single `*` character to represent any set of characters (including an empty set) preceding the `/` character in the file or directory name. For example, `/dir/*/file` or `/dir/*/*/file`. You can indicate two consecutive `*` characters to represent any set of characters (including an empty set and the `/` character) in the file or directory name. For example, `/dir/**/file*/` or `/dir/file**/`. The `**` mask can be used only once in a directory name. For example, `/dir/**/**/file` is an incorrect mask. You can use a single `?` character to represent any one character in the file or directory name. `Shared:NFS` — Exclude device file system resources that are accessible via the NFS protocol from scans. `Shared:SMB` — Exclude device file system resources that are accessible via the Samba protocol from scans. `Mounted:NFS` – Exclude the remote directories mounted on a device using the NFS protocol from scan. `Mounted:SMB` – Exclude the remote directories mounted on a device using the Samba protocol from scan. `AllRemoteMounted` – Exclude all remote directories mounted on the device using the Samba and NFS protocols from scan. `AllShared` – Exclude all device file system resources that are accessible using the Samba and NFS protocols from scan. `<file system type>` – Exclude from scanning all resources of the specified file system device.

Optimizing network directory scanning

To optimize the File Threat Protection task, you can exclude from scans any files being copied from network directories to the local directory. To do so, configure exclusion based on processes for the utility used for copying from network directories (for example, for the `cp` utility).

To configure exclusion of network directories from scans:

1. Output the File Threat Protection task settings (*File_Threat_Protection*, ID:1) to a configuration file using the following command:

   ```
   kesl-control --get-settings 1 --file <full path to configuration file> [--json]
   ```

2. Open the configuration file and add the `[ExcludedForProgram.item_#]` section with the following settings:

   - `ProgramPath` – path to the process to be excluded or to the directory with the processes to be excluded.
   - `ApplyToDescendants` is a parameter that indicates whether the scan should exclude child processes of the excluded process (possible values: `Yes` or `No`).
   - `AreaDesc` – a description of the process exclusion scope, which contains additional information about the exclusion scope.
   - `UseExcludedForProgram` enables exclusion of the specified scope during task operation (possible values: `Yes` or `No`).
   - `Path` – path to the files or directory with files modified by the process.
   - `AreaMask.item_#` is the file name mask for the files to be excluded from the scan. You can also specify the full path to the file.

   Example:

   ```
   [ExcludedForProgram.item_0000]
   ProgramPath=/usr/bin/cp
   ApplyToDescendants=No
   AreaDesc=
   UseExcludedForProgram=Yes
   Path=AllRemoteMounted
   AreaMask.item_0000=*
   ```

3. Execute the command:

   ```
   kesl-control --set-settings 1 --file <full path to configuration file> [--json]
   ```

   Specify the `--json` option if you are importing settings from a configuration file in JSON format. If the option is not specified, the application will attempt to import settings from an INI file. If the import fails, an error is displayed.

The application does not scan the files in network directories, but the `cp` command itself (for the example given above) and local files are scanned.

Special considerations for scanning symbolic links and hard links

Kaspersky Endpoint Security lets you scan symbolic links and hard links to files.

Scanning symbolic links

The application scans symbolic links only if the file referenced by the symbolic link is within the scan scope of the File Threat Protection component.

If the file referenced by the symbolic link is not within the scan scope of the File Threat Protection component, the application does not scan this file. However, if the file contains malicious code, the security of the device is at risk.

Scanning hard links

When processing a file that has more than one hard link, the application disinfects the original file. If disinfection fails, the application deletes the hard link and creates in its place a copy of the source file with the name of the deleted hard link. When deleting, the application deletes the hard link being processed, but does not process the other hard links to this file.

When you restore a file with a hard link from the Backup storage, the application creates a copy of the source file with the name of the hard link that was moved to the Backup storage. Connections with the remaining hard links to the source file will not be restored.

Malware Scan

Malware Scan is a one-time full or custom file scan on the device performed on demand. Kaspersky Endpoint Security can carry out multiple Malware Scan tasks at the same time.

A *Malware Scan (Scan_My_Computer)* predefined task is created in the application. You can use this task to perform a full scan of the device. During a full scan, the application scans all objects located on the device's local drives, as well as all mounted and shared objects that are accessed via Samba or NFS protocols with the recommended security settings.

If the root user does not have access to a remote directory mounted on the device over the NFSv4 protocol, the application blocks access to such a file for all users.

In Kaspersky Security Center, the Kaspersky Security Center Initial Configuration Wizard automatically creates a Malware Scan group task after installing the administration MMC plug-in or the Kaspersky Endpoint Security administration web plug-in.

During a full disk scan, the processor is busy. It is recommended to run the full scan task when the business is idle.

You can configure the settings of automatically created tasks in Kaspersky Security Center and on the command line, and also create Malware Scan user tasks.

Upon detecting malware, Kaspersky Endpoint Security may remove the infected file and terminate the malware process started from this file.

If during execution of the malware scan task the application was restarted by a control service or manually by the user, the task will be stopped. The application logs the *OnDemandTaskInterrupted* event.

You can run Malware Scan tasks and configure scan settings:

- Select operating system objects to scan: files, archives, boot sectors, process memory and kernel memory, startup objects.
- Limit the size of an object to be scanned and the duration of the object scan.
- Select the actions to be performed by the application on the infected objects.
- Configure exclusions of objects from scans:
  - by name or mask
  - by the name of the threats detected in the objects

  When running on operating systems that use the special-purpose parsecfs file system (Astra Linux Special Edition) we recommend adding mounting paths of this file system to exclusions from scanning.
- Enable or disable global exclusions and File Threat Protection exclusions when scanning.

- Enable the logging of information about scanned non-infected objects, about scanning objects in archives, and about unprocessed objects.
- Configure the use of the heuristic analyzer and iChecker technology during a scan.
- Limit the set of devices whose boot sectors need to be scanned.
- Configure scan scopes and scan exclusion scopes.

Malware Scan in the Web Console

In the Web Console, you can scan for malware using the *Malware Scan* task.

You can run an automatically created group task and also create and run user tasks for scanning. You can configure scan settings by editing the settings of Malware Scan tasks.

Malware Scan task settings

Setting	Description
Scan archives	This check box enables or disables scan of archives. If the check box is selected, the application scans the archives. To scan an archive, the application has to unpack it first, which may slow down scanning. You can reduce the duration of archive scans by configuring the **Skip file that is scanned for longer than (sec)** and **Skip file larger than (MB)** settings in the **General scan settings** section. If the check box is cleared, the application does not scan the archives. This check box is selected by default.
Scan SFX archives	This check box enables or disables *self-extracting archive* scans. Self-extracting archives are the archives that contain an executable extraction module. If the check box is selected, the application scans self-extracting archives. If the check box is cleared, the application does not scan self-extracting archives. This check box is available if the **Scan archives** check box is unchecked. This check box is selected by default.
Scan mail databases	This check box enables or disables scans of mail databases of Microsoft Outlook, Outlook Express, The Bat!, and other mail applications. If the check box is selected, the application scans mail database files. If the check box is cleared, the application does not scan mail database files. This check box is cleared by default.
Scan mail format files	This check box enables or disables scan of files of plain-text email messages. If this check box is selected, the application scans plain-text messages. If this check box is cleared, the application does not scan plain-text messages. This check box is cleared by default.
Skip file that is scanned for longer than (sec)	In this field, you can specify the maximum time to scan a file, in seconds. After the specified time, the application stops scanning the file. Possible values: 0–9999. If the value is set to 0, the scan time is unlimited. Default value: 0.
Skip file larger than (MB)	In this field, you can specify the maximum size of a file to scan, in megabytes. Possible values: 0–999999. If the value is set to 0, the application scans files of any size. Default value: 0.
Log clean objects	This check box enables or disables the logging of *ObjectProcessed* type events. If this check box is selected, the application logs events of the *ObjectProcessed* type for all scanned objects. If this check box is cleared, the application does not log events of the *ObjectProcessed* type for any scanned object. This check box is cleared by default.

Setting	Description
Log unprocessed objects	This check box enables or disables the logging *ObjectNotProcessed* type events if a file cannot be processed during a scan. If this check box is selected, the application logs the events of the *ObjectNotProcessed* type. If this check box is cleared, the application does not log the events of the *ObjectNotProcessed* type. This check box is cleared by default.
Log packed objects	This check box enables or disables the logging of *PackedObjectDetected* type events for all packed objects that are detected. If this check box is selected, the application logs the events of the *PackedObjectDetected* type. If this check box is cleared, the application does not log the events of the *PackedObjectDetected* type. This check box is cleared by default.
Use iChecker technology	This check box enables or disables scan of only new and modified since the last scan files. If the check box is selected, the application scans only new files or the files modified since the last scan. If the check box is cleared, the application scans the files regardless of the creation or modification date. This check box is selected by default.
Use heuristic analysis	This check box enables or disables heuristic analysis during file scans. This check box is selected by default.
Heuristic analysis level	If the **Use heuristic analysis** check box is selected, you can select the heuristic analysis level in the drop-down list: • **Light** is the least detailed scan with minimal system load. • **Medium** is a medium scan with balanced system load. • **Deep** is the most detailed scan with maximum system load. • **Recommended** (default value) is the optimal level recommended by Kaspersky experts. It ensures an optimal combination of protection quality and impact on the performance of the protected devices.
Actions on threat detection	You can select the action that the application performs on a detected infected object: • **Disinfect; delete if disinfection is not possible** (default). If you select this action, the application attempts to disinfect the infected object by saving a copy of the object in Backup. If disinfection is not possible (for example, if the type of object or the type of threat in the object cannot be disinfected), then the application deletes the infected object. • **Disinfect; inform if disinfection fails**. If you select this action, the application attempts to disinfect the infected object by saving a copy of the object in Backup. If disinfection is not possible (for example, if the type of object or the type of threat in the object cannot be disinfected), the application creates a record in the log. • **Inform**. If you select this action, the application creates a record about the infected object in the log.
Scan scopes	The table that contains the scopes scanned by the task. By default, the table contains one scan scope that includes all directories of the local file system. You can add, modify, delete, move up, or move down scan scopes in the table. You can also import the list of scan scopes from a file by clicking **Import** or export the list of scan scopes to a file in JSON format by clicking **Export**. When importing, you are prompted to replace the list of scan scopes or add scan scopes to the existing list.

Add scan scope window

In this window, you can add and configure scan scopes.

Scan scope settings

Setting	Description
Scope name	Field for entering the scan scope name. This name is displayed in the **Scan scopes** table in the **Scan settings** section. The entry field must not be blank.
Use this scope	This check box enables or disables scans of this scope by the application. If this check box is selected, the application processes this scan scope. If this check box is cleared, the application does not process this scan scope. You can later include this scope in the component settings by selecting the check box. This check box is selected by default.

Setting	Description
File system, access protocol, and path	You can select the type of file system in the drop-down list: • **Local** (default value) – local directories. If this item is selected, you need to indicate the path to the local directory. • **Mounted** – Mounted remote or local directories. If this item is selected, you need to indicate the protocol or name of the file system. • **Shared** — The protected server's file system resources accessible via the Samba or NFS protocol. • **All remote mounted** – all remote directories mounted on the device using the Samba and NFS protocols. • **All shared** — All of the protected server's file system resources accessible via the Samba and NFS protocols.
Access protocol	You can select the remote access protocol in the drop-down list: • **NFS**: remote directories mounted on a device using the NFS protocol. • **Samba**: remote directories mounted on a device using the Samba protocol. • **Custom** – resources of the device's file system specified in the field below. This drop-down list is available if the **Shared** or **Mounted** type is selected in the drop-down list of file systems.
Path	This is the entry field for specifying the path to the directory that you want to include in the scan scope. You can use **masks** and **tags** to specify the path. You can use special tags to specify a container or image: • `[container-id:<id>]/<path to local directory>` • `[container-name:<name>]/<path to local directory>` • `[image-id:<id>]/<path to local directory>` • `[image-name:<name>]/<path to local directory>` Where: `<id>` is the container ID. `<name>` is a container name `<path to local directory>` is the path to the local directory. You can also use unique combinations of tags: `[container-id:<id>]`, `[container-name:<name>]`, `[image-id:<id>]`, and `[image-name:<name>]/path to local directory>`. Any combination of 1 to 4 unique tags within one area is allowed. The order they are listed in is not important. For example: • `[container-name:<name>][image-name:<name>]/path to local directory>` • `[container-id:<id>][image-name:<name>]/<path to local directory>` • `[image-name:<name>][image-id:<id>]/<path to local directory>` • `[container-name:<name>][container-id:<id>][image-name:<name>]/<path to local directory>` • `[container-name:<name>][image-id:<id>][container-id:<id>][image-name:<name>]/path to local directory>` You can use masks (`?` and `*` characters) in names and identifiers. You can use the `*` (asterisk) character to create a file or directory name mask. You can indicate a single `*` character to represent any set of characters (including an empty set) preceding the `/` character in the file or directory name. For example, `/dir/*/file` or `/dir/*/*/file`. You can indicate two consecutive `*` characters to represent any set of characters (including an empty set and the `/` character) in the file or directory name. For example, `/dir/**/file*/` or `/dir/file**/`. The `**` mask can be used only once in a directory name. For example, `/dir/**/**/file` is an incorrect mask. You can use a single `?` character to represent any one character in the file or directory name. The **/** path is specified by default – the application scans all directories of the local file system. This field is available if the **Local** type is selected in the drop-down list of file systems. If the **Local** type is selected in the drop-down list of file systems, and the path is not specified, the application scans all directories of the local file system.

Setting	Description
Name of shared resource	The field for entering the name of the file system shared resource, where the directories that you want to add to the scan scope are located. The field is available if the **Mounted** type is selected in the File system drop-down list and the **Custom** item is selected in the **Access protocol** drop-down list.
Masks	The list contains name masks for the objects that the application scans. By default the list contains the * mask (all objects). You can add, edit, or delete masks.

Scan scopes section

You can configure scan scope settings for the Malware Scan task. The application allows you to scan files, boot sectors, client device memory, and startup objects.

Malware Scan scope task settings

Setting	Description
Scan files	This check box enables or disables file scans. If the check box is selected, the application scans the files. If the check box is cleared, the application does not scan the files. This check box is selected by default.
Scan boot sectors	This check box enables or disables boot sector scans. If the check box is selected, the application scans the boot sectors. If the check box is cleared, the application does not scan the boot sectors. This check box is cleared by default.
Scan kernel memory and running processes	This check box enables or disables client device memory scan. If the check box is selected, the application scans kernel memory and running processes. If the check box is cleared, the application does not scan kernel memory and running processes. This check box is cleared by default.
Scan startup objects	This check box enables or disables startup object scans. If the check box is selected, the application scans startup objects. If the check box is cleared, the application does not scan startup objects. This check box is cleared by default.
Devices to scan	Clicking the **Configure device masks** link opens the **Scan scopes** window, where you can specify the devices whose boot sectors will be scanned.

Scan scopes window

The table contains name masks of the devices, whose boot sectors the application must scan. By default, the table contains the **/**** device name mask (all devices).

You can add, edit, and delete items in the table.

Exclusion scopes section

In the **Exclusion scopes** section for the Malware Scan task, you can configure exclusion scopes, exclusions by mask and threat name, as well as the use of global exclusions and File Threat Protection exclusions when the task is running.

Settings of scan exclusions

Setting	Description
Configure exclusion scopes	Clicking the **Configure exclusion scopes** link opens the **Exclusion scopes** window. In this window, you can define the list of scan exclusions.
Configure exclusions by mask	Clicking the **Configure exclusions by mask** link opens the **Exclusions by mask** window. In this window, you can configure the exclusion of objects from scans by name mask.
Configure exclusions by threat name	Clicking the **Configure exclusions by threat name** link opens the **Exclusions by threat name** window. In this window, you can configure the exclusion of objects from scans based on threat name.
Use global exclusions	The check box enables or disables the exclusion of the mount points specified in global exceptions while the application is running. If this check box is selected, the application excludes configured mount points from scans. This check box is selected by default.
Use File Threat Protection exclusions	This check box enables or disables the use of configured File Threat Protection exclusions when the application is running. If the check box is selected, the application does not scan the objects specified in the exclusions for the File Threat Protection component. This check box is selected by default.

Exclusion scopes window

This window contains scan exclusion scopes. The application does not scan files and directories located at the paths specified in the table.

Exclusion scope settings

Setting	Description
Merge inherited values	This check box enables or disables the merging of the list when inherited in child policies. If the check box is selected, items in the list of the parent policy are displayed in child policies, and items can be added to the list of the child policy. If the check box is cleared, the list items are not merged when inheriting policy settings. This check box is cleared by default.
Exclusion scope name	Exclusion scope name.
Path	Path to the directory excluded from scan.
Status	The status indicates whether the application uses this exclusion.

By default, the table of exclusion scopes is empty. You can add, edit, and delete items in the table.

You can also import the exclusion list from a file using the **Import** button and export the exclusion list to a JSON file using the **Export** button. When importing, you will be prompted to replace the list of exclusions or add the exclusions to the existing list.

Add exclusion scope window

In this window, you can add and configure exclusion scopes.

Exclusion scope settings

Setting	Description
Exclusion scope name	Field for entering the exclusion scope name. This name will be displayed in the table in the **Exclusion scopes** window. The entry field must not be blank.
Use this scope	This check box enables or disables the exclusion of the scope when the application is running. If the check box is selected, the application excludes this scope from scan or protection during its operation. If the check box is cleared, the application includes this scope in scan or protection during its operation. You can later exclude this scope from scan or protection by selecting the check box. This check box is selected by default.
File system, access protocol, and path	In this drop-down list, you can select the type of file system where the directories that you want to add to scan exclusions are located: • **Local**, for local directories. • **Mounted**, for remote directories mounted on the device. • **All remote mounted** – all remote directories mounted on the device using the Samba and NFS protocols.
Access protocol	You can select the remote access protocol in the drop-down list: • **NFS**: remote directories mounted on a device using the NFS protocol. • **Samba**: remote directories mounted on a device using the Samba protocol. • **Custom** – resources of the device's file system specified in the field below. This drop-down list is available if the **Mounted** type is selected in the drop-down list of file systems.

Setting	Description
Path	Entry field for the path to the directory that you want to add to the exclusion scope. You can use **masks** and **tags** to specify the path. You can use special tags to specify a container or image: • `[container-id:<id>]/<path to local directory>` • `[container-name:<name>]/<path to local directory>` • `[image-id:<id>]/<path to local directory>` • `[image-name:<name>]/<path to local directory>` Where: `<id>` is the container ID. `<name>` is a container name `<path to local directory>` is the path to the local directory. You can also use unique combinations of tags: `[container-id:<id>]`, `[container-name:<name>]`, `[image-id:<id>]`, and `[image-name:<name>]/path to local directory>`. Any combination of 1 to 4 unique tags within one area is allowed. The order they are listed in is not important. For example: • `[container-name:<name>][image-name:<name>]/path to local directory>` • `[container-id:<id>][image-name:<name>]/<path to local directory>` • `[image-name:<name>][image-id:<id>]/<path to local directory>` • `[container-name:<name>][container-id:<id>][image-name:<name>]/<path to local directory>` • `[container-name:<name>][image-id:<id>][container-id:<id>][image-name:<name>]/path to local directory>` You can use masks (`?` and `*` characters) in names and identifiers. You can use the `*` (asterisk) character to create a file or directory name mask. You can indicate a single `*` character to represent any set of characters (including an empty set) preceding the `/` character in the file or directory name. For example, `/dir/*/file` or `/dir/*/*/file`. You can indicate two consecutive `*` characters to represent any set of characters (including an empty set and the `/` character) in the file or directory name. For example, `/dir/**/file*/` or `/dir/file**/`. The `**` mask can be used only once in a directory name. For example, `/dir/**/**/file` is an incorrect mask. To exclude the mount point `/dir`, you need to specifically indicate `/dir` (no asterisk). The mask `/dir/*` excludes all mount points at the level below `/dir` but not `/dir` itself. The `/dir/**` mask excludes all mount points below the level of `/dir` but not `/dir` itself. You can use a single `?` character to represent any one character in the file or directory name. The **/** path is specified by default. The application excludes all directories of the local file system from scan. This field is available if the **Local** type is selected in the drop-down list of file systems.
Name of shared resource	The field for entering the name of the file system shared resource, where the directories that you want to add to the exclusion scope are located. The field is available if the **Mounted** type is selected in the File system drop-down list and the **Custom** item is selected in the **Access protocol** drop-down list.
Masks	The list contains name masks of the objects that the application excludes from scan. Masks are only applied to objects in the directory specified in the **Path** field. By default the list contains the ***** mask (all objects). You can add, edit, or delete masks.

Exclusions by mask window

You can configure scan exclusions for objects by name mask. The application will not scan files whose names contain the specified mask. By default, the list of masks is empty.

You can add, edit, or delete masks.

Clicking the **Add** or **Edit** button opens the **Object mask** window. In this window, in the **Define object mask** field, you can specify the name template for files that Kaspersky Endpoint Security excludes from scans.

Examples:
The `*.txt` mask refers to all text files.
The `*_my_file_??.html` mask refers to html files starting with any characters, and ending with `_my_file_` followed by any two characters (for example, 2020_my_file_09.html).

You can also import the exclusion list from a file using the **Import** button and export the exclusion list to a JSON file using the **Export** button. When importing, you will be prompted to replace the list of exclusions or add the exclusions to the existing list.

You can enable the merging of the list of exclusions when inherited by child policies. If you want to merge list items, select the **Merge inherited values** check box. If the check box is selected, items in the list of the parent policy are displayed in child policies, and items can be added to the list of the child policy. If the check box is cleared, the list items are not merged when inheriting policy settings. This check box is cleared by default.

Exclusions by threat name window

You can configure the exclusion of objects from scans based on threat name. The application will not block the specified threats. By default, the list of threat names is empty.

You can add, edit, and delete threat names.

Clicking the **Add** or **Edit** button opens the **Threat name** window. In this window, you can define the name of the threat to be excluded from a scan.

You can also import the exclusion list from a file using the **Import** button and export the exclusion list to a JSON file using the **Export** button. When importing, you will be prompted to replace the list of exclusions or add the exclusions to the existing list.

You can enable the merging of the list of exclusions when inherited by child policies. If you want to merge list items, select the **Merge inherited values** check box. If the check box is selected, items in the list of the parent policy are displayed in child policies, and items can be added to the list of the child policy. If the check box is cleared, the list items are not merged when inheriting policy settings. This check box is cleared by default.

Malware Scan in the Administration Console

In the Administration Console, you can scan for malware using the *Malware Scan* task.

You can run an automatically created group task and also create and run user tasks for scanning. You can configure scan settings by editing the settings of Malware Scan tasks.

In the **Settings** section of the properties of the Malware Scan task, you can configure the settings listed in the table below.

Malware Scan task settings

Setting	Description
Scan	This group of settings contains buttons that open windows where you can configure the scan scopes, scan scope settings, and scan settings.
Actions on threat detection	This group of settings contains the **Configure** button. Clicking this button opens the **Actions on threat detection** window, where you can configure the actions that the application performs on detected infected objects.

In the **Exclusions** section, you can configure exclusion scopes as well as exclusions by mask and by threat name in the properties of the Malware Scan task.

Scan scopes window

The table contains the scan scopes. The application will scan files and directories located in the paths specified in the table. By default, the table contains one scan scope that includes all directories of the local file system.

Scan scope settings

Setting	Description
Merge inherited values	This check box enables or disables the merging of the list when inherited in child policies. If the check box is selected, items in the list of the parent policy are displayed in child policies, and items can be added to the list of the child policy. If the check box is cleared, the list items are not merged when inheriting policy settings. This check box is cleared by default.
Scope name	Scan scope name.
Path	Path to the directory that the application scans.
Status	The status indicates whether the application scans this scope.

You can add, edit, delete, move up, and move down items in the table.

Kaspersky Endpoint Security scans objects in the specified scopes in the order they appear in the list of scopes. If necessary, place the subdirectory higher in the list than its parent directory, to configure security settings for a subdirectory that are different from the security settings of the parent directory.

<New scan scope> window

In this window, you can add and configure scan scopes.

Scan scope settings

Setting	Description
Scan scope name	Field for entering the scan scope name. This name will be displayed in the table in the **Scan scopes** window. The entry field must not be blank.
Use this scope	This check box enables or disables scans of this scope by the application. If this check box is selected, the application processes this scan scope. If this check box is cleared, the application does not process this scan scope. You can later include this scope in the component settings by selecting the check box. This check box is selected by default.

Setting	Description
File system, access protocol, and path	The settings block lets you set the scan scope. You can select the file system type in the drop-down list of file systems: • **Local** (default value) – local directories. If this item is selected, you need to indicate the path to the local directory. • **Mounted** – Mounted remote or local directories. If this item is selected, you need to indicate the protocol or name of the file system. • **Shared** — The protected server's file system resources accessible via the Samba or NFS protocol. • **All remote mounted** – all remote directories mounted on the device using the Samba and NFS protocols. • **All shared** — All of the protected server's file system resources accessible via the Samba and NFS protocols.
	If **Shared** or **Mounted** is selected in the drop-down list of file systems, you can select the remote access protocol in the drop-down list on the right: • **NFS**: remote directories mounted on a device using the NFS protocol. • **Samba**: remote directories mounted on a device using the Samba protocol. • **Custom** – resources of the device's file system specified in the field below.
	If **Local** is selected in the drop-down list of file systems, then in the input field you can enter a path to a directory that you want to add to the scan scope. You can use **masks** and **tags** to specify the path. You can use special tags to specify a container or image: • `[container-id:<id>]/<path to local directory>` • `[container-name:<name>]/<path to local directory>` • `[image-id:<id>]/<path to local directory>` • `[image-name:<name>]/<path to local directory>` Where: `<id>` is the container ID. `<name>` is a container name `<path to local directory>` is the path to the local directory. You can also use unique combinations of tags: `[container-id:<id>]`, `[container-name:<name>]`, `[image-id:<id>]`, and `[image-name:<name>]/path to local directory>`. Any combination of 1 to 4 unique tags within one area is allowed. The order they are listed in is not important. For example: • `[container-name:<name>][image-name:<name>]/path to local directory>` • `[container-id:<id>][image-name:<name>]/<path to local directory>` • `[image-name:<name>][image-id:<id>]/<path to local directory>` • `[container-name:<name>][container-id:<id>][image-name:<name>]/<path to local directory>` • `[container-name:<name>][image-id:<id>][container-id:<id>][image-name:<name>]/path to local directory>` You can use masks (`?` and `*` characters) in names and identifiers. You can use the `*` (asterisk) character to create a file or directory name mask. You can indicate a single `*` character to represent any set of characters (including an empty set) preceding the `/` character in the file or directory name. For example, `/dir/*/file` or `/dir/*/*/file`. You can indicate two consecutive `*` characters to represent any set of characters (including an empty set and the `/` character) in the file or directory name. For example, `/dir/**/file*/` or `/dir/file**/`. The `**` mask can be used only once in a directory name. For example, `/dir/**/**/file` is an incorrect mask. You can use a single `?` character to represent any one character in the file or directory name. The **/** path is specified by default – the application scans all directories of the local file system. If the **Local** type is selected in the drop-down list of file systems, and the path is not specified, the application scans all directories of the local file system.

Setting	Description
Filesystem name	The field for entering the name of the file system where the directories that you want to add to the scan scope are located. The field is available if the **Mounted** type is selected in the drop-down list of file systems and the **Custom** item is selected in the drop-down list on the right.
Masks	The list contains name masks for the objects that the application scans. By default the list contains the * mask (all objects). You can add, edit, or delete masks.

Scan scope settings window

In this window, you can configure the scan settings for the Malware Scan task. The application allows you to scan files, boot sectors, device memory, and startup objects.

Scan scope settings

Setting	Description
Scan files	This check box enables or disables file scans. If the check box is selected, the application scans the files. If the check box is cleared, the application does not scan the files. This check box is selected by default.
Scan boot sectors	This check box enables or disables boot sector scans. If the check box is selected, the application scans the boot sectors. If the check box is cleared, the application does not scan the boot sectors. This check box is cleared by default.
Scan kernel memory and running processes	This check box enables or disables device memory scan. If the check box is selected, the application scans kernel memory and running processes. If the check box is cleared, the application does not scan kernel memory and running processes. This check box is cleared by default.
Scan startup objects	This check box enables or disables startup object scans. If the check box is selected, the application scans startup objects. If the check box is cleared, the application does not scan startup objects. This check box is cleared by default.
Devices to scan	This group of settings contains the **Configure** button. Clicking this button opens the **Scan scopes** window, where you can specify the devices whose boot sectors must be scanned.
Use global exclusions	The check box enables or disables the exclusion of the mount points specified in global exceptions while the application is running. If this check box is selected, the application excludes configured mount points from scans. This check box is selected by default.
Use File Threat Protection exclusions	This check box enables or disables the use of configured File Threat Protection exclusions when the application is running. If the check box is selected, the application does not scan the objects specified in the exclusions for the File Threat Protection component. This check box is selected by default.

Scan scopes window

The table contains name masks of the devices, whose boot sectors the application must scan. By default, the table contains the **/**** device name mask (all devices).

You can add, edit, and delete items in the table.

Scan settings window

In this window, you can configure the file scan settings for the task.

Scan settings

Setting	Description
Scan archives	This check box enables or disables scan of archives. If the check box is selected, the application scans the archives. To scan an archive, the application has to unpack it first, which may slow down scanning. You can reduce the duration of archive scans by configuring the **Skip file that is scanned for longer than (sec)** and **Skip file larger than (MB)** settings in the **General scan settings** section. If the check box is cleared, the application does not scan the archives. This check box is selected by default.
Scan SFX archives	This check box enables or disables *self-extracting archive* scans. Self-extracting archives are the archives that contain an executable extraction module. If the check box is selected, the application scans self-extracting archives. If the check box is cleared, the application does not scan self-extracting archives. This check box is available if the **Scan archives** check box is unchecked. This check box is selected by default.
Scan mail databases	This check box enables or disables scans of mail databases of Microsoft Outlook, Outlook Express, The Bat!, and other mail applications. If the check box is selected, the application scans mail database files. If the check box is cleared, the application does not scan mail database files. This check box is cleared by default.
Scan mail format files	This check box enables or disables scan of files of plain-text email messages. If this check box is selected, the application scans plain-text messages. If this check box is cleared, the application does not scan plain-text messages. This check box is cleared by default.
Skip file that is scanned for longer than (sec)	In this field, you can specify the maximum time to scan a file, in seconds. After the specified time, the application stops scanning the file. Possible values: 0–9999. If the value is set to 0, the scan time is unlimited. Default value: 0.
Skip file larger than (MB)	In this field, you can specify the maximum size of a file to scan, in megabytes. Possible values: 0–999999. If the value is set to 0, the application scans files of any size. Default value: 0.
Log clean objects	This check box enables or disables the logging of *ObjectProcessed* type events. If this check box is selected, the application logs events of the *ObjectProcessed* type for all scanned objects. If this check box is cleared, the application does not log events of the *ObjectProcessed* type for any scanned object. This check box is cleared by default.
Log unprocessed objects	This check box enables or disables the logging *ObjectNotProcessed* type events if a file cannot be processed during a scan. If this check box is selected, the application logs the events of the *ObjectNotProcessed* type. If this check box is cleared, the application does not log the events of the *ObjectNotProcessed* type. This check box is cleared by default.
Log packed objects	This check box enables or disables the logging of *PackedObjectDetected* type events for all packed objects that are detected. If this check box is selected, the application logs the events of the *PackedObjectDetected* type. If this check box is cleared, the application does not log the events of the *PackedObjectDetected* type. This check box is cleared by default.

Setting	Description
Use iChecker technology	This check box enables or disables scan of only new and modified since the last scan files. If the check box is selected, the application scans only new files or the files modified since the last scan. If the check box is cleared, the application scans the files regardless of the creation or modification date. This check box is selected by default.
Use heuristic analysis	This check box enables or disables heuristic analysis during file scans. This check box is selected by default.
Heuristic analysis level	If the **Use heuristic analysis** check box is selected, you can select the heuristic analysis level in the drop-down list: • **Light** is the least detailed scan with minimal system load. • **Medium** is a medium scan with balanced system load. • **Deep** is the most detailed scan with maximum system load. • **Recommended** (default value) is the optimal level recommended by Kaspersky experts. It ensures an optimal combination of protection quality and impact on the performance of the protected devices.

Actions on threat detection window

In this window, you can configure actions to be performed by Kaspersky Endpoint Security on detected infected objects:

Actions on threat detection

Setting	Description
Actions on threat detection	You can select the action that the application performs on a detected infected object: • **Disinfect; delete if disinfection is not possible** (default). If you select this action, the application attempts to disinfect the infected object by saving a copy of the object in Backup. If disinfection is not possible (for example, if the type of object or the type of threat in the object cannot be disinfected), then the application deletes the infected object. • **Disinfect; inform if disinfection fails**. If you select this action, the application attempts to disinfect the infected object by saving a copy of the object in Backup. If disinfection is not possible (for example, if the type of object or the type of threat in the object cannot be disinfected), the application creates a record in the log. • **Inform**. If you select this action, the application creates a record about the infected object in the log.

Exclusions section

Scan exclusion is a set of conditions. When these conditions are met, Kaspersky Endpoint Security does not scan the objects for viruses and other malware. You can also exclude objects from scans by masks and threat names.

Settings of scan exclusions

Group of settings	Description
Exclusion scopes	This group of settings contains the **Configure** button. Clicking this button opens the **Exclusion scopes** window. In this window, you can define the list of scopes to be excluded from scans.
Exclusions by mask	This group of settings contains the **Configure** button, which opens the **Exclusions by mask** window. In this window, you can configure the exclusion of objects from scans by name mask.
Exclusions by threat name	This group of settings contains the **Configure** button, which opens the **Exclusions by threat name** window. In this window, you can configure the exclusion of objects from scans based on threat name.

Exclusion scopes window

This window contains scan exclusion scopes. The application does not scan files and directories located at the paths specified in the table.

Exclusion scope settings

Setting	Description
Merge inherited values	This check box enables or disables the merging of the list when inherited in child policies. If the check box is selected, items in the list of the parent policy are displayed in child policies, and items can be added to the list of the child policy. If the check box is cleared, the list items are not merged when inheriting policy settings. This check box is cleared by default.
Exclusion scope name	Exclusion scope name.
Path	Path to the directory excluded from scan.
Status	The status indicates whether the application uses this exclusion.

By default, the table of exclusion scopes is empty. You can add, edit, and delete items in the table.

You can also import the list of exclusions from a file by clicking **Advanced** -> **Import** and export the list of added exclusions to a file by clicking **Advanced** -> **Export selected** or **Advanced** -> **Export all**.

New exclusion scope window

In this window, you can add and configure scan exclusion scopes.

Exclusion scope settings

Setting	Description
Exclusion scope name	Field for entering the exclusion scope name. This name will be displayed in the table in the **Exclusion scopes** window. The entry field must not be blank.
Use this scope	The check box enables or disables exclusion of the scope from scan when the application is running. If this check box is selected, the application excludes this area during scans. If this check box is cleared, the application includes this area in the scan scope. You can later exclude this scope by selecting the check box. This check box is selected by default.

Setting	Description
File system, access protocol, and path	The settings block lets you set the exclusion scope. In the drop-down list of file systems, you can select the type of file system of the directories to be excluded from scans: • **Local**, for local directories. • **Mounted** – mounted directories. • **All remote mounted** – all remote directories mounted on the device using the Samba and NFS protocols.
	If **Mounted** is selected in the drop-down list of file systems, you can select the remote access protocol in the drop-down list on the right: • **NFS**: remote directories mounted on a device using the NFS protocol. • **Samba**: remote directories mounted on a device using the Samba protocol. • **Custom** – resources of the device's file system specified in the field below.
	If **Local** is selected in the drop-down list of file systems, then in the input field you can enter a path to a directory that you want add to the exclusion scope. You can use **masks** and **tags** to specify the path. You can use special tags to specify a container or image: • `[container-id:<id>]/<path to local directory>` • `[container-name:<name>]/<path to local directory>` • `[image-id:<id>]/<path to local directory>` • `[image-name:<name>]/<path to local directory>` Where: `<id>` is the container ID. `<name>` is a container name `<path to local directory>` is the path to the local directory. You can also use unique combinations of tags: `[container-id:<id>]`, `[container-name:<name>]`, `[image-id:<id>]`, and `[image-name:<name>]/path to local directory>`. Any combination of 1 to 4 unique tags within one area is allowed. The order they are listed in is not important. For example: • `[container-name:<name>][image-name:<name>]/path to local directory>` • `[container-id:<id>][image-name:<name>]/<path to local directory>` • `[image-name:<name>][image-id:<id>]/<path to local directory>` • `[container-name:<name>][container-id:<id>][image-name:<name>]/<path to local directory>` • `[container-name:<name>][image-id:<id>][container-id:<id>][image-name:<name>]/path to local directory>` You can use masks (`?` and `*` characters) in names and identifiers. You can use the `*` (asterisk) character to create a file or directory name mask. You can indicate a single `*` character to represent any set of characters (including an empty set) preceding the `/` character in the file or directory name. For example, `/dir/*/file` or `/dir/*/*/file`. You can indicate two consecutive `*` characters to represent any set of characters (including an empty set and the `/` character) in the file or directory name. For example, `/dir/**/file*/` or `/dir/file**/`. The `**` mask can be used only once in a directory name. For example, `/dir/**/**/file` is an incorrect mask. To exclude the mount point `/dir`, you need to specifically indicate `/dir` (no asterisk). The mask `/dir/*` excludes all mount points at the level below `/dir` but not `/dir` itself. The `/dir/**` mask excludes all mount points below the level of `/dir` but not `/dir` itself. You can use a single `?` character to represent any one character in the file or directory name. The **/** path is specified by default. The application excludes all directories of the local file system from scan.

Setting	Description
Filesystem name	The field for entering the name of the file system where the directories that you want to add to the exclusion scope are located. The field is available if the **Mounted** type is selected in the drop-down list of file systems and the **Custom** item is selected in the drop-down list on the right.
Masks	The list contains name masks of the objects that the application excludes from scan. Masks are only applied to objects in the directory specified in the path field. By default the list contains the * mask (all objects). You can add, edit, or delete masks.

Exclusions by mask window

You can configure scan exclusions for objects by name mask. The application will not scan files whose names contain the specified mask. By default, the list of masks is empty.

You can add, edit, or delete masks.

Clicking the **Add** button opens the **Object mask** window. In this window, in the **Define object mask** field, you can specify the name template for files that Kaspersky Endpoint Security excludes from scans.

Examples:
The `*.txt` mask refers to all text files.
The `*_my_file_??.html` mask refers to html files starting with any characters, and ending with `_my_file_` followed by any two characters (for example, 2020_my_file_09.html).

You can enable the merging of the list of exclusions when inherited by child policies. If you want to merge list items, select the **Merge inherited values** check box. If the check box is selected, items in the list of the parent policy are displayed in child policies, and items can be added to the list of the child policy. If the check box is cleared, the list items are not merged when inheriting policy settings. This check box is cleared by default.

Exclusions by threat name window

You can configure the exclusion of objects from scans based on threat name. The application will not block the specified threats. By default, the list of threat names is empty.

You can add, edit, and delete threat names.

You can enable the merging of the list of exclusions when inherited by child policies. If you want to merge list items, select the **Merge inherited values** check box. If the check box is selected, items in the list of the parent policy are displayed in child policies, and items can be added to the list of the child policy. If the check box is cleared, the list items are not merged when inheriting policy settings. This check box is cleared by default.

Malware Scan in the command line

On the command line, you can scan for malware in the following ways:

- Using the Malware Scan predefined task (*Scan_My_Computer*). You can manually start, stop, pause, or resume this task and configure the task run schedule. You can configure scan settings by editing the settings of this task.

- Using Malware Scan user tasks (tasks of the *ODS* type). You can manually start, stop, pause, or resume user tasks and configure the task schedule.

Using the `kesl-control --scan-file` command, you can perform a *custom scan* of the specified files and directories.

Settings of the Malware Scan predefined task

The table describes all possible values and the default values of all the settings that you can specify for the Malware Scan task.

Malware Scan task settings

Setting	Description	Values
`ScanFiles`	Enables file scan.	`Yes` (default value) — Scan files. `No` — Do not scan files.
`ScanBootSectors`	Enables boot sector scans.	`Yes` (default value) — Scan boot sectors. `No` — Do not scan boot sectors.
`ScanComputerMemory`	Enables process memory and kernel memory scans.	`Yes` (default value) — Scan process memory and kernel memory. `No` — Do not scan process memory and kernel memory.
`ScanStartupObjects`	Enables startup object scans.	`Yes` (default value) — Scan startup objects. `No` — Do not scan startup objects.
`ScanArchived`	Enables scanning of archives (including SFX self-extracting archives). The application scans the following archives: .zip; .7z*; .7-z; .rar; .iso; .cab; .jar; .bz; .bz2; .tbz; .tbz2; .gz; .tgz; .arj. The list of supported archive formats depends on the application databases being used.	`Yes` (default value) — Scan archives. If `ActionOnThreat` is set to `DisinfectDeleteIfNotPossible`, and disinfection is impossible, then, depending on the archive type, the application deletes either the infected object or the entire archive that contains the threat. `No` — Do not scan archives.
`ScanSfxArchived`	Enables scanning of self-extracting archives only (archives that contain an executable extraction module).	`Yes` (default value) — Scan self-extracting archives. `No` — Do not scan self-extracting archives.
`ScanMailBases`	Enables scanning email databases of Microsoft Outlook, Outlook Express, The Bat, and other mail clients.	`Yes` — Scan files of email databases. `No` (default value) — Do not scan files of email databases.
`ScanPlainMail`	Enables scanning of plain text email messages.	`Yes` — Scan plain text email messages. `No` (default value) — Do not scan plain text email messages.
`SizeLimit`	Maximum size of an object to be scanned (in megabytes). If the object to be scanned is larger than the specified value, the application skips this object.	0 to 999999 0 — The application scans objects of any size. Default value: 0.

Setting	Description	Values
`TimeLimit`	Maximum object scan duration (in seconds). The application stops scanning the object if it takes longer than the time specified by this setting.	0 to 9999 0 — The object scan time is unlimited. Default value: 0.
`ActionOnThreat`	Selection of the action to be performed by the application on the infected objects.	`DisinfectDeleteIfNotPossible` (disinfect; delete if not possible) means the application tries to disinfect the infected object after saving a copy of the object in Backup. If disinfection is not possible (for example, if the type of object or the type of threat in the object cannot be disinfected), then the application deletes the infected object. `DisinfectInformIfNotPossible` (disinfect; inform if not possible) means the application tries to disinfect the infected object after saving a copy of the object in Backup. If disinfection is not possible (for example, if the type of object or the type of threat in the object cannot be disinfected), the application creates a record in the log. `Inform` means the application does not try to disinfect or delete the infected object. Information about the infected object is logged. Default value: `DisinfectDeleteIfNotPossible`.
`UseExcludeMasks`	Enables exclusion of the objects specified by the `ExcludeMasks.item_#` setting from the scan.	`Yes` — Exclude objects specified by the `ExcludeMasks.item_#` setting from scans. `No` (default value) — Do not exclude objects specified by the `ExcludeMasks.item_#` setting from the scan.

`ExcludeMasks.item_#`	Excludes objects from being scanned by name or mask. You can use this setting to exclude an individual file from the specified scan scope by name or exclude several files at once using masks in the shell format.
	Before specifying a value for this setting, make sure that the `UseExcludeMasks` setting is enabled.
		The default value is not defined.
		Example:
		`UseExcludeMasks=Yes`
		`ExcludeMasks.item_0000=eicar1.*`
		`ExcludeMasks.item_0001=eicar2.*`

`UseExcludeThreats`	Enables exclusion of objects containing the threats specified by the `ExcludeThreats.item_#` setting from scans.	`Yes` — Exclude objects containing the threats specified by the `ExcludeThreats.item_#` setting from the scan. `No` (default value): do not exclude objects containing the threats specified by the `ExcludeThreats.item_#` setting from the scan.

`ExcludeThreats.item_#`	Excludes objects from scans by the name of the threats detected in them. Before specifying a value for this setting, make sure that the `UseExcludeThreats` setting is enabled.
	In order to exclude an object from scans, specify the full name of the threat detected in this object – the string containing the application's decision that the object is infected.
	For example, you may be using a utility to obtain information about your network. To keep the application from blocking it, add the full name of the threat contained in it to the list of threats excluded from scans.
	You can find the full name of the threat detected in an object in the application log or on the website https://threats.kaspersky.com.
		The setting value is case-sensitive.
		The default value is not defined.
		Example:
		`UseExcludeThreats=Yes`
		`ExcludeThreats.item_0000=EICAR-Test-*`
		`ExcludeThreats.item_0001=?rojan.Linux`

`UseGlobalExclusions`	Enables global exclusions for scanning.	`Yes` (default value) — Use the global exclusions. `No` — Do not use global exclusions.
`UseOASExclusions`	Enables File Threat Protection exclusions for scanning.	`Yes` (default value) — Use File Threat Protection exclusions. `No` — do not use File Threat Protection exclusions.

Setting	Description	Values
`ReportCleanObjects`	Enables logging of information about scanned objects that the application reports as not being infected. You can enable this setting, for example, to make sure that a particular object was scanned by the application.	`Yes` — Log information about non-infected objects. `No` (default value) — Do not log information about non-infected objects.
`ReportPackedObjects`	Enables logging of information about scanned objects that are part of compound objects. You can enable this setting, for example, to make sure that an object within an archive has been scanned by the application.	`Yes` — Log information about scanned objects within archives. `No` (default value) — Do not log information about scanned objects within archives.
`ReportUnprocessedObjects`	Enables logging of information about objects that have not been processed for some reason.	`Yes` — Log information about unprocessed objects. `No` (default value) — Do not log information about unprocessed objects.
`UseAnalyzer`	Enables heuristic analysis. Heuristic analysis helps the application to detect threats even before they become known to virus analysts.	`Yes` (default value) — Enable Heuristic Analyzer. `No` — Disable Heuristic Analyzer.
`HeuristicLevel`	Specifies the heuristic analysis level. You can specify the heuristic analysis level. The heuristic analysis level sets the balance between the thoroughness of searches for threats, the load on the operating system's resources, and the scan duration. The higher the heuristic analysis level, the more resources and time are required for scanning.	`Light` — The least thorough scan with minimum load on the system. `Medium` — A medium heuristic analysis level with a balanced load on the system. `Deep` — The most thorough scan with maximum load on the system. `Recommended` (default value) — The recommended value.
`UseIChecker`	Enables usage of the iChecker technology.	`Yes` (default value) — Enable use of the iChecker technology. `No` — Disable use of the iChecker technology.
`DeviceNameMasks.item_#`	List of device names. The application will scan boot sectors of these devices. The setting value cannot be empty. At least one device name mask must be specified to run this task.	`AllObjects` – scan boot sectors of all devices. `< device name mask >` – scan boot sectors of the devices whose names match the specified mask. Default value: `/**` – any set of characters in the device name, including the `/` character.
The **[ScanScope.item_#]** section contains the following settings:		
`AreaDesc`	Description of the scan scope, which contains additional information about the scan scope. The maximum length of the string specified using this setting is 4096 characters.	Default value: `All objects`. Example: `AreaDesc=" Mail bases scan "`
`UseScanArea`	Enables scans of the specified scope. To run the task, enable scans of at least one scope.	`Yes` (default value) — Scan the specified scope. `No` — Do not scan the specified scope.
`AreaMask.item_#`	Scan scope limitation. Within the scan scope, the application scans only the files that are specified using the masks in the shell format. If this setting is not specified, the application scans all the objects in the scan scope. You can specify several values for this setting.	The default value is `*` (scan all objects). Example: `AreaMask.item_< item number >=*doc`

Setting	Description	Values
`Path`	Path to the directory with objects to be scanned.	`< path to local directory >` — scan objects in the specified directory. `Shared:NFS` — Scan the device file system resources that are accessible via the NFS protocol. `Shared:SMB` – Scan the device file system resources that are accessible via the Samba protocol. `Mounted:NFS` – Scan the remote directories mounted on a device using the NFS protocol. `Mounted:SMB` – Scan the remote directories mounted on a device using the Samba protocol. `AllRemoteMounted` – Scan all remote directories mounted on the device using the Samba and NFS protocols. `AllShared` – Scan all the device file system resources that are accessible via the Samba and NFS protocols. `<file system type>` – Scan all resources of the specified file system device.
The **[ExcludedFromScanScope.item_#]** section contains the following settings:		
`AreaDesc`	Description of the scan exclusion scope, which contains additional information about the exclusion scope.	The default value is not defined.
`UseScanArea`	Excludes the specified scope from scans.	`Yes` (default value) — Exclude the specified scope. `No` — Do not exclude the specified scope.
`AreaMask.item_#`	Limitation of scan exclusion scope. In the exclusion scope, the application excludes only the files that are specified using masks in the shell format. If this setting is not specified, the application excludes all the objects in the exclusion scope. You can specify several values for this setting.	Default value: `*` (exclude all objects)

Setting	Description	Values
`Path`	Path to the directory with objects to be excluded.	`<path to local directory>` – Exclude objects in the specified directory (including subdirectories) from scans. You can use **masks** to specify the path. You can use the `*` (asterisk) character to create a file or directory name mask. You can indicate a single `*` character to represent any set of characters (including an empty set) preceding the `/` character in the file or directory name. For example, `/dir/*/file` or `/dir/*/*/file`. You can indicate two consecutive `*` characters to represent any set of characters (including an empty set and the `/` character) in the file or directory name. For example, `/dir/**/file*/` or `/dir/file**/`. The `**` mask can be used only once in a directory name. For example, `/dir/**/**/file` is an incorrect mask. You can use a single `?` character to represent any one character in the file or directory name. In order to optimize the operation of scan tasks, it is recommended to add the path with snapshots mounted by the system in the read-only mode to the exclusions for the systems with the btrfs file system and enabled active snapshots. For example, for the systems based on SUSE/OpenSUSE, you can add the following exclusion `/.snapshots/*/snapshot/`. The `/` path is specified by default. The application excludes all directories of the local file system from scan. `Mounted:NFS` – Exclude the remote directories mounted on a device using the NFS protocol from scan. `Mounted:SMB` – Exclude the remote directories mounted on a device using the Samba protocol from scan. `AllRemoteMounted` – Exclude all remote directories mounted on the device using the Samba and NFS protocols from scan. `<file system type>` – Exclude from scanning all resources of the specified file system device. Remote directories are excluded from scanning by the application only if they were mounted before the task was started. Remote directories mounted after the task is started are not excluded from scanning.

Custom Scan of files and directories on the command line

You can perform a custom scan of the specified files and directories using the following command: `kesl-control --scan-file`.

A custom scan is performed with the settings stored in the *Scan_File* predefined task (ID:3). You can configure settings for a custom scan of files by editing the settings of this task (see the table below).

To start a custom scan of the specified files and directories, execute the following command:

```
kesl-control --scan-file <path> [--action <action>]
```

where:

- < path > is the path to the file or directory that you want to scan. You can specify multiple paths by separating them with a space.

- --action < action > is the action to be performed by the application on the infected objects. Possible values: DisinfectDeleteIfNotPossible, DisinfectInformIfNotPossible, Inform. If you do not specify the --action option, the application performs the DisinfectDeleteIfNotPossible action.

As a result of executing the command, a temporary file scan task is created, which is automatically deleted after completion. In this case, the scan results are output to the console.

The table describes all possible values and the default values of all the settings that you can specify for the *Scan_File* task.

The [ScanScope.item_#] and [ExcludedFromScanScope.item_#] sections defined in the *Scan_File* task are not taken into account when performing the custom scan.

Scan_File task settings

Setting	Description	Values
ScanFiles	Enables file scan.	Yes (default value) — Scan files. No — Do not scan files.
ScanBootSectors	Enables boot sector scans.	Yes — Scan boot sectors. No (default value) — Do not scan boot sectors.
ScanComputerMemory	Enables process memory and kernel memory scans.	Yes — Scan process memory and kernel memory. No (default value) — Do not scan process memory and kernel memory.
ScanStartupObjects	Enables startup object scans.	Yes — Scan startup objects. No (default value) — Do not scan startup objects.
ScanArchived	Enables scanning of archives (including SFX self-extracting archives). The application scans the following archives: .zip; .7z*; .7-z; .rar; .iso; .cab; .jar; .bz; .bz2; .tbz; .tbz2; .gz; .tgz; .arj. The list of supported archive formats depends on the application databases being used.	Yes (default value) — Scan archives. If ActionOnThreat is set to DisinfectDeleteIfNotPossible, and disinfection is impossible, then, depending on the archive type, the application deletes either the infected object or the entire archive that contains the threat. No — Do not scan archives.
ScanSfxArchived	Enables scanning of self-extracting archives only (archives that contain an executable extraction module).	Yes (default value) — Scan self-extracting archives. No — Do not scan self-extracting archives.
ScanMailBases	Enables scanning email databases of Microsoft Outlook, Outlook Express, The Bat!, and other mail clients.	Yes — Scan files of email databases. No (default value) — Do not scan files of email databases.
ScanPlainMail	Enables scanning of plain text email messages.	Yes — Scan plain text email messages. No (default value) — Do not scan plain text email messages.
SizeLimit	Maximum size of an object to be scanned (in megabytes). If the object to be scanned is larger than the specified value, the application skips this object.	0 to 999999 0 — The application scans objects of any size. Default value: 0.
TimeLimit	Maximum object scan duration (in seconds). The application stops scanning the object if it takes longer than the time specified by this setting.	0 to 9999 0 — The object scan time is unlimited. Default value: 0.

Setting	Description	Values
`ActionOnThreat`	Selection of the action to be performed by the application on the infected objects.	`DisinfectDeleteIfNotPossible` (disinfect; delete if not possible) means the application tries to disinfect the infected object after saving a copy of the object in Backup. If disinfection is not possible (for example, if the type of object or the type of threat in the object cannot be disinfected), then the application deletes the infected object. `DisinfectInformIfNotPossible` (disinfect; inform if not possible) means the application tries to disinfect the infected object after saving a copy of the object in Backup. If disinfection is not possible (for example, if the type of object or the type of threat in the object cannot be disinfected), the application creates a record in the log. `Inform` means the application does not try to disinfect or delete the infected object. Information about the infected object is logged. Default value: `DisinfectDeleteIfNotPossible`.
`UseExcludeMasks`	Enables exclusion of the objects specified by the `ExcludeMasks.item_#` setting from the scan.	`Yes` — Exclude objects specified by the `ExcludeMasks.item_#` setting from scans. `No` (default value) — Do not exclude objects specified by the `ExcludeMasks.item_#` setting from the scan.

`ExcludeMasks.item_#`	Excludes objects from being scanned by name or mask. You can use this setting to exclude an individual file from the specified scan scope by name or exclude several files at once using masks in the shell format.	The default value is not defined.
		Example:
		`UseExcludeMasks=Yes`
		`ExcludeMasks.item_0000=eicar1.*`
		`ExcludeMasks.item_0001=eicar2.*`

`UseExcludeThreats`	Enables exclusion of objects containing the threats specified by the `ExcludeThreats.item_#` setting from scans.	`Yes` — Exclude objects containing the threats specified by the `ExcludeThreats.item_#` setting from the scan. `No` (default value): do not exclude objects containing the threats specified by the `ExcludeThreats.item_#` setting from the scan.

`ExcludeThreats.item_#`	Excludes objects from scans by the name of the threats detected in them. Before specifying a value for this setting, make sure that the `UseExcludeThreats` setting is enabled.
	In order to exclude an object from scans, specify the full name of the threat detected in this object – the string containing the application's decision that the object is infected.
	For example, you may be using a utility to obtain information about your network. To keep the application from blocking it, add the full name of the threat contained in it to the list of threats excluded from scans.
	You can find the full name of the threat detected in an object in the application log or on the website https://threats.kaspersky.com.
		The setting value is case-sensitive.
		The default value is not defined.
		Example:
		`UseExcludeThreats=Yes`
		`ExcludeThreats.item_0000=EICAR-Test-*`
		`ExcludeThreats.item_0001=?rojan.Linux`

`UseGlobalExclusions`	Enables global exclusions for scanning.	`Yes` (default value) — Use the global exclusions. `No` — Do not use global exclusions.
`UseOASExclusions`	Enables File Threat Protection exclusions for scanning.	`Yes` (default value) — Use File Threat Protection exclusions. `No` — do not use File Threat Protection exclusions.
`ReportCleanObjects`	Enables logging of information about scanned objects that the application reports as not being infected. You can enable this setting, for example, to make sure that a particular object was scanned by the application.	`Yes` — Log information about non-infected objects. `No` (default value) — Do not log information about non-infected objects.

Setting	Description	Values
`ReportPackedObjects`	Enables logging of information about scanned objects that are part of compound objects. You can enable this setting, for example, to make sure that an object within an archive has been scanned by the application.	`Yes` — Log information about scanned objects within archives. `No` (default value) — Do not log information about scanned objects within archives.
`ReportUnprocessedObjects`	Enables logging of information about objects that have not been processed for some reason.	`Yes` — Log information about unprocessed objects. `No` (default value) — Do not log information about unprocessed objects.
`UseAnalyzer`	Enables heuristic analysis. Heuristic analysis helps the application to detect threats even before they become known to virus analysts.	`Yes` (default value) — Enable Heuristic Analyzer. `No` — Disable Heuristic Analyzer.
`HeuristicLevel`	Specifies the heuristic analysis level. You can specify the heuristic analysis level. The heuristic analysis level sets the balance between the thoroughness of searches for threats, the load on the operating system's resources, and the scan duration. The higher the heuristic analysis level, the more resources and time are required for scanning.	`Light` — The least thorough scan with minimum load on the system. `Medium` — A medium heuristic analysis level with a balanced load on the system. `Deep` — The most thorough scan with maximum load on the system. `Recommended` (default value) — The recommended value.
`UseIChecker`	Enables usage of the iChecker technology.	`Yes` (default value) — Enable use of the iChecker technology. `No` — Disable use of the iChecker technology.
`DeviceNameMasks.item_#`	List of device names. The application will scan boot sectors of these devices. The setting value cannot be empty. At least one device name mask must be specified to run this task.	`AllObjects` – scan boot sectors of all devices. `< device name mask >` – scan boot sectors of the devices whose names match the specified mask. Default value: `/**` – any set of characters in the device name, including the `/` character.
The **[ScanScope.item_#]** section contains the following settings:		
`AreaDesc`	Description of the scan scope, which contains additional information about the scan scope. The maximum length of the string specified using this setting is 4096 characters.	Default value: `All objects`. Example: `AreaDesc=" Scanning of email databases "`
`UseScanArea`	Enables scans of the specified scope. To run the task, enable scans of at least one scope.	`Yes` (default value) — Scan the specified scope. `No` — Do not scan the specified scope.
`AreaMask.item_#`	Scan scope limitation. Within the scan scope, the application scans only the files that are specified using the masks in the shell format. If this setting is not specified, the application scans all the objects in the scan scope. You can specify several values for this setting.	The default value is `*` (scan all objects). Example: `AreaMask.item_< item number >=*doc`
`Path`	Path to the directory with objects to be scanned.	`< path to local directory >` — scan objects in the specified directory. `Shared:NFS` — Scan the device file system resources that are accessible via the NFS protocol. `Shared:SMB` – Scan the device file system resources that are accessible via the Samba protocol. `Mounted:NFS` – Scan the remote directories mounted on a device using the NFS protocol. `Mounted:SMB` – Scan the remote directories mounted on a device using the Samba protocol. `AllRemoteMounted` – Scan all remote directories mounted on the device using the Samba and NFS protocols. `AllShared` – Scan all the device file system resources that are accessible via the Samba and NFS protocols. `<file system type>` – Scan all resources of the specified file system device.

Setting	Description	Values
The **[ExcludedFromScanScope.item_#]** section contains the following settings:		
`AreaDesc`	Description of the scan exclusion scope, which contains additional information about the exclusion scope.	The default value is not defined.
`UseScanArea`	Excludes the specified scope from scans.	`Yes` (default value) — Exclude the specified scope. `No` — Do not exclude the specified scope.
`AreaMask.item_#`	Limitation of scan exclusion scope. In the exclusion scope, the application excludes only the files that are specified using masks in the shell format. If this setting is not specified, the application excludes all the objects in the exclusion scope. You can specify several values for this setting.	Default value: `*` (exclude all objects)
`Path`	Path to the directory with objects to be excluded.	`<path to local directory>` – Exclude objects in the specified directory (including subdirectories) from scans. You can use **masks** to specify the path. You can use the `*` (asterisk) character to create a file or directory name mask. You can indicate a single `*` character to represent any set of characters (including an empty set) preceding the `/` character in the file or directory name. For example, `/dir/*/file` or `/dir/*/*/file`. You can indicate two consecutive `*` characters to represent any set of characters (including an empty set and the `/` character) in the file or directory name. For example, `/dir/**/file*/` or `/dir/file**/`. The `**` mask can be used only once in a directory name. For example, `/dir/**/**/file` is an incorrect mask. You can use a single `?` character to represent any one character in the file or directory name. In order to optimize the operation of scan tasks, it is recommended to add the path with snapshots mounted by the system in the read-only mode to the exclusions for the systems with the btrfs file system and enabled active snapshots. For example, for the systems based on SUSE/OpenSUSE, you can add the following exclusion `/.snapshots/*/snapshot/`. The `/` path is specified by default. The application excludes all directories of the local file system from scan. `Mounted:NFS` – Exclude the remote directories mounted on a device using the NFS protocol from scan. `Mounted:SMB` – Exclude the remote directories mounted on a device using the Samba protocol from scan. `AllRemoteMounted` – Exclude all remote directories mounted on the device using the Samba and NFS protocols from scan. `<file system type>` – Exclude from scanning all resources of the specified file system device. Remote directories are excluded from scanning by the application only if they were mounted before the task was started. Remote directories mounted after the task is started are not excluded from scanning.

Critical Areas Scan

When performing a critical areas scan, Kaspersky Endpoint Security can scan boot sectors, startup objects, process memory, and kernel memory.

Upon detecting malware, the application can remove the infected file and terminate the malware process started from this file.

If the root user does not have access to a remote directory mounted on the device over the NFSv4 protocol, the application blocks access to such a file for all users.

You can start a critical areas scan and configure the settings of the scan:

- Select the operating system objects to be scanned. Scanning of boot sectors, process memory and kernel memory, startup objects and archives is enabled by default. By default, files are not scanned during the critical areas scan.
- Limit the size of an object to be scanned and the duration of the object scan.
- Select the actions to be performed by the application on the infected objects.
- Configure exclusions of objects from scans:
  - by name or mask
  - by the name of the threats detected in the objects

  When running on operating systems that use the special-purpose parsecfs file system (Astra Linux Special Edition) we recommend adding mounting paths of this file system to exclusions from scanning.
- Enable or disable global exclusions and File Threat Protection exclusions when scanning.
- Enable the logging of information about scanned non-infected objects, about scanning objects in archives, and about unprocessed objects.
- Configure the use of the heuristic analyzer and iChecker technology during a scan.
- Limit the set of devices whose boot sectors need to be scanned.
- Configure scan scopes and scan exclusion scopes.

Critical Areas Scan in the Web Console

In the Web Console, you can perform a critical areas scan of the operating system of a protected device using the *Critical Areas Scan* task.

You can create and run critical areas scan user tasks. You can configure the scan settings by editing the settings of the tasks.

Setting	Description
Scan archives	This check box enables or disables scan of archives. If the check box is selected, the application scans the archives. To scan an archive, the application has to unpack it first, which may slow down scanning. You can reduce the duration of archive scans by configuring the **Skip file that is scanned for longer than (sec)** and **Skip file larger than (MB)** settings in the **General scan settings** section. If the check box is cleared, the application does not scan the archives. This check box is selected by default.
Scan SFX archives	This check box enables or disables *self-extracting archive* scans. Self-extracting archives are the archives that contain an executable extraction module. If the check box is selected, the application scans self-extracting archives. If the check box is cleared, the application does not scan self-extracting archives. This check box is available if the **Scan archives** check box is unchecked. This check box is selected by default.
Scan mail databases	This check box enables or disables scans of mail databases of Microsoft Outlook, Outlook Express, The Bat!, and other mail applications. If the check box is selected, the application scans mail database files. If the check box is cleared, the application does not scan mail database files. This check box is cleared by default.
Scan mail format files	This check box enables or disables scan of files of plain-text email messages. If this check box is selected, the application scans plain-text messages. If this check box is cleared, the application does not scan plain-text messages. This check box is cleared by default.
Skip file that is scanned for longer than (sec)	In this field, you can specify the maximum time to scan a file, in seconds. After the specified time, the application stops scanning the file. Possible values: 0–9999. If the value is set to 0, the scan time is unlimited. Default value: 0.
Skip file larger than (MB)	In this field, you can specify the maximum size of a file to scan, in megabytes. Possible values: 0–999999. If the value is set to 0, the application scans files of any size. Default value: 0.
Log clean objects	This check box enables or disables the logging of *ObjectProcessed* type events. If this check box is selected, the application logs events of the *ObjectProcessed* type for all scanned objects. If this check box is cleared, the application does not log events of the *ObjectProcessed* type for any scanned object. This check box is cleared by default.
Notify about unprocessed files	This check box enables or disables the logging *ObjectNotProcessed* type events if a file cannot be processed during a scan. If this check box is selected, the application logs the events of the *ObjectNotProcessed* type. If this check box is cleared, the application does not log the events of the *ObjectNotProcessed* type. This check box is cleared by default.
Log packed objects	This check box enables or disables the logging of *PackedObjectDetected* type events for all packed objects that are detected. If this check box is selected, the application logs the events of the *PackedObjectDetected* type. If this check box is cleared, the application does not log the events of the *PackedObjectDetected* type. This check box is cleared by default.
Use iChecker technology	This check box enables or disables scan of only new and modified since the last scan files. If the check box is selected, the application scans only new files or the files modified since the last scan. If the check box is cleared, the application scans the files regardless of the creation or modification date. This check box is selected by default.
Use heuristic analysis	This check box enables or disables heuristic analysis during file scans. This check box is selected by default.

Setting	Description
Heuristic analysis level	If the **Use heuristic analysis** check box is selected, you can select the heuristic analysis level in the drop-down list: • **Light** is the least detailed scan with minimal system load. • **Medium** is a medium scan with balanced system load. • **Deep** is the most detailed scan with maximum system load. • **Recommended** (default value) is the optimal level recommended by Kaspersky experts. It ensures an optimal combination of protection quality and impact on the performance of the protected devices.
Action on threat detection	You can select the action that the application performs on a detected infected object: • **Disinfect; delete if disinfection is not possible** (default). If you select this action, the application attempts to disinfect the infected object by saving a copy of the object in Backup. If disinfection is not possible (for example, if the type of object or the type of threat in the object cannot be disinfected), then the application deletes the infected object. • **Disinfect; inform if disinfection fails**. If you select this action, the application attempts to disinfect the infected object by saving a copy of the object in Backup. If disinfection is not possible (for example, if the type of object or the type of threat in the object cannot be disinfected), the application creates a record in the log. • **Inform**. If you select this action, the application creates a record about the infected object in the log.
Scan scopes	The table that contains the scopes scanned by the task. By default, the table contains one scan scope that includes all directories of the local file system. You can add, modify, delete, move up, or move down scan scopes in the table. You can also import the list of scan scopes from a file by clicking **Import** or export the list of scan scopes to a file in JSON format by clicking **Export**. When importing, you are prompted to replace the list of scan scopes or add scan scopes to the existing list.

Add scan scope window

In this window, you can add and configure scan scopes.

Scan scope settings

Setting	Description
Scope name	Field for entering the scan scope name. This name is displayed in the **Scan scopes** table in the **Scan settings** section. The entry field must not be blank.
Use this scope	This check box enables or disables scans of this scope by the application. If this check box is selected, the application processes this scan scope. If this check box is cleared, the application does not process this scan scope. You can later include this scope in the component settings by selecting the check box. This check box is selected by default.
File system, access protocol, and path	You can select the type of file system in the drop-down list: • **Local** (default value) – local directories. If this item is selected, you need to indicate the path to the local directory. • **Mounted** – Mounted remote or local directories. If this item is selected, you need to indicate the protocol or name of the file system. • **Shared** — The protected server's file system resources accessible via the Samba or NFS protocol. • **All remote mounted** – all remote directories mounted on the device using the Samba and NFS protocols. • **All shared** — All of the protected server's file system resources accessible via the Samba and NFS protocols.
Access protocol	You can select the remote access protocol in the drop-down list: • **NFS**: remote directories mounted on a device using the NFS protocol. • **Samba**: remote directories mounted on a device using the Samba protocol. • **Custom** – resources of the device's file system specified in the field below. This drop-down list is available if the **Shared** or **Mounted** type is selected in the drop-down list of file systems.

Setting	Description
Path	This is the entry field for specifying the path to the directory that you want to include in the scan scope. You can use **masks** and **tags** to specify the path. You can use special tags to specify a container or image: • `[container-id:<id>]/<path to local directory>` • `[container-name:<name>]/<path to local directory>` • `[image-id:<id>]/<path to local directory>` • `[image-name:<name>]/<path to local directory>` Where: `<id>` is the container ID. `<name>` is a container name `<path to local directory>` is the path to the local directory. You can also use unique combinations of tags: `[container-id:<id>]`, `[container-name:<name>]`, `[image-id:<id>]`, and `[image-name:<name>]/path to local directory>`. Any combination of 1 to 4 unique tags within one area is allowed. The order they are listed in is not important. For example: • `[container-name:<name>][image-name:<name>]/path to local directory>` • `[container-id:<id>][image-name:<name>]/<path to local directory>` • `[image-name:<name>][image-id:<id>]/<path to local directory>` • `[container-name:<name>][container-id:<id>][image-name:<name>]/<path to local directory>` • `[container-name:<name>][image-id:<id>][container-id:<id>][image-name:<name>]/path to local directory>` You can use masks (`?` and `*` characters) in names and identifiers. You can use the `*` (asterisk) character to create a file or directory name mask. You can indicate a single `*` character to represent any set of characters (including an empty set) preceding the `/` character in the file or directory name. For example, `/dir/*/file` or `/dir/*/*/file`. You can indicate two consecutive `*` characters to represent any set of characters (including an empty set and the `/` character) in the file or directory name. For example, `/dir/**/file*/` or `/dir/file**/`. The `**` mask can be used only once in a directory name. For example, `/dir/**/**/file` is an incorrect mask. You can use a single `?` character to represent any one character in the file or directory name. The **/** path is specified by default – the application scans all directories of the local file system. This field is available if the **Local** type is selected in the drop-down list of file systems. If the **Local** type is selected in the drop-down list of file systems, and the path is not specified, the application scans all directories of the local file system.
Name of shared resource	The field for entering the name of the file system shared resource, where the directories that you want to add to the scan scope are located. The field is available if the **Mounted** type is selected in the File system drop-down list and the **Custom** item is selected in the **Access protocol** drop-down list.
Masks	The list contains name masks for the objects that the application scans. By default the list contains the * mask (all objects). You can add, edit, or delete masks.

Scan scopes section

Scan scope settings for the Critical area scan task

Setting	Description
Scan files	This check box enables or disables file scans. If the check box is selected, the application scans the files. If the check box is cleared, the application does not scan the files. This check box is cleared by default.
Scan boot sectors	This check box enables or disables boot sector scans. If the check box is selected, the application scans the boot sectors. If the check box is cleared, the application does not scan the boot sectors. This check box is selected by default.
Scan kernel memory and running processes	This check box enables or disables client device memory scan. If the check box is selected, the application scans kernel memory and running processes. If the check box is cleared, the application does not scan kernel memory and running processes. This check box is selected by default.
Scan startup objects	This check box enables or disables startup object scans. If the check box is selected, the application scans startup objects. If the check box is cleared, the application does not scan startup objects. This check box is selected by default.
Devices to scan	Clicking the **Configure device masks** link opens the **Scan scopes** window, where you can specify the devices whose boot sectors will be scanned.

Scan scopes window

The table contains name masks of the devices, whose boot sectors the application must scan. By default, the table contains the **/**** device name mask (all devices).

You can add, edit, and delete items in the table.

Exclusion scopes section

In the **Exclusion scopes** section for the Critical Areas Scan task, you can configure exclusion scopes, exclusions by mask and by threat name, as well as the use of global exclusions and File Threat Protection exclusions when the task is running.

Settings of scan exclusions

Setting	Description
Configure exclusion scopes	Clicking the **Configure exclusion scopes** link opens the **Exclusion scopes** window. In this window, you can define the list of scan exclusions.
Configure exclusions by mask	Clicking the **Configure exclusions by mask** link opens the **Exclusions by mask** window. In this window, you can configure the exclusion of objects from scans by name mask.
Configure exclusions by threat name	Clicking the **Configure exclusions by threat name** link opens the **Exclusions by threat name** window. In this window, you can configure the exclusion of objects from scans based on threat name.

Setting	Description
Use global exclusions	The check box enables or disables the exclusion of the mount points specified in global exceptions while the application is running. If this check box is selected, the application excludes configured mount points from scans. This check box is selected by default.
Use File Threat Protection exclusions	This check box enables or disables the use of configured File Threat Protection exclusions when the application is running. If the check box is selected, the application does not scan the objects specified in the exclusions for the File Threat Protection component. This check box is selected by default.

Exclusion scopes window

This window contains scan exclusion scopes. The application does not scan files and directories located at the paths specified in the table.

Exclusion scope settings

Setting	Description
Merge inherited values	This check box enables or disables the merging of the list when inherited in child policies. If the check box is selected, items in the list of the parent policy are displayed in child policies, and items can be added to the list of the child policy. If the check box is cleared, the list items are not merged when inheriting policy settings. This check box is cleared by default.
Exclusion scope name	Exclusion scope name.
Path	Path to the directory excluded from scan.
Status	The status indicates whether the application uses this exclusion.

By default, the table of exclusion scopes is empty. You can add, edit, and delete items in the table.

You can also import the exclusion list from a file using the **Import** button and export the exclusion list to a JSON file using the **Export** button. When importing, you will be prompted to replace the list of exclusions or add the exclusions to the existing list.

Add exclusion scope window

In this window, you can add and configure exclusion scopes.

Exclusion scope settings

Setting	Description
Exclusion scope name	Field for entering the exclusion scope name. This name will be displayed in the table in the **Exclusion scopes** window. The entry field must not be blank.
Use this scope	This check box enables or disables the exclusion of the scope when the application is running. If the check box is selected, the application excludes this scope from scan or protection during its operation. If the check box is cleared, the application includes this scope in scan or protection during its operation. You can later exclude this scope from scan or protection by selecting the check box. This check box is selected by default.

Setting	Description
File system, access protocol, and path	In this drop-down list, you can select the type of file system where the directories that you want to add to scan exclusions are located: • **Local**, for local directories. • **Mounted**, for remote directories mounted on the device. • **All remote mounted** – all remote directories mounted on the device using the Samba and NFS protocols.
Access protocol	You can select the remote access protocol in the drop-down list: • **NFS**: remote directories mounted on a device using the NFS protocol. • **Samba**: remote directories mounted on a device using the Samba protocol. • **Custom** – resources of the device's file system specified in the field below. This drop-down list is available if the **Mounted** type is selected in the drop-down list of file systems.
Path	Entry field for the path to the directory that you want to add to the exclusion scope. You can use **masks** and **tags** to specify the path. You can use special tags to specify a container or image: • `[container-id:<id>]/<path to local directory>` • `[container-name:<name>]/<path to local directory>` • `[image-id:<id>]/<path to local directory>` • `[image-name:<name>]/<path to local directory>` Where: `<id>` is the container ID. `<name>` is a container name `<path to local directory>` is the path to the local directory. You can also use unique combinations of tags: `[container-id:<id>]`, `[container-name:<name>]`, `[image-id:<id>]`, and `[image-name:<name>]/path to local directory>`. Any combination of 1 to 4 unique tags within one area is allowed. The order they are listed in is not important. For example: • `[container-name:<name>][image-name:<name>]/path to local directory>` • `[container-id:<id>][image-name:<name>]/<path to local directory>` • `[image-name:<name>][image-id:<id>]/<path to local directory>` • `[container-name:<name>][container-id:<id>][image-name:<name>]/<path to local directory>` • `[container-name:<name>][image-id:<id>][container-id:<id>][image-name:<name>]/path to local directory>` You can use masks (`?` and `*` characters) in names and identifiers. You can use the `*` (asterisk) character to create a file or directory name mask. You can indicate a single `*` character to represent any set of characters (including an empty set) preceding the `/` character in the file or directory name. For example, `/dir/*/file` or `/dir/*/*/file`. You can indicate two consecutive `*` characters to represent any set of characters (including an empty set and the `/` character) in the file or directory name. For example, `/dir/**/file*/` or `/dir/file**/`. The `**` mask can be used only once in a directory name. For example, `/dir/**/**/file` is an incorrect mask. To exclude the mount point `/dir`, you need to specifically indicate `/dir` (no asterisk). The mask `/dir/*` excludes all mount points at the level below `/dir` but not `/dir` itself. The `/dir/**` mask excludes all mount points below the level of `/dir` but not `/dir` itself. You can use a single `?` character to represent any one character in the file or directory name. The **/** path is specified by default. The application excludes all directories of the local file system from scan. This field is available if the **Local** type is selected in the drop-down list of file systems.

Setting	Description
Name of shared resource	The field for entering the name of the file system shared resource, where the directories that you want to add to the exclusion scope are located. The field is available if the **Mounted** type is selected in the File system drop-down list and the **Custom** item is selected in the **Access protocol** drop-down list.
Masks	The list contains name masks of the objects that the application excludes from scan. Masks are only applied to objects in the directory specified in the **Path** field. By default the list contains the * mask (all objects). You can add, edit, or delete masks.

Exclusions by mask window

You can configure scan exclusions for objects by name mask. The application will not scan files whose names contain the specified mask. By default, the list of masks is empty.

You can add, edit, or delete masks.

Clicking the **Add** or **Edit** button opens the **Object mask** window. In this window, in the **Define object mask** field, you can specify the name template for files that Kaspersky Endpoint Security excludes from scans.

Examples:
The `*.txt` mask refers to all text files.
The `*_my_file_??.html` mask refers to html files starting with any characters, and ending with `_my_file_` followed by any two characters (for example, 2020_my_file_09.html).

You can also import the exclusion list from a file using the **Import** button and export the exclusion list to a JSON file using the **Export** button. When importing, you will be prompted to replace the list of exclusions or add the exclusions to the existing list.

You can enable the merging of the list of exclusions when inherited by child policies. If you want to merge list items, select the **Merge inherited values** check box. If the check box is selected, items in the list of the parent policy are displayed in child policies, and items can be added to the list of the child policy. If the check box is cleared, the list items are not merged when inheriting policy settings. This check box is cleared by default.

Exclusions by threat name window

You can configure the exclusion of objects from scans based on threat name. The application will not block the specified threats. By default, the list of threat names is empty.

You can add, edit, and delete threat names.

Clicking the **Add** or **Edit** button opens the **Threat name** window. In this window, you can define the name of the threat to be excluded from a scan.

You can also import the exclusion list from a file using the **Import** button and export the exclusion list to a JSON file using the **Export** button. When importing, you will be prompted to replace the list of exclusions or add the exclusions to the existing list.

You can enable the merging of the list of exclusions when inherited by child policies. If you want to merge list items, select the **Merge inherited values** check box. If the check box is selected, items in the list of the parent policy are displayed in child policies, and items can be added to the list of the child policy. If the check box is cleared, the list items are not merged when inheriting policy settings. This check box is cleared by default.

Critical Areas Scan in the Administration Console

In the Administration Console, you can perform a critical areas scan of the operating system of a protected device using the *Critical Areas Scan* task.

You can create and run critical areas scan user tasks. You can configure the scan settings by editing the settings of the tasks.

In the **Settings** section of the properties of the Critical Areas Scan task, you can configure the settings listed in the table below.

Critical Areas Scan task settings

Setting	Description
Scan	This group of settings contains buttons that open windows where you can configure the scan scopes, scan scope settings, and scan settings.
Actions on threat detection	This group of settings contains the **Configure** button. Clicking this button opens the **Actions on threat detection** window, where you can configure the actions that the application performs on detected infected objects.

In the **Exclusions** section of the Critical Areas Scan task properties, you can also configure exclusion scopes or exclusions by mask and by the threat name.

Scan scopes window

The table contains the scan scopes. The application will scan files and directories located in the paths specified in the table. By default, the table contains one scan scope that includes all directories of the local file system.

Scan scope settings

Setting	Description
Merge inherited values	This check box enables or disables the merging of the list when inherited in child policies. If the check box is selected, items in the list of the parent policy are displayed in child policies, and items can be added to the list of the child policy. If the check box is cleared, the list items are not merged when inheriting policy settings. This check box is cleared by default.
Scope name	Scan scope name.
Path	Path to the directory that the application scans.
Status	The status indicates whether the application scans this scope.

You can add, edit, delete, move up, and move down items in the table.

Kaspersky Endpoint Security scans objects in the specified scopes in the order they appear in the list of scopes. If necessary, place the subdirectory higher in the list than its parent directory, to configure security settings for a subdirectory that are different from the security settings of the parent directory.

New scan scope window

In this window, you can add and configure scan scopes.

Scan scope settings

Setting	Description
Scan scope name	Field for entering the scan scope name. This name will be displayed in the table in the **Scan scopes** window. The entry field must not be blank.
Use this scope	This check box enables or disables scans of this scope by the application. If this check box is selected, the application processes this scan scope. If this check box is cleared, the application does not process this scan scope. You can later include this scope in the component settings by selecting the check box. This check box is selected by default.

Setting	Description
File system, access protocol, and path	The settings block lets you set the scan scope. You can select the file system type in the drop-down list of file systems: • **Local** (default value) – local directories. If this item is selected, you need to indicate the path to the local directory. • **Mounted** – Mounted remote or local directories. If this item is selected, you need to indicate the protocol or name of the file system. • **Shared** — The protected server's file system resources accessible via the Samba or NFS protocol. • **All remote mounted** – all remote directories mounted on the device using the Samba and NFS protocols. • **All shared** — All of the protected server's file system resources accessible via the Samba and NFS protocols.
	If **Shared** or **Mounted** is selected in the drop-down list of file systems, you can select the remote access protocol in the drop-down list on the right: • **NFS**: remote directories mounted on a device using the NFS protocol. • **Samba**: remote directories mounted on a device using the Samba protocol. • **Custom** – resources of the device's file system specified in the field below.
	If **Local** is selected in the drop-down list of file systems, then in the input field you can enter a path to a directory that you want to add to the scan scope. You can use **masks** and **tags** to specify the path. You can use special tags to specify a container or image: • `[container-id:<id>]/<path to local directory>` • `[container-name:<name>]/<path to local directory>` • `[image-id:<id>]/<path to local directory>` • `[image-name:<name>]/<path to local directory>` Where: `<id>` is the container ID. `<name>` is a container name `<path to local directory>` is the path to the local directory. You can also use unique combinations of tags: `[container-id:<id>]`, `[container-name:<name>]`, `[image-id:<id>]`, and `[image-name:<name>]/path to local directory>`. Any combination of 1 to 4 unique tags within one area is allowed. The order they are listed in is not important. For example: • `[container-name:<name>][image-name:<name>]/path to local directory>` • `[container-id:<id>][image-name:<name>]/<path to local directory>` • `[image-name:<name>][image-id:<id>]/<path to local directory>` • `[container-name:<name>][container-id:<id>][image-name:<name>]/<path to local directory>` • `[container-name:<name>][image-id:<id>][container-id:<id>][image-name:<name>]/path to local directory>` You can use masks (`?` and `*` characters) in names and identifiers. You can use the `*` (asterisk) character to create a file or directory name mask. You can indicate a single `*` character to represent any set of characters (including an empty set) preceding the `/` character in the file or directory name. For example, `/dir/*/file` or `/dir/*/*/file`. You can indicate two consecutive `*` characters to represent any set of characters (including an empty set and the `/` character) in the file or directory name. For example, `/dir/**/file*/` or `/dir/file**/`. The `**` mask can be used only once in a directory name. For example, `/dir/**/**/file` is an incorrect mask. You can use a single `?` character to represent any one character in the file or directory name. The **/** path is specified by default – the application scans all directories of the local file system. If the **Local** type is selected in the drop-down list of file systems, and the path is not specified, the application scans all directories of the local file system.

Setting	Description
Filesystem name	The field for entering the name of the file system where the directories that you want to add to the scan scope are located. The field is available if the **Mounted** type is selected in the drop-down list of file systems and the **Custom** item is selected in the drop-down list on the right.
Masks	The list contains name masks for the objects that the application scans. By default the list contains the * mask (all objects). You can add, edit, or delete masks.

Scan scope settings window

In this window, you can configure the scan settings for the Critical Areas Scan task. The application allows you to scan files, boot sectors, startup objects, process memory, and kernel memory.

Scan scope settings

Setting	Description
Scan files	This check box enables or disables file scans. If this check box is selected, Kaspersky Endpoint Security will scan files. If this check box is unchecked, Kaspersky Endpoint Security will not scan files. This check box is cleared by default.
Scan boot sectors	This check box enables or disables boot sector scans. If this check box is selected, Kaspersky Endpoint Security will scan boot sectors. If this check box is unchecked, Kaspersky Endpoint Security will not scan boot sectors. This check box is selected by default.
Scan kernel memory and running processes	This check box enables or disables device memory scan. If the check box is selected, Kaspersky Endpoint Security scans kernel memory and running processes. If the check box is cleared, Kaspersky Endpoint Security does not scan kernel memory and running processes. This check box is selected by default.
Scan startup objects	This check box enables or disables startup object scans. If this check box is selected, Kaspersky Endpoint Security will scan startup objects. If this check box is unchecked, Kaspersky Endpoint Security will not scan startup objects. This check box is selected by default.
Devices to scan	This group of settings contains the **Configure** button. Clicking this button opens the **Scan scopes** window, where you can specify the devices whose boot sectors must be scanned.
Use global exclusions	The check box enables or disables the exclusion of the mount points specified in global exceptions while the application is running. If this check box is selected, the application excludes configured mount points from scans. This check box is selected by default.
Use File Threat Protection exclusions	This check box enables or disables the use of configured File Threat Protection exclusions when the application is running. If the check box is selected, the application does not scan the objects specified in the exclusions for the File Threat Protection component. This check box is selected by default.

Scan scopes window

The table contains name masks of the devices, whose boot sectors the application must scan. By default, the table contains the **/**** device name mask (all devices).

You can add, edit, and delete items in the table.

Scan settings window

In this window, you can configure the file scan settings for the task.

Scan settings

Setting	Description
Scan archives	This check box enables or disables scan of archives. If the check box is selected, the application scans the archives. To scan an archive, the application has to unpack it first, which may slow down scanning. You can reduce the duration of archive scans by configuring the **Skip file that is scanned for longer than (sec)** and **Skip file larger than (MB)** settings in the **General scan settings** section. If the check box is cleared, the application does not scan the archives. This check box is selected by default.
Scan SFX archives	This check box enables or disables *self-extracting archive* scans. Self-extracting archives are the archives that contain an executable extraction module. If the check box is selected, the application scans self-extracting archives. If the check box is cleared, the application does not scan self-extracting archives. This check box is available if the **Scan archives** check box is unchecked. This check box is selected by default.
Scan mail databases	This check box enables or disables scans of mail databases of Microsoft Outlook, Outlook Express, The Bat!, and other mail applications. If the check box is selected, the application scans mail database files. If the check box is cleared, the application does not scan mail database files. This check box is cleared by default.
Scan mail format files	This check box enables or disables scan of files of plain-text email messages. If this check box is selected, the application scans plain-text messages. If this check box is cleared, the application does not scan plain-text messages. This check box is cleared by default.
Skip file that is scanned for longer than (sec)	In this field, you can specify the maximum time to scan a file, in seconds. After the specified time, the application stops scanning the file. Possible values: 0–9999. If the value is set to 0, the scan time is unlimited. Default value: 0.
Skip file larger than (MB)	In this field, you can specify the maximum size of a file to scan, in megabytes. Possible values: 0–999999. If the value is set to 0, the application scans files of any size. Default value: 0.
Log clean objects	This check box enables or disables the logging of *ObjectProcessed* type events. If this check box is selected, the application logs events of the *ObjectProcessed* type for all scanned objects. If this check box is cleared, the application does not log events of the *ObjectProcessed* type for any scanned object. This check box is cleared by default.
Log unprocessed objects	This check box enables or disables the logging *ObjectNotProcessed* type events if a file cannot be processed during a scan. If this check box is selected, the application logs the events of the *ObjectNotProcessed* type. If this check box is cleared, the application does not log the events of the *ObjectNotProcessed* type. This check box is cleared by default.
Log packed objects	This check box enables or disables the logging of *PackedObjectDetected* type events for all packed objects that are detected. If this check box is selected, the application logs the events of the *PackedObjectDetected* type. If this check box is cleared, the application does not log the events of the *PackedObjectDetected* type. This check box is cleared by default.

Setting	Description
Use iChecker technology	This check box enables or disables scan of only new and modified since the last scan files. If the check box is selected, the application scans only new files or the files modified since the last scan. If the check box is cleared, the application scans the files regardless of the creation or modification date. This check box is selected by default.
Use heuristic analysis	This check box enables or disables heuristic analysis during file scans. This check box is selected by default.
Heuristic analysis level	If the **Use heuristic analysis** check box is selected, you can select the heuristic analysis level in the drop-down list: • **Light** is the least detailed scan with minimal system load. • **Medium** is a medium scan with balanced system load. • **Deep** is the most detailed scan with maximum system load. • **Recommended** (default value) is the optimal level recommended by Kaspersky experts. It ensures an optimal combination of protection quality and impact on the performance of the protected devices.

Actions on threat detection window

In this window, you can configure actions to be performed by Kaspersky Endpoint Security on detected infected objects:

Actions on threat detection

Setting	Description
Actions on threat detection	You can select the action that the application performs on a detected infected object: • **Disinfect; delete if disinfection is not possible** (default). If you select this action, the application attempts to disinfect the infected object by saving a copy of the object in Backup. If disinfection is not possible (for example, if the type of object or the type of threat in the object cannot be disinfected), then the application deletes the infected object. • **Disinfect; inform if disinfection fails**. If you select this action, the application attempts to disinfect the infected object by saving a copy of the object in Backup. If disinfection is not possible (for example, if the type of object or the type of threat in the object cannot be disinfected), the application creates a record in the log. • **Inform**. If you select this action, the application creates a record about the infected object in the log.

Exclusions section

Scan exclusion is a set of conditions. When these conditions are met, Kaspersky Endpoint Security does not scan the objects for viruses and other malware. You can also exclude objects from scans by masks and threat names.

Settings of scan exclusions

Group of settings	Description
Exclusion scopes	This group of settings contains the **Configure** button. Clicking this button opens the **Exclusion scopes** window. In this window, you can define the list of scopes to be excluded from scans.
Exclusions by mask	This group of settings contains the **Configure** button, which opens the **Exclusions by mask** window. In this window, you can configure the exclusion of objects from scans by name mask.
Exclusions by threat name	This group of settings contains the **Configure** button, which opens the **Exclusions by threat name** window. In this window, you can configure the exclusion of objects from scans based on threat name.

Exclusion scopes window

This window contains scan exclusion scopes. The application does not scan files and directories located at the paths specified in the table.

Exclusion scope settings

Setting	Description
Merge inherited values	This check box enables or disables the merging of the list when inherited in child policies. If the check box is selected, items in the list of the parent policy are displayed in child policies, and items can be added to the list of the child policy. If the check box is cleared, the list items are not merged when inheriting policy settings. This check box is cleared by default.
Exclusion scope name	Exclusion scope name.
Path	Path to the directory excluded from scan.
Status	The status indicates whether the application uses this exclusion.

By default, the table of exclusion scopes is empty. You can add, edit, and delete items in the table.

You can also import the list of exclusions from a file by clicking **Advanced** -> **Import** and export the list of added exclusions to a file by clicking **Advanced** -> **Export selected** or **Advanced** -> **Export all**.

New exclusion scope window

In this window, you can add and configure scan exclusion scopes.

Exclusion scope settings

Setting	Description
Exclusion scope name	Field for entering the exclusion scope name. This name will be displayed in the table in the **Exclusion scopes** window. The entry field must not be blank.
Use this scope	The check box enables or disables exclusion of the scope from scan when the application is running. If this check box is selected, the application excludes this area during scans. If this check box is cleared, the application includes this area in the scan scope. You can later exclude this scope by selecting the check box. This check box is selected by default.

Setting	Description
File system, access protocol, and path	The settings block lets you set the exclusion scope. In the drop-down list of file systems, you can select the type of file system of the directories to be excluded from scans: • **Local**, for local directories. • **Mounted** – mounted directories. • **All remote mounted** – all remote directories mounted on the device using the Samba and NFS protocols.
	If **Mounted** is selected in the drop-down list of file systems, you can select the remote access protocol in the drop-down list on the right: • **NFS**: remote directories mounted on a device using the NFS protocol. • **Samba**: remote directories mounted on a device using the Samba protocol. • **Custom** – resources of the device's file system specified in the field below.
	If **Local** is selected in the drop-down list of file systems, then in the input field you can enter a path to a directory that you want add to the exclusion scope. You can use **masks** and **tags** to specify the path. You can use special tags to specify a container or image: • `[container-id:<id>]/<path to local directory>` • `[container-name:<name>]/<path to local directory>` • `[image-id:<id>]/<path to local directory>` • `[image-name:<name>]/<path to local directory>` Where: `<id>` is the container ID. `<name>` is a container name `<path to local directory>` is the path to the local directory. You can also use unique combinations of tags: `[container-id:<id>]`, `[container-name:<name>]`, `[image-id:<id>]`, and `[image-name:<name>]/path to local directory>`. Any combination of 1 to 4 unique tags within one area is allowed. The order they are listed in is not important. For example: • `[container-name:<name>][image-name:<name>]/path to local directory>` • `[container-id:<id>][image-name:<name>]/<path to local directory>` • `[image-name:<name>][image-id:<id>]/<path to local directory>` • `[container-name:<name>][container-id:<id>][image-name:<name>]/<path to local directory>` • `[container-name:<name>][image-id:<id>][container-id:<id>][image-name:<name>]/path to local directory>` You can use masks (`?` and `*` characters) in names and identifiers. You can use the `*` (asterisk) character to create a file or directory name mask. You can indicate a single `*` character to represent any set of characters (including an empty set) preceding the `/` character in the file or directory name. For example, `/dir/*/file` or `/dir/*/*/file`. You can indicate two consecutive `*` characters to represent any set of characters (including an empty set and the `/` character) in the file or directory name. For example, `/dir/**/file*/` or `/dir/file**/`. The `**` mask can be used only once in a directory name. For example, `/dir/**/**/file` is an incorrect mask. To exclude the mount point `/dir`, you need to specifically indicate `/dir` (no asterisk). The mask `/dir/*` excludes all mount points at the level below `/dir` but not `/dir` itself. The `/dir/**` mask excludes all mount points below the level of `/dir` but not `/dir` itself. You can use a single `?` character to represent any one character in the file or directory name. The **/** path is specified by default. The application excludes all directories of the local file system from scan.

Setting	Description
Filesystem name	The field for entering the name of the file system where the directories that you want to add to the exclusion scope are located. The field is available if the **Mounted** type is selected in the drop-down list of file systems and the **Custom** item is selected in the drop-down list on the right.
Masks	The list contains name masks of the objects that the application excludes from scan. Masks are only applied to objects in the directory specified in the path field. By default the list contains the * mask (all objects). You can add, edit, or delete masks.

Exclusions by mask window

You can configure scan exclusions for objects by name mask. The application will not scan files whose names contain the specified mask. By default, the list of masks is empty.

You can add, edit, or delete masks.

Clicking the **Add** button opens the **Object mask** window. In this window, in the **Define object mask** field, you can specify the name template for files that Kaspersky Endpoint Security excludes from scans.

Examples:
The `*.txt` mask refers to all text files.
The `*_my_file_??.html` mask refers to html files starting with any characters, and ending with `_my_file_` followed by any two characters (for example, 2020_my_file_09.html).

You can enable the merging of the list of exclusions when inherited by child policies. If you want to merge list items, select the **Merge inherited values** check box. If the check box is selected, items in the list of the parent policy are displayed in child policies, and items can be added to the list of the child policy. If the check box is cleared, the list items are not merged when inheriting policy settings. This check box is cleared by default.

Exclusions by threat name window

You can configure the exclusion of objects from scans based on threat name. The application will not block the specified threats. By default, the list of threat names is empty.

You can add, edit, and delete threat names.

You can enable the merging of the list of exclusions when inherited by child policies. If you want to merge list items, select the **Merge inherited values** check box. If the check box is selected, items in the list of the parent policy are displayed in child policies, and items can be added to the list of the child policy. If the check box is cleared, the list items are not merged when inheriting policy settings. This check box is cleared by default.

Critical Areas Scan on the command line

In the command line, you can perform a critical areas scan of the operating system of a protected device using the Critical Areas Scan predefined task (*Critical_Areas_Scan*).

You can manually start, stop, pause, or resume this task and configure the task run schedule. You can configure scan settings by editing the settings of this task.

Critical Areas Scan task settings

Setting	Description	Values
ScanFiles	Enables file scan.	Yes — Scan files. No (default value) — Do not scan files.
ScanBootSectors	Enables boot sector scans.	Yes (default value) — Scan boot sectors. No — Do not scan boot sectors.
ScanComputerMemory	Enables process memory and kernel memory scans.	Yes (default value) — Scan process memory and kernel memory. No — Do not scan process memory and kernel memory.
ScanStartupObjects	Enables startup object scans.	Yes (default value) — Scan startup objects. No — Do not scan startup objects.
ScanArchived	Enables scanning of archives (including SFX self-extracting archives). The application scans the following archives: .zip; .7z*; .7-z; .rar; .iso; .cab; .jar; .bz; .bz2; .tbz; .tbz2; .gz; .tgz; .arj. The list of supported archive formats depends on the application databases being used.	Yes (default value) — Scan archives. If ActionOnThreat is set to DisinfectDeleteIfNotPossible, and disinfection is impossible, then, depending on the archive type, the application deletes either the infected object or the entire archive that contains the threat. No — Do not scan archives.
ScanSfxArchived	Enables scanning of self-extracting archives only (archives that contain an executable extraction module).	Yes (default value) — Scan self-extracting archives. No — Do not scan self-extracting archives.
ScanMailBases	Enables scanning email databases of Microsoft Outlook, Outlook Express, The Bat, and other mail clients.	Yes — Scan files of email databases. No (default value) — Do not scan files of email databases.
ScanPlainMail	Enables scanning of plain text email messages.	Yes — Scan plain text email messages. No (default value) — Do not scan plain text email messages.
SizeLimit	Maximum size of an object to be scanned (in megabytes). If the object to be scanned is larger than the specified value, the application skips this object.	0 to 999999 0 — The application scans objects of any size. Default value: 0.
TimeLimit	Maximum object scan duration (in seconds). The application stops scanning the object if it takes longer than the time specified by this setting.	0 to 9999 0 — The object scan time is unlimited. Default value: 0.
ActionOnThreat	Selection of the action to be performed by the application on the infected objects.	DisinfectDeleteIfNotPossible (disinfect; delete if not possible) means the application tries to disinfect the infected object after saving a copy of the object in Backup. If disinfection is not possible (for example, if the type of object or the type of threat in the object cannot be disinfected), then the application deletes the infected object. DisinfectInformIfNotPossible (disinfect; inform if not possible) means the application tries to disinfect the infected object after saving a copy of the object in Backup. If disinfection is not possible (for example, if the type of object or the type of threat in the object cannot be disinfected), the application creates a record in the log. Inform means the application does not try to disinfect or delete the infected object. Information about the infected object is logged. Default value: DisinfectDeleteIfNotPossible.
UseExcludeMasks	Enables exclusion of the objects specified by the ExcludeMasks.item_# setting from the scan.	Yes — Exclude objects specified by the ExcludeMasks.item_# setting from scans. No (default value) — Do not exclude objects specified by the ExcludeMasks.item_# setting from the scan.

Setting	Description	Values

`ExcludeMasks.item_#`	Excludes objects from being scanned by name or mask. You can use this setting to exclude an individual file from the specified scan scope by name or exclude several files at once using masks in the shell format.
	Before specifying a value for this setting, make sure that the `UseExcludeMasks` setting is enabled.
		The default value is not defined.
		Example:
		`UseExcludeMasks=Yes`
		`ExcludeMasks.item_0000=eicar1.*`
		`ExcludeMasks.item_0001=eicar2.*`

`UseExcludeThreats`	Enables exclusion of objects containing the threats specified by the `ExcludeThreats.item_#` setting from scans.	`Yes` — Exclude objects containing the threats specified by the `ExcludeThreats.item_#` setting from the scan. `No` (default value): do not exclude objects containing the threats specified by the `ExcludeThreats.item_#` setting from the scan.

`ExcludeThreats.item_#`	Excludes objects from scans by the name of the threats detected in them. Before specifying a value for this setting, make sure that the `UseExcludeThreats` setting is enabled.
	In order to exclude an object from scans, specify the full name of the threat detected in this object – the string containing the application's decision that the object is infected.
	For example, you may be using a utility to obtain information about your network. To keep the application from blocking it, add the full name of the threat contained in it to the list of threats excluded from scans.
	You can find the full name of the threat detected in an object in the application log or on the website https://threats.kaspersky.com.
		The setting value is case-sensitive.
		The default value is not defined.
		Example:
		`UseExcludeThreats=Yes`
		`ExcludeThreats.item_0000=EICAR-Test-*`
		`ExcludeThreats.item_0001=?rojan.Linux`

`UseGlobalExclusions`	Enables global exclusions for scanning.	`Yes` (default value) — Use the global exclusions. `No` — Do not use global exclusions.
`UseOASExclusions`	Enables File Threat Protection exclusions for scanning.	`Yes` (default value) — Use File Threat Protection exclusions. `No` — do not use File Threat Protection exclusions.
`ReportCleanObjects`	Enables logging of information about scanned objects that the application reports as not being infected. You can enable this setting, for example, to make sure that a particular object was scanned by the application.	`Yes` — Log information about non-infected objects. `No` (default value) — Do not log information about non-infected objects.
`ReportPackedObjects`	Enables logging of information about scanned objects that are part of compound objects. You can enable this setting, for example, to make sure that an object within an archive has been scanned by the application.	`Yes` — Log information about scanned objects within archives. `No` (default value) — Do not log information about scanned objects within archives.
`ReportUnprocessedObjects`	Enables logging of information about objects that have not been processed for some reason.	`Yes` — Log information about unprocessed objects. `No` (default value) — Do not log information about unprocessed objects.
`UseAnalyzer`	Enables heuristic analysis. Heuristic analysis helps the application to detect threats even before they become known to virus analysts.	`Yes` (default value) — Enable Heuristic Analyzer. `No` — Disable Heuristic Analyzer.
`HeuristicLevel`	Specifies the heuristic analysis level. You can specify the heuristic analysis level. The heuristic analysis level sets the balance between the thoroughness of searches for threats, the load on the operating system's resources, and the scan duration. The higher the heuristic analysis level, the more resources and time are required for scanning.	`Light` — The least thorough scan with minimum load on the system. `Medium` — A medium heuristic analysis level with a balanced load on the system. `Deep` — The most thorough scan with maximum load on the system. `Recommended` (default value) — The recommended value.

Setting	Description	Values
`UseIChecker`	Enables usage of the iChecker technology.	`Yes` (default value) — Enable use of the iChecker technology. `No` — Disable use of the iChecker technology.
`DeviceNameMasks.item_#`	List of device names. The application will scan boot sectors of these devices. The setting value cannot be empty. At least one device name mask must be specified to run this task.	`AllObjects` – scan boot sectors of all devices. `< device name mask >` – Scan boot sectors of the devices whose names match the specified mask. Default value: `/**` – any set of characters in the device name, including the `/` character.
The **[ScanScope.item_#]** section contains the following settings:		
`AreaDesc`	Description of the scan scope, which contains additional information about the scan scope. The maximum length of the string specified using this setting is 4096 characters.	Default value: `All objects`. Example: `AreaDesc=" Mail bases scan "`
`UseScanArea`	Enables scans of the specified scope. To run the task, enable scans of at least one scope.	`Yes` (default value) — Scan the specified scope. `No` — Do not scan the specified scope.
`AreaMask.item_#`	Scan scope limitation. Within the scan scope, the application scans only the files that are specified using the masks in the shell format. If this setting is not specified, the application scans all the objects in the scan scope. You can specify several values for this setting.	The default value is `*` (scan all objects). Example: `AreaMask.item_< item number >=*doc`
`Path`	Path to the directory with objects to be scanned.	`< path to local directory >` — scan objects in the specified directory. `Shared:NFS` — Scan the device file system resources that are accessible via the NFS protocol. `Shared:SMB` – Scan the device file system resources that are accessible via the Samba protocol. `Mounted:NFS` – Scan the remote directories mounted on a device using the NFS protocol. `Mounted:SMB` – Scan the remote directories mounted on a device using the Samba protocol. `AllRemoteMounted` – Scan all remote directories mounted on the device using the Samba and NFS protocols. `AllShared` – Scan all the device file system resources that are accessible via the Samba and NFS protocols. `<file system type>` – Scan all resources of the specified file system device.
The **[ExcludedFromScanScope.item_#]** section contains the following settings:		
`AreaDesc`	Description of the scan exclusion scope, which contains additional information about the exclusion scope.	The default value is not defined.
`UseScanArea`	Excludes the specified scope from scans.	`Yes` (default value) — Exclude the specified scope. `No` — Do not exclude the specified scope.
`AreaMask.item_#`	Limitation of scan exclusion scope. In the exclusion scope, the application excludes only the files that are specified using masks in the shell format. If this setting is not specified, the application excludes all the objects in the exclusion scope. You can specify several values for this setting.	Default value: `*` (exclude all objects)

Setting	Description	Values
`Path`	Path to the directory with objects to be excluded.	`<path to local directory>` – Exclude objects in the specified directory (including subdirectories) from scans. You can use **masks** to specify the path. You can use the `*` (asterisk) character to create a file or directory name mask. You can indicate a single `*` character to represent any set of characters (including an empty set) preceding the `/` character in the file or directory name. For example, `/dir/*/file` or `/dir/*/*/file`. You can indicate two consecutive `*` characters to represent any set of characters (including an empty set and the `/` character) in the file or directory name. For example, `/dir/**/file*/` or `/dir/file**/`. The `**` mask can be used only once in a directory name. For example, `/dir/**/**/file` is an incorrect mask. You can use a single `?` character to represent any one character in the file or directory name. In order to optimize the operation of scan tasks, it is recommended to add the path with snapshots mounted by the system in the read-only mode to the exclusions for the systems with the btrfs file system and enabled active snapshots. For example, for the systems based on SUSE/OpenSUSE, you can add the following exclusion `/.snapshots/*/snapshot/`. The `/` path is specified by default. The application excludes all directories of the local file system from scan. `Mounted:NFS` – Exclude the remote directories mounted on a device using the NFS protocol from scan. `Mounted:SMB` – Exclude the remote directories mounted on a device using the Samba protocol from scan. `AllRemoteMounted` – Exclude all remote directories mounted on the device using the Samba and NFS protocols from scan. `<file system type>` – Exclude from scanning all resources of the specified file system device. Remote directories are excluded from scanning by the application only if they were mounted before the task was started. Remote directories mounted after the task is started are not excluded from scanning.

Removable drives scan

Kaspersky Endpoint Security can scan the following removable drives when they are connected to the protected device: CDs, DVDs, Blu-ray discs, flash drives (including USB modems), external hard drives, and floppy disks.

If the removable drives scan is enabled, Kaspersky Endpoint Security monitors the connection of removable drives to the protected device and, if a connected removable drive is detected, it scans the drive and its boot sectors for viruses and other malware.

By default, the application does not monitor for the connection of removable drives or scan these.

Configuring Removable Drives Scan in the Web Console

In the Web Console, you can manage the settings of the removable drives scan in the policy properties (**Application settings** → **Host Threat Protection** → **Removable Drives Scan**).

Configuring Removable Drives Scan in the Administration Console

In the Administration Console, you can manage Removable Drives Scan settings in the policy properties (Managing policies in the Administration Console, Creating a policy using the Administration Console) (**Local Tasks** → **Removable Drives Scan**).

Removable Drives Scan component settings

Setting	Description
Enable removable drives scan when connected to the device	This check box enables or disables the scan of removable drives when they are connected to the user device. This check box is cleared by default.
Action when a removable drive connects	In the drop-down list, you can select an action to be performed by the application upon connection of removable drives to the user device: • **Do not scan** removable drives when connected (default value). • **Quick scan** – only scan files of **certain types** on removable drives (except CD/DVD drives and Blu-ray discs) and do not unpack compound objects. A quick scan is performed using the default settings for the *Critical Areas Scan* task. The following file formats are scanned on removable media: com, exe, sys, prg, bin, bat, cmd, dpl, dll, scr, cpl, ocx, tsp, drv, vxd, pif, lnk, reg, ini, cia, vbs, vbe, js, jse, htm, htt, hta, asp, chm, pht, wsh, wsf, the, hip, eml, nws, msg, pig, mbx, doc*, dot*, fpm, rtf, shs, dwg, msi, otm, pdf, swf, jpeg, emf, ico, ov?, xl*, xlsb, pp*, md*, sldx, sldm, thmx. • **Detailed scan** – scan all files on removable drives (except CD/DVD drives and Blu-ray discs). A detailed scan is performed using the default settings for the *Malware Scan* task.

Setting	Description
Action when a CD / DVD drive connects	In the drop-down list, you can select an action to be performed by the application upon connection of CD/DVD drives and Blu-ray discs to the user device: • **Do not scan** CD/DVD drives and Blu-ray discs when connected (default value). • **Quick scan**: only scans files of **certain types** on CD/DVD drives and Blu-ray discs. A quick scan is performed using the default settings for the *Critical Areas Scan* task. The following file formats are scanned on removable media: com, exe, sys, prg, bin, bat, cmd, dpl, dll, scr, cpl, ocx, tsp, drv, vxd, pif, lnk, reg, ini, cia, vbs, vbe, js, jse, htm, htt, hta, asp, chm, pht, wsh, wsf, the, hip, eml, nws, msg, pig, mbx, doc*, dot*, fpm, rtf, shs, dwg, msi, otm, pdf, swf, jpeg, emf, ico, ov?, xl*, xlsb, pp*, md*, sldx, sldm, thmx. • **Detailed scan** – scan all files on CD/DVD drives and Blu-ray discs. A detailed scan is performed using the default settings for the *Malware Scan* task.
Block access to the removable drive while scanning	This check box enables or disables blocking of files on the connected drive during execution of the scan. This check box is cleared by default.

Configuring Removable Drives Scan on the command line

On the command line, you can manage removable media scanning using the *Removable Drives Scan* predefined task (*Removable_Drives_Scan*).

Removable Drives Scan is not running by default. You can start and stop this task manually. You can configure scan settings by editing the settings of this task.

If the task is running, the application monitors the connection of removable drives to the device and, when a removable drive is connected, it creates and starts a temporary boot sector scan task (task of the *ODS* type). This task cannot be stopped. After the task execution completes, the application automatically deletes the task.

If you enabled file scanning in the *Removable Drives Scan* task settings, the application also starts one or more temporary custom file scan tasks (tasks of the *ODS* type). If necessary, a user with administrator privileges can stop these tasks.

If you modify the *Removable Drives Scan* task settings, the new values are not applied to temporary tasks that are already running. Stopping the *Removable Drives Scan* task does not stop temporary tasks that are already running.

Removable Drives Scan task settings

Setting	Description	Values
`ScanRemovableDrives`	Enables the scanning of removable media when it is connected to the device. This setting does not apply to CD/DVD drives and Blu-ray discs (see the `ScanOpticalDrives` setting).	`DetailedScan` — Scan all files on removable media (except CD/DVD and Blu-ray discs). A detailed scan is performed with the default settings for the *Scan_File* task (ID: 3). `QuickScan` — Scan only files of **specific types** on removable media (except CD/DVD and Blu-ray discs). The following file formats are scanned on removable media: com, exe, sys, prg, bin, bat, cmd, dpl, dll, scr, cpl, ocx, tsp, drv, vxd, pif, lnk, reg, ini, cia, vbs, vbe, js, jse, htm, htt, hta, asp, chm, pht, wsh, wsf, the, hip, eml, nws, msg, pig, mbx, doc*, dot*, fpm, rtf, shs, dwg, msi, otm, pdf, swf, jpeg, emf, ico, ov?, xl*, xlsb, pp*, md*, sldx, sldm, thmx. A quick scan is performed with the default settings for the *Critical_Areas_Scan* task (ID: 4). `NoScan` (default value) — Do not scan removable media when it is connected to the device.

Setting	Description	Values
`ScanOpticalDrives`	Enables the scanning of CD/DVD drives and Blu-ray discs when they are connected to the device.	`DetailedScan` — Scan all files on CD/DVD drives and Blu-ray discs. A detailed scan is performed with the default settings for the *Scan_File* task (ID: 3). `QuickScan` — Scan only files of **specific types** on CD/DVD drives and Blu-ray discs. The following file formats are scanned on removable media: com, exe, sys, prg, bin, bat, cmd, dpl, dll, scr, cpl, ocx, tsp, drv, vxd, pif, lnk, reg, ini, cia, vbs, vbe, js, jse, htm, htt, hta, asp, chm, pht, wsh, wsf, the, hip, eml, nws, msg, pig, mbx, doc*, dot*, fpm, rtf, shs, dwg, msi, otm, pdf, swf, jpeg, emf, ico, ov?, xl*, xlsb, pp*, md*, sldx, sldm, thmx. A quick scan is performed with the default settings for the *Critical_Areas_Scan* task (ID: 4). `NoScan` (default value) — Do not scan CD/DVD drives and Blu-ray discs when they are connected.
`BlockDuringScan`	Enables the blocking of files on a connected disk during scanning. While scanning boot sectors, files are not blocked.	`Yes` — Block files during the scan. `No` (default value) — Do not block files during the scan.

Container Scan

You can scan containers and images for malware in real time and on demand:

- The *Container Monitoring component (Container Scan, Container Monitoring)* allows scanning containers being started and namespaces in real time.
- You can use the *Container Scan* tasks to scan containers and images on demand.

To use the Container Scan functionality, a license that includes this function is required.

The application supports integration with the Docker container management system, the CRI-O environment, and the Podman and runc utilities.

Integration with Docker 28.5.2 and earlier is supported.

Container monitoring

The Container Monitoring component is enabled by default. The application scans running containers and namespaces in real time.

For the Container Monitoring component to work, the File Threat Protection component must be enabled. File Threat Protection settings are applied when scanning containers and namespaces.

The application does not scan namespaces and containers unless components for working with containers and namespaces are installed in the operating system. In this case, the component status for Container Monitoring on the command line is displayed as `Task is available and not running`, whereas in Kaspersky Security Center, it is displayed as "`Stopped`".

You can enable or disable the Container Monitoring component, and also configure the settings for scanning containers and namespaces in real time:

- Select the action that the application performs on a container when it detects an infected object.

  This setting is available when using the application under a license that supports this function.

- Configure the integration of Kaspersky Endpoint Security with the Docker container management system, CRI-O framework, and Podman and runc utilities.

  Integration with Docker 28.5.2 and earlier is supported.

Configuring container monitoring in the Web Console

In the Web Console, you can manage Container Scan settings component in the policy properties (**Application settings → General Settings → Container Scan settings**).

Configuring container monitoring in the Administration Console

In the Administration Console, you can manage application trace settings in the policy properties (Managing policies in the Administration Console, Creating a policy using the Administration Console) (**General settings → Container Scan settings**).

Container monitoring settings

Setting	Description
Enable namespace and container scan	This check box enables or disables the scanning of namespaces and containers in real time. This check box is selected by default.
Action with container upon threat detection	In the drop-down list, you can select the action to be performed on a container when an infected object is detected: • **Skip container**: if an infected object is detected, the application does not perform any action on the container. • **Stop container**: if an infected object is detected, the application stops the container. • **Stop container if disinfection fails** (default value) – the application stops the container if disinfection of the infected object fails. This setting is available when using the application under a license that supports this function.
Container Scan settings	The group of settings contains the **Configure** button. Clicking this button opens the **Container Scan settings** window.

Container Scan settings window

In this window, you can edit the settings for integrating Kaspersky Endpoint Security with the Docker container management system, the CRI-O environment, and the Podman and runc utilities.

Container Scan settings

Setting	Description
Use Docker	This check box enables or disables the use of the Docker container management system. This check box is selected by default. Docker 28.5.2 and earlier is supported.
Docker socket path	Entry field for the path or URI (Uniform Resource Identifier) of the Docker socket. Default value: /var/run/docker.sock.
Use CRI-O	The check box enables or disables the use of the CRI-O environment. This check box is selected by default.
File path	Entry field for the path to CRI-O configuration file. Default value: /etc/crio/crio.conf.

Setting	Description
Use Podman	The check box enables or disables the use of the Podman utility. This check box is selected by default.
File path	Entry field for the path to the Podman utility executable file. Default value: /usr/bin/podman.
Root directory	Entry field for the path to the root directory of the container storage. Default value: /var/lib/containers/storage
Use runc	The check box enables or disables the use of the runc utility. This check box is selected by default.
File path	Entry field for the path to the runc utility executable file. Default value: /usr/bin/runc.
Root directory	Entry field for the path to the root directory of the container state storage. Default value: /run/runc.

Configuring container monitoring in the command line

In the command line, you can enable or disable real-time scanning of namespaces and containers by using the `NamespaceMonitoring=Yes/No` setting from the general application settings.

You can edit the value for the setting `NamespaceMonitoring` using the configuration file that contains all general application settings, or using command line options.

When scanning namespaces and containers in real time, the general Container Scan settings are used. You can view and edit these settings using special administration commands for Kaspersky Endpoint Security:

- You can output the current values of general Container Scan settings to the console or to a configuration file. You can use this file to edit the settings.
- You can edit all general Container Scan settings using the configuration file that contains the settings. You can get the configuration file using the command for displaying general Container Scan settings.
- You can edit individual settings using command line options in the format `< setting name >=< setting value >`. You can get the current values of the settings using the command for displaying general Container Scan settings.

To output the current values of general Container Scan settings to the console, execute the following command:

```
kesl-control --get-container-settings [--json]
```

where `--json` is specified to output the settings in JSON format. If the `--json` option is not specified, the settings are output in the INI format.

To output the current values of general Container Scan settings to a file, execute the following command:

```
kesl-control --get-container-settings --file < path to configuration file > [--json]
```

where:

- `--file <path to configuration file>` is the path to the file where the general Container Scan settings will be saved. If you specify the name of a file without specifying its path, the file will be created in the current directory. If a file with the specified name already exists in the specified path, it will be overwritten. If the specified directory cannot be found on the disk, file will not be created.
- `--json` is specified to output the settings in JSON format. If the `--json` option is not specified, the settings are output in the INI format.

To edit the values of the general Container Scan settings using a configuration file:

1. Output the general Container Scan settings to the configuration file, as described above.
2. Edit the values of the necessary parameters in the file and save the changes.
3. Execute the command:

   `kesl-control --set-container-settings --file <path to configuration file> [--json]`

   where:

   - `--file <path to configuration file>` is the full path to the configuration file with the General Container Scan settings.
   - Specify the `--json` option if you are importing settings from a JSON configuration file. If the `--json` option is not specified, the application attempts to import from an INI file. If the import fails, an error is displayed.

   All the values of the general Container Scan settings defined in the file will be imported into the application.

To edit values of general Container Scan settings using command line options, execute the following command:

`kesl-control --set-container-settings <setting name>=<setting value> [<setting name>=<setting value>]`

where `<setting name>=<setting value>` is the name and value of one of the general Container Scan settings.

The values of the specified general Container Scan settings will be changed.

On-demand scan of containers and images

When the *Container Scan* task is running, Kaspersky Endpoint Security scans containers and images for viruses and other malware. The application can run multiple Container Scan tasks simultaneously.

A license that covers the Container Scan task is required to use this functionality.

The application supports integration with the Docker container management system, the CRI-O environment, and the Podman and runc utilities.

Integration with Docker 28.5.2 and earlier is supported.

You can start a Container Scan and configure the settings of the scan:

- Specify the containers and images to be scanned by name or name mask.
- Enables scanning of all layers of images and containers.
- Select the action that the application will perform on the container and the action that the application will perform on the image when an infected object is detected.
- Configure settings for scanning objects inside containers or images:
  - Enable or disable scanning of archives, mail databases, email messages in text format.
  - Limit the size of an object to be scanned and the duration of the object scan.
  - Select the actions to be performed by the application on the infected objects.
  - Configure exclusions of objects from scans:
    - by name or mask
    - by the name of the threats detected in the objects
  - Enable or disable the use of global exclusions when scanning.
  - Configure the use of the heuristic analyzer and iChecker technology during a scan.
  - Enable or disable the logging of information about scanned non-infected objects, about scanning objects in archives, and about unprocessed objects.

Container Scan in the Web Console

In the Web Console, you can scan containers and images using the *Container Scan* task.

You can create and run Container Scan user tasks. You can configure the scan settings by editing the settings of the tasks.

Container Scan task settings

Setting	Description
Scan archives	This check box enables or disables scan of archives. If the check box is selected, the application scans the archives. To scan an archive, the application has to unpack it first, which may slow down scanning. You can reduce the duration of archive scans by configuring the **Skip file that is scanned for longer than (sec)** and **Skip file larger than (MB)** settings in the **General scan settings** section. If the check box is cleared, the application does not scan the archives. This check box is selected by default.

Setting	Description
Scan SFX archives	This check box enables or disables *self-extracting archive* scans. Self-extracting archives are the archives that contain an executable extraction module. If the check box is selected, the application scans self-extracting archives. If the check box is cleared, the application does not scan self-extracting archives. This check box is available if the **Scan archives** check box is unchecked. This check box is selected by default.
Scan mail databases	This check box enables or disables scans of mail databases of Microsoft Outlook, Outlook Express, The Bat!, and other mail applications. If the check box is selected, the application scans mail database files. If the check box is cleared, the application does not scan mail database files. This check box is cleared by default.
Scan mail format files	This check box enables or disables scan of files of plain-text email messages. If this check box is selected, the application scans plain-text messages. If this check box is cleared, the application does not scan plain-text messages. This check box is cleared by default.
Skip file that is scanned for longer than (sec)	In this field, you can specify the maximum time to scan a file, in seconds. After the specified time, the application stops scanning the file. Possible values: 0–9999. If the value is set to 0, the scan time is unlimited. Default value: 0.
Skip file larger than (MB)	In this field, you can specify the maximum size of a file to scan, in megabytes. Possible values: 0–999999. If the value is set to 0, the application scans files of any size. Default value: 0.
Log clean objects	This check box enables or disables the logging of *ObjectProcessed* type events. If this check box is selected, the application logs events of the *ObjectProcessed* type for all scanned objects. If this check box is cleared, the application does not log events of the *ObjectProcessed* type for any scanned object. This check box is cleared by default.
Log unprocessed objects	This check box enables or disables the logging *ObjectNotProcessed* type events if a file cannot be processed during a scan. If this check box is selected, the application logs the events of the *ObjectNotProcessed* type. If this check box is cleared, the application does not log the events of the *ObjectNotProcessed* type. This check box is cleared by default.
Log packed objects	This check box enables or disables the logging of *PackedObjectDetected* type events for all packed objects that are detected. If this check box is selected, the application logs the events of the *PackedObjectDetected* type. If this check box is cleared, the application does not log the events of the *PackedObjectDetected* type. This check box is cleared by default.
Use iChecker technology	This check box enables or disables scan of only new and modified since the last scan files. If the check box is selected, the application scans only new files or the files modified since the last scan. If the check box is cleared, the application scans the files regardless of the creation or modification date. This check box is selected by default.
Use heuristic analysis	This check box enables or disables heuristic analysis during file scans. This check box is selected by default.
Heuristic analysis level	If the **Use heuristic analysis** check box is selected, you can select the heuristic analysis level in the drop-down list: • **Light** is the least detailed scan with minimal system load. • **Medium** is a medium scan with balanced system load. • **Deep** is the most detailed scan with maximum system load. • **Recommended** (default value) is the optimal level recommended by Kaspersky experts. It ensures an optimal combination of protection quality and impact on the performance of the protected devices.

Setting	Description
Actions on threat detection	You can select the action that the application performs on a detected infected object: • **Disinfect; delete if disinfection is not possible** (default). If you select this action, the application attempts to disinfect the infected object by saving a copy of the object in Backup. If disinfection is not possible (for example, if the type of object or the type of threat in the object cannot be disinfected), then the application deletes the infected object. • **Disinfect; inform if disinfection fails**. If you select this action, the application attempts to disinfect the infected object by saving a copy of the object in Backup. If disinfection is not possible (for example, if the type of object or the type of threat in the object cannot be disinfected), the application creates a record in the log. • **Inform**. If you select this action, the application creates a record about the infected object in the log.
Scan containers	This check box enables or disables container scans. If the check box is selected, you can specify a name or a name mask for containers to be scanned. This check box is selected by default.
Name mask	Entry field for a name or a name mask for containers to be scanned. By default, the * mask is specified – all containers will be scanned.
Action on threat detection	You can select the action that the application performs on a container when it detects an infected object: • **Skip container** – do not perform any actions on the container when an infected object is detected. • **Stop container** – stop container when an infected object is detected. • **Stop container if disinfection fails** (default value) – stop the container if disinfection of the infected object or elimination of the threat fails. Due to the way a CRI-O environment works, an infected object is not disinfected or deleted in a container in a CRI-O environment. We recommend selecting the **Stop container** action.
Scan images	This check box enables or disables the image scan. If the check box is selected, you can specify a name or a name mask for images to be scanned. This check box is selected by default.
Name mask	Entry field for a name or a name mask for images to be scanned. By default, the * mask is specified (all images are scanned).
Action on threat detection	You can select the action that the application performs on a container when it detects an infected object: • **Skip image** (default value) – do not perform any actions on the image when an infected object is detected. • **Delete image** when an infected object is detected (not recommended). All dependencies will also be deleted. Running containers will be stopped, and then deleted.
Scan each layer	This check box enables or disables the scanning of all layers of images and running containers. This check box is cleared by default.

Exclusion scopes section

In the **Exclusion scopes** section for the Container Scan task, you can configure exclusions by mask and by threat name, as well as the use of global exclusions when the task is running.

Settings of scan exclusions

Setting	Description
Configure exclusions by mask	Clicking the **Configure exclusions by mask** link opens the **Exclusions by mask** window. In this window, you can configure the exclusion of objects from scans by name mask.
Configure exclusions by threat name	Clicking the **Configure exclusions by threat name** link opens the **Exclusions by threat name** window. In this window, you can configure the exclusion of objects from scans based on threat name.
Use global exclusions	The check box enables or disables the exclusion of the mount points specified in global exceptions while the application is running. If this check box is selected, the application excludes configured mount points from scans. This check box is selected by default.

Exclusions by mask window

You can configure scan exclusions for objects by name mask. The application will not scan files whose names contain the specified mask. By default, the list of masks is empty.

You can add, edit, or delete masks.

Clicking the **Add** or **Edit** button opens the **Object mask** window. In this window, in the **Define object mask** field, you can specify the name template for files that Kaspersky Endpoint Security excludes from scans.

Examples:
The `*.txt` mask refers to all text files.
The `*_my_file_??.html` mask refers to html files starting with any characters, and ending with `_my_file_` followed by any two characters (for example, 2020_my_file_09.html).

You can also import the exclusion list from a file using the **Import** button and export the exclusion list to a JSON file using the **Export** button. When importing, you will be prompted to replace the list of exclusions or add the exclusions to the existing list.

You can enable the merging of the list of exclusions when inherited by child policies. If you want to merge list items, select the **Merge inherited values** check box. If the check box is selected, items in the list of the parent policy are displayed in child policies, and items can be added to the list of the child policy. If the check box is cleared, the list items are not merged when inheriting policy settings. This check box is cleared by default.

Exclusions by threat name window

You can configure the exclusion of objects from scans based on threat name. The application will not block the specified threats. By default, the list of threat names is empty.

You can add, edit, and delete threat names.

Clicking the **Add** or **Edit** button opens the **Threat name** window. In this window, you can define the name of the threat to be excluded from a scan.

You can also import the exclusion list from a file using the **Import** button and export the exclusion list to a JSON file using the **Export** button. When importing, you will be prompted to replace the list of exclusions or add the exclusions to the existing list.

You can enable the merging of the list of exclusions when inherited by child policies. If you want to merge list items, select the **Merge inherited values** check box. If the check box is selected, items in the list of the parent policy are displayed in child policies, and items can be added to the list of the child policy. If the check box is cleared, the list items are not merged when inheriting policy settings. This check box is cleared by default.

Container Scan in the Administration Console

In the Administration Console, you can scan containers and images using the *Container Scan* task.

You can create and run Container Scan user tasks. You can configure the scan settings by editing the settings of the tasks.

In the **Settings** section of the properties of the Container Scan task, you can configure the settings listed in the table below.

Container Scan task settings

Setting	Description
Scan	This group of settings contains buttons that open windows where you can configure the Container Scan settings and general scan settings.
Actions on threat detection	This group of settings contains the **Configure** button. Clicking this button opens the **Actions on threat detection** window, where you can configure the actions that the application performs on detected infected objects.

In the **Exclusions** section in the task properties, you can also configure exclusions by mask and by threat name for the Container Scan task.

Container Scan settings window

In this window, you can configure container and image scan settings.

Container and image scan settings

Setting	Description
Scan containers	This check box enables or disables container scans. If the check box is selected, you can specify a name or a name mask for containers to be scanned. This check box is selected by default.
Name mask	Entry field for a name or a name mask for containers to be scanned. By default, the * mask is specified – all containers will be scanned.
Action on threat detection	In the drop-down list, you can select the action to be performed on a container when an infected object is detected: • **Skip container** – do not perform any actions on the container when an infected object is detected. • **Stop container** – stop container when an infected object is detected. • **Stop container if disinfection fails** (default value) – stop the container if disinfection of the infected object or elimination of the threat fails. Due to the way a CRI-O environment works, an infected object is not disinfected or deleted in a container in a CRI-O environment. We recommend selecting the **Stop container** action.
Scan images	This check box enables or disables the image scan. If the check box is selected, you can specify a name or a name mask for images to be scanned. This check box is selected by default.
Name mask	Entry field for a name or a name mask for images to be scanned. By default, the * mask is specified (all images are scanned).
Action on threat detection	In the drop-down list, you can select the action to be performed on an image when an infected object is detected: • **Skip image** (default value) – do not perform any actions on the image when an infected object is detected. • **Delete image** when an infected object is detected (not recommended). All dependencies will also be deleted. Running containers will be stopped, and then deleted.
Scan each layer	This check box enables or disables the scanning of all layers of images and running containers. This check box is cleared by default.

Scan settings window

In this window, you can configure the file scan settings for the task.

Setting	Description
Scan archives	This check box enables or disables scan of archives. If the check box is selected, the application scans the archives. To scan an archive, the application has to unpack it first, which may slow down scanning. You can reduce the duration of archive scans by configuring the **Skip file that is scanned for longer than (sec)** and **Skip file larger than (MB)** settings in the **General scan settings** section. If the check box is cleared, the application does not scan the archives. This check box is selected by default.
Scan SFX archives	This check box enables or disables *self-extracting archive* scans. Self-extracting archives are the archives that contain an executable extraction module. If the check box is selected, the application scans self-extracting archives. If the check box is cleared, the application does not scan self-extracting archives. This check box is available if the **Scan archives** check box is unchecked. This check box is selected by default.
Scan mail databases	This check box enables or disables scans of mail databases of Microsoft Outlook, Outlook Express, The Bat!, and other mail applications. If the check box is selected, the application scans mail database files. If the check box is cleared, the application does not scan mail database files. This check box is cleared by default.
Scan mail format files	This check box enables or disables scan of files of plain-text email messages. If this check box is selected, the application scans plain-text messages. If this check box is cleared, the application does not scan plain-text messages. This check box is cleared by default.
Skip file that is scanned for longer than (sec)	In this field, you can specify the maximum time to scan a file, in seconds. After the specified time, the application stops scanning the file. Possible values: 0–9999. If the value is set to 0, the scan time is unlimited. Default value: 0.
Skip file larger than (MB)	In this field, you can specify the maximum size of a file to scan, in megabytes. Possible values: 0–999999. If the value is set to 0, the application scans files of any size. Default value: 0.
Log clean objects	This check box enables or disables the logging of *ObjectProcessed* type events. If this check box is selected, the application logs events of the *ObjectProcessed* type for all scanned objects. If this check box is cleared, the application does not log events of the *ObjectProcessed* type for any scanned object. This check box is cleared by default.
Log unprocessed objects	This check box enables or disables the logging *ObjectNotProcessed* type events if a file cannot be processed during a scan. If this check box is selected, the application logs the events of the *ObjectNotProcessed* type. If this check box is cleared, the application does not log the events of the *ObjectNotProcessed* type. This check box is cleared by default.
Log packed objects	This check box enables or disables the logging of *PackedObjectDetected* type events for all packed objects that are detected. If this check box is selected, the application logs the events of the *PackedObjectDetected* type. If this check box is cleared, the application does not log the events of the *PackedObjectDetected* type. This check box is cleared by default.
Use iChecker technology	This check box enables or disables scan of only new and modified since the last scan files. If the check box is selected, the application scans only new files or the files modified since the last scan. If the check box is cleared, the application scans the files regardless of the creation or modification date. This check box is selected by default.
Use heuristic analysis	This check box enables or disables heuristic analysis during file scans. This check box is selected by default.

Setting	Description
Heuristic analysis level	If the **Use heuristic analysis** check box is selected, you can select the heuristic analysis level in the drop-down list: • **Light** is the least detailed scan with minimal system load. • **Medium** is a medium scan with balanced system load. • **Deep** is the most detailed scan with maximum system load. • **Recommended** (default value) is the optimal level recommended by Kaspersky experts. It ensures an optimal combination of protection quality and impact on the performance of the protected devices.

Actions on threat detection window

In this window, you can configure actions to be performed by Kaspersky Endpoint Security on detected infected objects:

Actions on threat detection

Setting	Description
Actions on threat detection	You can select the action that the application performs on a detected infected object: • **Disinfect; delete if disinfection is not possible** (default). If you select this action, the application attempts to disinfect the infected object by saving a copy of the object in Backup. If disinfection is not possible (for example, if the type of object or the type of threat in the object cannot be disinfected), then the application deletes the infected object. • **Disinfect; inform if disinfection fails**. If you select this action, the application attempts to disinfect the infected object by saving a copy of the object in Backup. If disinfection is not possible (for example, if the type of object or the type of threat in the object cannot be disinfected), the application creates a record in the log. • **Inform**. If you select this action, the application creates a record about the infected object in the log.

Exclusions section

Settings of scan exclusions

Group of settings	Description
Exclusions by mask	This group of settings contains the **Configure** button, which opens the **Exclusions by mask** window. In this window, you can configure the exclusion of objects from scans by name mask.
Exclusions by threat name	This group of settings contains the **Configure** button, which opens the **Exclusions by threat name** window. In this window, you can configure the exclusion of objects from scans based on threat name.
Use global exclusions	The check box enables or disables the exclusion of the mount points specified in global exceptions while the application is running. If this check box is selected, the application excludes configured mount points from scans. This check box is selected by default.

Exclusions by mask window

You can configure scan exclusions for objects by name mask. The application will not scan files whose names contain the specified mask. By default, the list of masks is empty.

You can add, edit, or delete masks.

Clicking the **Add** button opens the **Object mask** window. In this window, in the **Define object mask** field, you can specify the name template for files that Kaspersky Endpoint Security excludes from scans.

Examples:
The `*.txt` mask refers to all text files.
The `*_my_file_??.html` mask refers to html files starting with any characters, and ending with `_my_file_` followed by any two characters (for example, 2020_my_file_09.html).

You can enable the merging of the list of exclusions when inherited by child policies. If you want to merge list items, select the **Merge inherited values** check box. If the check box is selected, items in the list of the parent policy are displayed in child policies, and items can be added to the list of the child policy. If the check box is cleared, the list items are not merged when inheriting policy settings. This check box is cleared by default.

Exclusions by threat name window

You can configure the exclusion of objects from scans based on threat name. The application will not block the specified threats. By default, the list of threat names is empty.

You can add, edit, and delete threat names.

You can enable the merging of the list of exclusions when inherited by child policies. If you want to merge list items, select the **Merge inherited values** check box. If the check box is selected, items in the list of the parent policy are displayed in child policies, and items can be added to the list of the child policy. If the check box is cleared, the list items are not merged when inheriting policy settings. This check box is cleared by default.

Container Scan on the command line

On the command line, you can scan containers and images in the following ways:

- Using the Container Scan predefined task (*Container_Scan*). You can manually start or stop this task, and configure the task run schedule. You can configure scan settings by editing the settings of this task.
- Using Container Scan user tasks (tasks of the *ContainerScan* type). You can manually start and stop user tasks and configure the task run schedule.
- Using the `kesl-control --scan-container` command, you can perform a *custom scan* of the specified containers and images.

Container Scan task settings

The table describes all available values and the default values of all the container and image scan settings.

Container Scan task settings

Setting	Description	Values
`ScanContainers`	Scan of containers specified by mask You can specify masks using the `ContainerNameMask` setting.	`Yes` (default value) — Scan containers defined by mask. `No` — Do not scan containers defined by mask.

`ContainerNameMask`	Specifies a name or a name mask that defines a container to scan.
	Masks are specified in command shell format. You can use the ? and * symbols.
	Before specifying this setting, make sure that `ScanContainers=Yes`.
		Default value: * (scan all containers).
		Examples:
		Scan a container with my_container name:
		`ContainerNameMask=my_container`
		Scan all containers whose names start with my_container:
		`ContainerNameMask=my_container*`
		Scan all containers whose names start with my_, then contain any five characters, then _container, and end with any characters sequence:
		`ContainerNameMask=my_?????_container*`

`ScanImages`	Scan of images specified by mask You can specify masks using the `ImageNameMask` setting.	`Yes` (default value) — Scan images defined by mask. `No` — Do not scan images defined by mask.

Setting	Description	Values

`ImageNameMask`	Specifies a name or a name mask that define images to scan.
	Before specifying this setting, make sure that the `ScanImages` setting is set to `Yes`.
	Masks are specified in command shell format.
	If you want to specify several masks, each mask must be specified on a new line with a new index.
		Default value: * (scan all images).
		Examples:
		Scan images with the "my_image" name, and the "latest" tag:
		`ImageNameMask=my_image:latest`
		Scan all images whose names start with my_image_ and with any tag:
		`ImageNameMask=my_image*`

`DeepScan`	Checking all image layers and running containers.	`Yes` – Scan all layers. `No` (default value) – Do not scan any layer.
`ContainerScanAction`	Action to be performed on a container when an infected object is detected. Actions on an infected object inside the container are described below.	`StopContainerIfFailed` (default value) — The application stops the container if an infected object could not be disinfected or deleted. If this value is selected, the action performed with the container also depends on the `ActionOnThreat` setting, which is applied to objects inside containers and images (see the table below). If `ActionOnThreat` is set to `DisinfectDeleteIfNotPossible` and the application cannot disinfect or delete the infected object while carrying out the action, the container is stopped. Due to the way a CRI-O environment works, an infected object is not disinfected or deleted in a container in a CRI-O environment. We recommend selecting the `StopContainer` action. `StopContainer` — The application stops the container when an infected object is detected. `Skip` — The application does not perform any action on containers when an infected object is detected.
`ImageAction`	Specifies the action to be performed on an image when an infected object is detected. Actions on an infected object inside the image are described below.	`Skip` (default value) — The application does not perform any action on images when an infected object is detected. `Delete` — The application deletes the image when an infected object is detected (not recommended). All dependencies will also be deleted. Running containers will be stopped, and then deleted.

The settings described below are applied to the objects inside containers and images.

Container Scan task settings

Setting	Description	Values
`ScanArchived`	Enables scanning of archives (including SFX self-extracting archives). The application scans the following archives: .zip; .7z*; .7-z; .rar; .iso; .cab; .jar; .bz; .bz2; .tbz; .tbz2; .gz; .tgz; .arj. The list of supported archive formats depends on the application databases being used.	`Yes` (default value) — Scan archives. If `ActionOnThreat` is set to `DisinfectDeleteIfNotPossible`, and disinfection is impossible, then, depending on the archive type, the application deletes either the infected object or the entire archive that contains the threat. `No` — Do not scan archives.
`ScanSfxArchived`	Enables scanning of self-extracting archives only (archives that contain an executable extraction module).	`Yes` (default value) — Scan self-extracting archives. `No` — Do not scan self-extracting archives.
`ScanMailBases`	Enables scanning email databases of Microsoft Outlook, Outlook Express, The Bat, and other mail clients.	`Yes` — Scan files of email databases. `No` (default value) — Do not scan files of email databases.

Setting	Description	Values
`ScanPlainMail`	Enables scanning of plain text email messages.	`Yes` — Scan plain text email messages. `No` (default value) — Do not scan plain text email messages.
`TimeLimit`	Maximum object scan duration (in seconds). The application stops scanning the object if it takes longer than the time specified by this setting.	0 to 9999 0 — The object scan time is unlimited. Default value: 0.
`SizeLimit`	Maximum size of an object to be scanned (in megabytes). If the object to be scanned is larger than the specified value, the application skips this object.	0 to 999999 0 — The application scans objects of any size. Default value: 0.
`ActionOnThreat`	Selection of the action to be performed by the application on the infected objects.	`DisinfectDeleteIfNotPossible` (disinfect; delete if not possible) means the application tries to disinfect the infected object after saving a copy of the object in Backup. If disinfection is not possible (for example, if the type of object or the type of threat in the object cannot be disinfected), then the application deletes the infected object. `DisinfectInformIfNotPossible` (disinfect; inform if not possible) means the application tries to disinfect the infected object after saving a copy of the object in Backup. If disinfection is not possible (for example, if the type of object or the type of threat in the object cannot be disinfected), the application creates a record in the log. `Inform` means the application does not try to disinfect or delete the infected object. Information about the infected object is logged. Default value: `DisinfectDeleteIfNotPossible`.
`UseExcludeMasks`	Uses scan exclusions for the objects specified by the `ExcludeMasks.item_#` setting.	`Yes` — Exclude objects specified by the `ExcludeMasks.item_#` setting from scans. `No` (default value) — Do not exclude objects specified by the `ExcludeMasks.item_#` setting from the scan.

`ExcludeMasks.item_#`	Excludes objects from being scanned by name or mask. You can use this setting to exclude an individual file from the specified scan scope by name or exclude several files at once using masks in the shell format.	The default value is not defined.
		Example:
		`UseExcludeMasks=Yes`
		`ExcludeMasks.item_0000=eicar1.*`
		`ExcludeMasks.item_0001=eicar2.*`

`UseExcludeThreats`	Uses scan exclusions for objects containing the threats specified by the `ExcludeThreats.item_#` setting.	`Yes` — Exclude objects containing the threats specified by the `ExcludeThreats.item_#` setting from the scan. `No` (default value): do not exclude objects containing the threats specified by the `ExcludeThreats.item_#` setting from the scan.

`ExcludeThreats.item_#`	Excludes objects from scans by the name of the threats detected in them. Before specifying a value for this setting, make sure that the `UseExcludeThreats` setting is enabled.
	In order to exclude an object from scans, specify the full name of the threat detected in this object – the string containing the application's decision that the object is infected.
	For example, you may be using a utility to obtain information about your network. To keep the application from blocking it, add the full name of the threat contained in it to the list of threats excluded from scans.
	You can find the full name of the threat detected in an object in the application log or on the website https://threats.kaspersky.com.
		The setting value is case-sensitive.
		The default value is not defined.
		Example:
		`UseExcludeThreats=Yes`
		`ExcludeThreats.item_0000=EICAR-Test-*`
		`ExcludeThreats.item_0001=?rojan.Linux`

`UseGlobalExclusions`	Enables global exclusions for scanning.	`Yes` (default value) — Use the global exclusions. `No` — Do not use global exclusions.

Setting	Description	Values
`ReportCleanObjects`	Enables logging of information about scanned objects that the application reports as not being infected. You can enable this setting, for example, to make sure that a particular object was scanned by the application.	`Yes` — Log information about non-infected objects. `No` (default value) — Do not log information about non-infected objects.
`ReportPackedObjects`	Enables logging of information about scanned objects that are part of compound objects. You can enable this setting, for example, to make sure that an object within an archive has been scanned by the application.	`Yes` — Log information about scanned objects within archives. `No` (default value) — Do not log information about scanned objects within archives.
`ReportUnprocessedObjects`	Enables logging of information about objects that have not been processed for some reason.	`Yes` — Log information about unprocessed objects. `No` (default value) — Do not log information about unprocessed objects.
`UseAnalyzer`	Enables heuristic analysis. Heuristic analysis helps the application to detect threats even before they become known to virus analysts.	`Yes` (default value) — Enable Heuristic Analyzer. `No` — Disable Heuristic Analyzer.
`HeuristicLevel`	Specifies the heuristic analysis level. You can specify the heuristic analysis level. The heuristic analysis level sets the balance between the thoroughness of searches for threats, the load on the operating system's resources, and the scan duration. The higher the heuristic analysis level, the more resources and time are required for scanning.	`Light` — The least thorough scan with minimum load on the system. `Medium` — A medium heuristic analysis level with a balanced load on the system. `Deep` — The most thorough scan with maximum load on the system. `Recommended` (default value) — The recommended value.
`UseIChecker`	Enables usage of the iChecker technology.	`Yes` (default value) — Enable use of the iChecker technology. `No` — Disable use of the iChecker technology.

Custom scan of containers and images

You can perform a custom scan of the specified containers and images using the `kesl-control --scan-container` command.

A custom scan is performed with the settings stored in the predefined task *Custom_Container_Scan* (ID: 19). You can configure Custom Container Scan settings by editing the settings of this task. By default, the *Custom_Container_Scan* task has the same settings as the *Container_Scan* task (ID:18).

To start the Custom Container Scan task, execute the following command:

```
kesl-control --scan-container <ID/name[:tag]>
```

where `<ID/name[:tag]>` is the name or ID of the container or image. You can use **masks** to scan multiple objects.

You can use the `*` (asterisk) character to create a file or directory name mask.

You can indicate a single `*` character to represent any set of characters (including an empty set) preceding the `/` character in the file or directory name. For example, `/dir/*/file` or `/dir/*/*/file`.

You can indicate two consecutive `*` characters to represent any set of characters (including an empty set and the `/` character) in the file or directory name. For example, `/dir/**/file*/` or `/dir/file**/`.

The `**` mask can be used only once in a directory name. For example, `/dir/**/**/file` is an incorrect mask.

You can use a single `?` character to represent any one character in the file or directory name.

If there are several entities with the same name, the application scans all of them.

As a result of executing the command, a temporary containers and images scan task is created, which is automatically deleted after completion. In this case, the scan results are output to the console.

Examples:
Scan the container named my_container:
```
kesl-control --scan-container my_container
```
Scan the image named my_image (all tags):
```
kesl-control --scan-container my_image*
```

Integration with Jenkins

Kaspersky Endpoint Security supports integration with Jenkins. Jenkins Pipeline plug-ins can be used to scan Docker images at different stages. For example, you can scan Docker images in a repository during the development process or before publishing.

To integrate Kaspersky Endpoint Security with Jenkins:

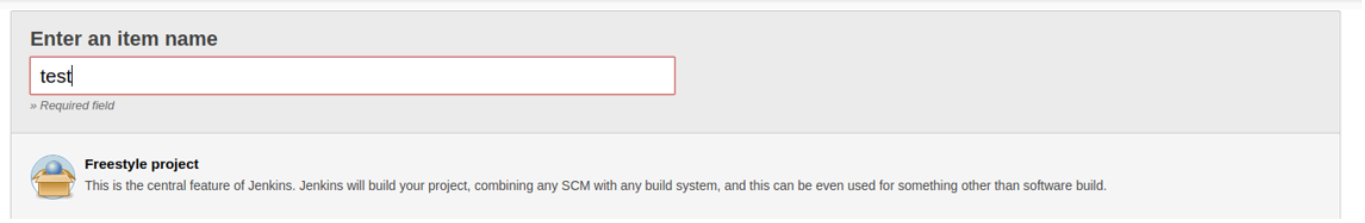
1. Install Kaspersky Endpoint Security on a Jenkins node.
2. Install Docker Engine on a Jenkins node.

   For details, please refer to the Docker Engine documentation.
3. Grant the Kaspersky Endpoint Security administrator privileges to the Jenkins user:

   ```
   kesl-control --grant-role admin <user name Jenkins>
   ```
4. Add a Jenkins user to the docker group:

   ```
   sudo usermod -aG docker <user name Jenkins>
   ```

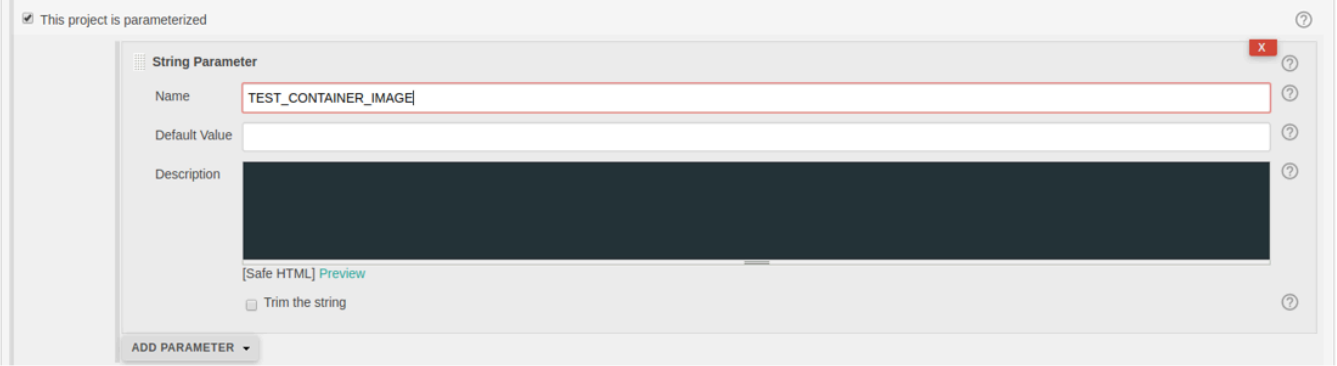
   Usually the jenkins name is used.
5. In Jenkins, create a new build job with the `test` name (**New Item** → **Enter an item name**).



6. Configure your project, according to your needs. It is assumed that as a result, you have an image or a started container that you need to scan.
7. To start the Docker container, add the following script to the Jenkins build procedure. If you use Jenkins plug-ins or another way to start Docker containers, save the ID of the running Docker container to the file /tmp/kesl_cs_info, for further scanning:

   ```
   TMP_FILE="/tmp/kesl_cs_info"
   EXIT_CODE=0
   ```

```
echo "Start container from image: '${TEST_CONTAINER_IMAGE}'"
CONTAINER_ID=$(docker run -d -v /storage:/storage ${TEST_CONTAINER_IMAGE}
/storage/docker_process.sh)
if [ -z "${CONTAINER_ID}" ] ; then
echo "Cannot start container from image ${TEST_CONTAINER_IMAGE}"
exit 1
fi
echo "${CONTAINER_ID}" > ${TMP_FILE}
exit ${EXIT_CODE}
```



8. After building the artifacts, add the following script to the steps to build the jenkins.

   This script supports one container for scanning. If necessary, modify the script according to your needs.

```
TMP_FILE="/tmp/kesl_cs_info"
EXIT_CODE=0
if [ ! -f "${TMP_FILE}" ] ; then
echo "Cannot find temporary file with container ID: '${TMP_FILE}'"
exit 1
fi
CONTAINER_ID=$(cat ${TMP_FILE})
if [ -z "${CONTAINER_ID}" ] ; then
echo "Cannot find container ID in the temporary file: '${TMP_FILE}'"
exit 1
fi
echo "Start anti-virus scan for: '${CONTAINER_ID}'"
THREATS_AMOUNT=$(kesl-control --scan-container ${CONTAINER_ID}|grep 'Total detected
objects'|awk '{print $5}')
if [ "${THREATS_AMOUNT}" != "0" ] ; then
echo "ATTENTION! ${THREATS_AMOUNT} threats detected at: '${CONTAINER_ID}'"
EXIT_CODE=1
else
echo "Not threats found"
fi
echo "Remove container: {${CONTAINER_ID}}"
docker kill ${CONTAINER_ID}
```

```
docker rm -f ${CONTAINER_ID}
rm -f ${TMP_FILE}
```

9. To scan a Docker image from a repository, use the following script:

```
DOCKER_FILE=https://raw.githubusercontent.com/ianmiell/simple-
dockerfile/master/Dockerfile
DOCKER_FILE_FETCHED=$$.Dockerfile
TEST_IMAGE_NAME=test_image
echo "Build image from ${DOCKER_FILE}"
curl ${DOCKER_FILE} -o ${DOCKER_FILE_FETCHED}
if [ -f ${DOCKER_FILE_FETCHED} ] ; then
echo "Dockerfile fetched: ${DOCKER_FILE_FETCHED}"
else
echo "Dockerfile not fetched"
exit 1
fi
docker build -f ${DOCKER_FILE_FETCHED} -t ${TEST_IMAGE_NAME}
echo "Scan docker image"
SCAN_RESULT=$(/opt/kaspersky/kesl/bin/kesl-control --scan-container
${TEST_IMAGE_NAME}*)
echo "Scan done: "
echo $SCAN_RESULT
```

10. Save the build job.

Firewall Management

A device used on local area networks (LANs) and the internet is exposed to viruses, other malware, and a variety of attacks that exploit vulnerabilities in operating systems and software. The operating system firewall protects data stored on the user device by blocking most threats when the device is connected to the internet or a LAN.

The operating system firewall allows you to detect all network connections on the user device and provide a list of their IP addresses. The Firewall Management component allows you to set the status of the network connections by configuring the network packet rules.

You can use network packet rules to specify the desired level of device protection, from fully blocking Internet access for all applications to allowing unlimited access. All outbound connections are allowed by default, unless corresponding blocking rules for the Firewall Management component are specified.

The Firewall Management component is disabled by default.

It is recommended to disable other operating system firewall management tools before enabling the Firewall Management component.

When the Firewall Management component is enabled, Kaspersky Endpoint Security automatically deletes all custom rules configured for the firewall with tools provided by the operating system. These rules are not restored after the component is disabled. If required, save the custom firewall rules before enabling the Firewall Management component.

If firewall management is enabled, Kaspersky Endpoint Security scans the operating system firewall and blocks any attempt to change the firewall settings, for example, when an application or utility attempts to add or delete a firewall rule. Kaspersky Endpoint Security checks the operating system firewall every 60 seconds and, if necessary. restores the set of firewall rules created using the application. The checking period cannot be changed.

Kaspersky Endpoint Security still scans the operating system firewall when firewall management is disabled. This allows the application to restore dynamic rules.

You can enable or disable firewall management, and also configure the following settings:

- Configure a list of network packet rules that Kaspersky Endpoint Security will apply when an attempt to establish a network connection is detected. You can add or remove network packet rules, and also change the execution priority of a network packet rule.

  In some operating systems based on the Red Hat Enterprise Linux code base, firewall rules created in the Kaspersky Endpoint Security application can only be viewed using a management command (`kesl-control -F --query`).

- Select default actions to perform on incoming connections and packets if no other network packet rules apply to this connection type.

- Map network addresses to predefined networks. You can add IP addresses or subnets to available networks and delete address from available networks.

- Enables or disables automatic adding of allowing rules for Network Agent ports.

About network packet rules

Network packet rules are actions taken by the Kaspersky Endpoint Security to allow or deny a detected network connection attempt.

Network packet rules impose restrictions on network packets regardless of the application. Such rules restrict inbound and outbound network traffic through specific ports of the selected data protocol.

All outbound connections are allowed by default (default action setting), unless the corresponding blocking rules for the Firewall Management are specified. The default action is performed with the lowest priority: if no other network packet rule has been triggered or if no network packet rules have been specified, the connection is allowed.

Firewall Management specifies certain network packet rules by default. You can create your own network packet rules and specify an execution priority for each network packet rule.

About dynamic rules

Kaspersky Endpoint Security allows *dynamic rules* to be added to, or deleted from, the firewall to ensure the application works properly. For example, Network Agent adds dynamic rules that allow connections to Kaspersky Security Center initiated by the application or by Kaspersky Security Center. The rules of the Anti-Cryptor are also dynamic.

If Kaspersky Endpoint Security is used in Light Agent mode, dynamic rules are automatically added to the firewall that allow connections to the SVM and Integration Server.

Kaspersky Endpoint Security does not control dynamic rules and does not block application components' access to network resources. Dynamic rules do not depend on the Firewall Management component state (enabled/disabled) or changes to the settings of the component operation. The execution priority of dynamic rules is higher than the priority of network packet rules. The application restores a set of dynamic rules if any of them are deleted, for example, by using the iptables utility.

You can view the set of dynamic rules (using the `kesl-control -F --query` command); however the dynamic rules settings cannot be modified.

About the predefined available networks

An *available network* is a defined group of IP addresses or subnets. An available network lets you use the same rules for several IP addresses or subnets without having to create a separate rule for each IP address or subnet. An available network can be used as the value of the "remote address" parameter when creating a network packet rule. Kaspersky Endpoint Security provides three predefined networks:

- **Public**. A network that is not protected by an anti-virus application, firewall, or filters (such as networks of internet cafés).
- **Local**. A network whose users have the right of access to files and printers on the device (such as corporate LANs or home networks).
- **Trusted**. A safe network in which the device is not exposed to attacks or unauthorized data access attempts.

You cannot create a new predefined network or delete an existing one, but you can add or remove IP addresses and subnets from a network.

Firewall Management in the Web Console

In the Web Console, you can manage Firewall settings in the policy properties (**Application settings** → **Communication & Web Protection** → **Firewall**).

Firewall Management in the Administration Console

In the Administration Console, you can manage Firewall Management settings in the policy properties (Managing policies in the Administration Console, Creating a policy using the Administration Console) (**Essential Threat Protection** → **Firewall Management**).

Firewall Management settings

Setting	Description
Enable Firewall Management	This check box enables or disables Firewall Management. This check box is cleared by default.
Network packet rules	This group of settings contains the **Configure** button. Clicking this button opens the **Network packet rules** window. In this window, you can configure network packet rules that are applied by the Firewall Management component when it detects the network connection attempt.
Available networks	This group of settings contains the **Configure** button. Clicking this button opens the **Available networks** window. In this window, you can configure the list of networks that the Firewall Management component will monitor.
Incoming connections	In this drop-down list, you can select the action to be performed for incoming network connections: • **Allow** network connections (default value). • **Block** network connections.
Incoming packets	In this drop-down list you can select the action to be performed for incoming packets: • **Allow** incoming packets (default value). • **Block** incoming packets.
Always add allowing rules for Network Agent ports	This check box enables or disables the automatic adding of allowing rules for Network Agent ports. This check box is selected by default.

Network packet rules window

The **Network packet rules** table contains network packet rules that the Firewall Management component uses for network activity monitoring. You can configure the settings described in the table below for network packet rules.

Network packet rules settings

Setting	Description
Name	Network packet rule name.
Action	Action to be performed by Firewall Management when it detects the network activity.
Local address	Network addresses of devices that have Kaspersky Endpoint Security installed and can send and/or receive network packets.
Remote address	Network addresses of remote devices that can send and/or receive network packets.
Logging	This column shows if the application logs actions of the network packet rule. If the value is **Yes**, the application logs the actions of the network packet rule. If the value is **No**, the application does not log the actions of the network packet rule.

By default, the table of network packet rules is empty.

You can add, edit, delete, move up, and move down network packet rules in the table.

Added network packet rule window

In this window, you can configure the added network packet rule settings.

Network packet rule settings

Setting	Description
Protocol	You can select the type of data transfer protocol for which you want to monitor network activity: • **Any** (default value) • **GRE** • **ICMP** • **ICMPv6** • **IGMP** • **TCP** • **UDP**
Direction	You can specify the direction of network activity being monitored: • **Incoming packets**. If this option is selected, the Firewall Management component monitors only incoming packets. • **Incoming**. If this option is selected, the Firewall Management component monitors only incoming connections. • **Incoming/Outgoing** (default setting). If this option is selected, the Firewall Management component monitors both incoming and outgoing connections. • **Incoming/Outgoing packets**. If this option is selected, the Firewall Management component monitors both incoming and outgoing packets. • **Outgoing packets**. If this option is selected, the Firewall Management component monitors only outgoing packets. • **Outgoing**. If this option is selected, the Firewall Management component monitors only outgoing connections.
ICMP type	You can specify the ICMP type. The Firewall Management component monitors messages of the specified type sent by the host or gateway. If the **Specified** option is selected, the field for entering the ICMP type will be displayed. This window is displayed if the **ICMP** or **ICMPv6** data transfer protocol is selected in the **Protocol** drop-down list.
ICMP code	You can specify the ICMP code. The Firewall Management component monitors messages of the type specified in the **ICMP type** field, with the code specified in the **ICMP code** field, and sent by the host or gateway. If the **Specified** option is selected, the field for entering the ICMP code will be displayed. This window is displayed if the **ICMP** or **ICMPv6** data transfer protocol is selected in the **Protocol** drop-down list.

Setting	Description
Remote ports	You can specify a port number or port range of the remote devices between which the connection is to be monitored. If the **Specified** option is selected, the field for entering the port numbers will be displayed. This window is displayed only if **TCP** or **UDP** data transfer protocol is selected in the **Protocol** drop-down list.
Local ports	You can specify a port number or port range of the local devices between which the connection is to be monitored. If the **Specified** option is selected, the field for entering the port numbers will be displayed. This window is displayed only if **TCP** or **UDP** data transfer protocol is selected in the **Protocol** drop-down list.
Remote addresses	You can specify the network addresses of the remote devices that can send and receive network packets: • **Any address** (default value). If this item is selected, the network rule controls network packets sent and/or received by remote devices with any IP address. • **Specified address or address range**. If this option is selected, the network rule controls the sending and receiving of network packets by remote devices with the IP addresses that are specified in the table below. Clicking the **Add** button above the table opens the Add IP addresses window, in which you can specify an IP address of the device, a network address, or a range of IP addresses. • **By network type**. If this item is selected, the network rule controls network packets sent and received by remote devices with the IP addresses associated with the selected network type: **Public networks**, **Local networks**, or **Trusted networks**.
Local addresses	You can specify the network addresses of the devices with Kaspersky Endpoint Security installed that can send and receive network packets: • **Any address** (default value). If this option is selected, the network rule controls network packets sent and/or received by the devices with Kaspersky Endpoint Security installed regardless of their IP address. • **Specified address or address range**. If this option is selected, the network rule controls the network addresses of devices with Kaspersky Endpoint Security installed that can send and receive network packets. These network addresses are specified in the table below. Clicking the **Add** button above the table opens the Add IP addresses window, in which you can specify an IP address of the device, a network address, or a range of IP addresses.
Action	You can select an action to be performed by the Firewall Management component when it detects network activity: • **Block** network activity. • **Allow** network activity (default value).
Logging	You can specify whether the actions of the network rule will be logged in the report.
Rule name	The field for entering the name of the network packet rule.

Add IP addresses window

In this window, you can specify the IP address of the device, network address or range of IP addresses.

You can specify multiple addresses; enter each address on a new line for convenience of copying them.

Available networks window

The **Available networks** table contains the networks controlled by the Firewall Management component. The table of available networks is empty by default.

Available networks settings

Setting	Description
IP address	Network IP address.
Network type	Network type (**Public network**, **Local network**, or **Trusted network**).

You can add, edit, and delete available networks.

Network connection window

In this window, you can configure the network connection that the Firewall Management component will monitor.

Network connection

Setting	Description
IP address	The field for entering IP address of the network.
Network type	You can select the type of the network: • **Public** • **Local** • **Trusted**

Firewall Management in the command line

In the command line, you can configure Firewall Management using the Firewall Management predefined task (*Firewall_Management*).

By default, the Firewall Management Task is not run. You can start and stop this task manually.

You can configure the firewall management settings by editing the settings of the Firewall Management predefined task.

You can also configure Firewall Management settings using Firewall Management commands:

- Create and delete network packet rules and change their execution priority.
- Create a list of IP addresses or subnets in network zones.
- View firewall rules created in the application by using the following command: `kesl-control -F --query`.

Firewall Management task settings

Setting	Description	Values
`DefaultIncomingAction`	The default action to perform on an inbound connection if no network rules apply to this connection type.	`Allow` (default value) — Allow inbound connections. `Block` — Block inbound connections.
`DefaultIncomingPacketAction`	The default action to perform on an incoming packet if no network packet rules apply to this connection type.	`Allow` (default value) — Allow incoming packets. `Block` — Block incoming packets.
`OpenNagentPorts`	Adds Network Agent dynamic rules to the network packet rules.	`Yes` (default value) – Add Network Agent dynamic rules to the network packet rules. `No` – Do not add Network Agent dynamic rules to the network packet rules.
The **[PacketRules.item_#]** section contains network packet rules for the Firewall Management task. You can specify several `[PacketRules.item_#]` sections in any order. The application processes the scopes by index in ascending order. Each `[PacketRules.item_#]` section contains the following settings:		
`Name`	Network packet rule name.	Default value: `Packet rule #<n>`, where n is an index.
`FirewallAction`	Action to be performed on connections specified in this network packet rule.	`Allow` (default value) — Allow network connections. `Block` — Block network connections.

Setting	Description	Values

`Protocol`	Type of protocol for which network activity is to be monitored.	`Any` (default value) — The Firewall Management task monitors all network activity.
		`TCP`
		`UDP`
		`ICMP`
		`ICMPv6`
		`IGMP`
		`GRE`

`RemotePorts`	Port numbers of the remote devices whose connection is monitored. An integer or interval can be specified for this value. This setting can only be specified if the `Protocol` setting is set to `TCP` or `UDP`.	`Any` (default value) — Monitor all remote ports. `0 – 65535`.
`LocalPorts`	Port numbers of the local devices whose connection is monitored. An integer or interval can be specified for this value. This setting can only be specified if the `Protocol` setting is set to `TCP` or `UDP`.	`Any` (default value) — Monitor all local ports. `0 – 65535`.
`ICMPType`	ICMP packet type. This setting can only be specified if the `Protocol` setting is set to `ICMP` or `ICMPv6`.	`Any` (default value) — Monitor all ICMP packet types. Integer number according to the data transfer protocol specification.
`ICMPCode`	ICMP packet code. This setting can only be specified if the `Protocol` setting is set to `ICMP` or `ICMPv6`.	`Any` (default value) — Monitor all ICMP packet codes. Integer number according to the data transfer protocol specification.
`Direction`	Direction of the monitored network activity.	`IncomingOutgoing` or `InOut` (default value) — Monitor both inbound and outbound connections. `Incoming` or `In` — Monitor only inbound connections. `Outgoing` or `Out` — Monitor only outbound connections. `IncomingPacket` or `InPacket` — Monitor only incoming packets. `OutgoingPacket` or `OutPacket` — Monitor only outgoing packets. `IncomingOutgoingPacket` or `InOutPacket` — Monitor both incoming and outgoing packets.
`RemoteAddress`	The network addresses of the remote devices that can send and receive network packets.	`Any` (default value) — Monitor network packets sent and/or received by remote devices with any IP address. `Trusted` — Predefined network zone for trusted networks. `Local` — Predefined network zone for local networks. `Public` — Predefined network zone for public networks. `d.d.d.d` — IPv4 address, where d is a decimal number from 0 to 255. `d.d.d.d – d.d.d.d` — Range of IPv4 addresses. `d.d.d.d/p` — Subnet of IPv4 addresses, where p is a number from 0 to 32. `x:x:x:x:x:x:x:x` — IPv6 address, where x is a hexadecimal number from 0 to ffff. `x:x:x:x:x:x:x:x – x:x:x:x:x:x:x:x` — Range of IPv6 addresses. x:x:x:x:x:x:x:x/p — Subnet of IPv6 addresses, where p is a number from 0 to 128; you can use :: for brevity.

Setting	Description	Values
`LocalAddress`	Network addresses of devices that have Kaspersky Endpoint Security installed and can send and/or receive network packets.	`Any` (default value) — Monitor network packets sent and/or received by local devices with any IP address. `d.d.d.d` — IPv4 address, where d is a decimal number from 0 to 255. `d.d.d.d – d.d.d.d` — Range of IPv4 addresses. `d.d.d.d/p` — Subnet of IPv4 addresses, where p is a number from 0 to 32. `x:x:x:x:x:x:x:x` — IPv6 address, where x is a hexadecimal number from 0 to ffff. `x:x:x:x:x:x:x:x – x:x:x:x:x:x:x:x` — Range of IPv6 addresses. x:x:x:x:x:x:x:x/p — Subnet of IPv6 addresses, where p is a number from 0 to 128; you can use **::** for brevity.
`LogAttempts`	Include a record of the network rule action in the report.	`Yes` — Log actions in the report. `No` (default value)—Do not write the actions in the report.
The **[NetworkZonesPublic]** section contains network addresses associated with public networks. You can specify several IP addresses or subnets of IP addresses.		
`Address.item_#`	Specifies IP addresses or subnets of IP addresses.	`d.d.d.d` — IPv4 address, where d is a decimal number from 0 to 255. `d.d.d.d/p` — Subnet of IPv4 addresses, where p is a number from 0 to 32. `x:x:x:x:x:x:x:x` — IPv6 address, where x is a hexadecimal number from 0 to ffff. `x:x:x:x::0/p` — Subnet of IPv6 addresses, where p is a number from 0 to 64. Default value: "" (no network addresses in this zone)
The **[NetworkZonesLocal]** section contains network addresses associated with local networks. You can specify several IP addresses or subnets of IP addresses.		
`Address.item_#`	Specifies IP addresses or subnets of IP addresses.	`d.d.d.d` — IPv4 address, where d is a decimal number from 0 to 255. `d.d.d.d/p` — Subnet of IPv4 addresses, where p is a number from 0 to 32. `x:x:x:x:x:x:x:x` — IPv6 address, where x is a hexadecimal number from 0 to ffff. `x:x:x:x::0/p` — Subnet of IPv6 addresses, where p is a number from 0 to 64. Default value: `""` (no network addresses in this zone)
The **[NetworkZonesTrusted]** section contains network addresses associated with trusted networks. You can specify several IP addresses or subnets of IP addresses.		
`Address.item_#`	Specifies IP addresses or subnets of IP addresses.	`d.d.d.d` — IPv4 address, where d is a decimal number from 0 to 255. `d.d.d.d/p` — Subnet of IPv4 addresses, where p is a number from 0 to 32. `x:x:x:x:x:x:x:x` — IPv6 address, where x is a hexadecimal number from 0 to ffff. `x:x:x:x::0/p` — Subnet of IPv6 addresses, where p is a number from 0 to 64. Default value: `""` (no network addresses in this zone)

Configuring a list of network packet rules on the command line

To add a network packet rule, execute the following command:

```
kesl-control --add-rule [--name <rule name>] [--action <action>] [--protocol
<protocol>] [--direction <direction>] [--remote <remote address>[:<port or port
range>]] [--local <local address>[:<port or port range>]] [--at <index>]
```

where:

- `--name <rule name>` is the name of the network packet rule.
- `--action <action>` is the action to be performed on connections specified in network packet rule.
- `--protocol <protocol>` is the type of communication protocol for which you want to monitor network activity.
- `--direction <direction>` is the direction of the monitored network activity.
- `--remote <remote address>[:<port or port range>]` is the network address of the remote device. You can specify the name of a predefined network zone as the remote address.
- `--local <local address>[:<port or port range>]` is the network address of the device with Kaspersky Endpoint Security installed.
- `--at <index>` is the index of rules in the list of network packet rules. If the `--at` option is not specified or its value is larger than the number of rules in the list, the new rule is added to the end of the list.

Parameters that you do not specify values for in the command are set to their default values.

Examples:

To create a rule that blocks all incoming and established connections to TCP port 23, execute the following command:

```
kesl-control --add-rule --name Block_Telnet --action Block --direction in --protocol TCP --local any:23 --remote
any
```

To create a rule that blocks incoming and established connections via the TCP port 23 for the Public network zone, execute the following command:

```
kesl-control --add-rule --name Block_Telnet --action Block --direction in --protocol TCP --local any:23 --remote
Public
```

To delete a network packet rule, execute one of the following commands:

- `kesl-control --del-rule --name <rule name>`
- `kesl-control --del-rule --index <index>`

where:

- `--name <rule name>` is the name of the network packet rule.
- `--index <index>` is the current index of rules in the list of network packet rules.

If the list of network packet rules contains multiple rules with an identical name or does not contain a rule with a specified name or index, an error occurs.

To change a network packet rule's execution priority, execute one of the following commands:

- `kesl-control --move-rule --name <rule name> --at <index>`
- `kesl-control --move-rule --index <index> --at <index>`

  where:

- `--name <rule name>` is the name of the network packet rule.
- `--index <index>` is the current index of rules in the list of network packet rules.
- `--at <index>` is the new index of rules in the list of network packet rules.

Configuring network zones on the command line

To add a network address to the zone, execute the following command:

```
kesl-control --add-zone <zone> --address <address>
```

where:

- `<zone>` is the predefined name of the network zone. Possible values: `Public`, `Local`, `Trusted`.
- `<address>` is the network address or subnet.

To delete a network address from a zone, execute one of the following commands:

- `kesl-control --del-zone <zone> --address <address>`
- `kesl-control --del-zone <zone> --index <address index in the zone>`

If a zone contains several items with the same network address, the `--del-zone` command will not be executed.

If the specified network address or index does not exist, an error message is generated.

Web Threat Protection

The Web Threat Protection component allows you to scan inbound traffic via HTTP, HTTPS, and FTP, websites, and IP addresses, prevent malicious files from being downloaded from the Internet, and block access to phishing, adware, and other malicious websites. Web Threat Protection uses port 9879 to intercept connections.

> Stopping or starting the application or the Web Threat Protection component terminates connections on intercepted ports, for example, HTTPS.

By default, the Web Threat Protection task is disabled. However, it is enabled automatically if local management of Web Threat Protection settings has been allowed on the device (a policy is not applied or the "lock" is not set in the policy properties) and one of the following executable browser files, including in snap format, has been detected on the system:

- chrome
- chromium
- chromium-browser
- firefox
- firefox-esr
- google-chrome
- opera
- yandex-browser

You can enable or disable Web Threat Protection, and also configure the protection settings:

- Select action that the application performs on a web resource where a dangerous object is detected.
- Configure a list of trusted web addresses. The application will not scan the contents of websites whose web addresses are included in this list.
- Select objects that the application will detect when scanning inbound traffic.
- Configure the encrypted connections scan to scan HTTPS traffic.

> To scan FTP traffic, control of all network ports must be configured in the settings for the network traffic scan.

When a website is opened, the application performs the following actions:

1. Checks the website security using the downloaded application databases.
2. Checks the website security using **heuristic analysis**, if enabled.

   During heuristic analysis, Kaspersky Endpoint Security analyzes the activity of applications in the operating system. Heuristic analysis can detect dangerous objects for which there are currently no records in Kaspersky Endpoint Security databases.
3. Checks the trustworthiness of a website using Kaspersky reputation databases if the use of Kaspersky Security Network is enabled.

   > You are advised to enable the use of Kaspersky Security Network to help Web Threat Protection work more effectively.
4. Blocks or allows opening of the website.

On attempt to open a dangerous website, the application performs the following:

- For HTTP or FTP traffic, the application blocks access and shows a warning message.
- For HTTPS traffic, a browser displays an error page.

> Removing application certificates may cause the Web Threat Protection component to work incorrectly.

> If you have configured traffic interception exclusions for Kaspersky Endpoint Security, these affect Web Threat Protection.

Configuring Web Threat Protection in the Web Console

In the Web Console, you can manage Web Threat Protection settings in the policy properties (**Application settings** → **Communication & Web Protection** → **Web Threat Protection**).

Configuring Web Threat Protection in the Administration Console

In the Administration Console, you can manage Web Threat Protection settings in the policy properties (Managing policies in the Administration Console, Creating a policy using the Administration Console) (**Essential Threat Protection** → **Web Threat Protection**).

Web Threat Protection component settings

Setting	Description
Enable Web Threat Protection	This check box enables or disables Web Threat Protection. This check box is cleared by default.
Trusted web addresses	This group of settings contains the **Configure** button, which opens the **Trusted web addresses** window, where you can specify the list of trusted web addresses. The application will not scan the contents of websites whose web addresses are included in this list.
Action on threat detection	Action that the application performs on a web resource where a dangerous object is detected: • **Block** access to all dangerous objects detected in web traffic, display a notification about the blocked access attempts, and log information about the dangerous objects (default value). • **Inform** the user when a dangerous object is detected in web traffic. Web Threat Protection allows this object to be downloaded to the device. At that, the application logs the information about the dangerous object and adds it to the list of active threats.
Scan settings	This group of settings contains the **Configure** button, which opens the **Scan settings** window, where you can configure the settings for scanning incoming traffic.

Trusted web addresses window

In this window, you can add web addresses and web pages whose content you consider trusted.

You can only add HTTP/HTTPS web addresses to the list of trusted web addresses. You can use **masks** to specify web addresses. Masks are not supported to specify IP addresses. By default, the list is empty. You can add, edit, and remove web addresses on the list.

When creating an address mask, use an asterisk (*) as a placeholder for one or more characters. If you enter the *abc* address mask, it is applied to all web resources that contain the "abc" sequence (for example, www.virus.com/download_virus/page_0-9abcdef.html). To include the asterisk in the address mask as a character, but not as a mask, enter the * character twice (for example, www.virus.com/**/page_0-9abcdef.html means www.virus.com/*/page_0-9abcdef.html).

Scan settings window

In this window, you can configure the settings for scanning incoming traffic during operation of the Web Threat Protection component.

Web Threat Protection settings

Setting	Description
Detect malicious objects	This check box enables or disables checking of links against the databases of malicious web addresses. This check box is selected by default.
Detect phishing links	This check box enables or disables checking of links against the databases of phishing web addresses. This check box is selected by default.
Use heuristic analysis for detecting phishing links	This check box enables or disables the use of heuristic analysis for detecting phishing links. This check box is available if the **Detect phishing links** check box is selected, and is selected by default.

Setting	Description
Detect adware	This check box enables or disables checking links against the databases of adware web addresses. This check box is cleared by default.
Detect legitimate applications that intruders can use to compromise devices or data	This check box enables or disables checking links against the databases of legitimate applications that intruders can use to compromise devices or data. This check box is cleared by default.

Configuring Web Threat Protection on the command line

In the command line, you can manage Web Threat Protection using the Web Threat Protection predefined task (*Web_Threat_Protection*).

The task starts automatically if one of the supported browsers is detected in the system and local management of Web Threat Protection settings is allowed on the device (a policy is not applied or the "lock" is not set in the policy properties). You can start and stop the task manually.

You can configure Web Threat Protection settings by editing the settings of the Web Threat Protection predefined task.

Web Threat Protection task settings

Setting	Description	Values
`ActionOnDetect`	Specifies the action to be performed upon detection of an infected object in web traffic.	`Notify` — Allow the detected object to be downloaded, display a notification about the blocked access attempt, and log information about the infected object. `Block` (default value) — Block access to the detected object, display a notification about the blocked access attempt, and log information about the infected object.
`CheckMalicious`	Enables or disables checking of links against the databases of malicious web addresses.	`Yes` (default value) — Check if the links are listed in the malicious links database. `No` — Do not check if the links are listed in the malicious links database.
`CheckPhishing`	Enables or disables checking of links against the databases of phishing web addresses.	`Yes` (default value) — Check if the links are listed in the phishing links database. `No` — Do not check if the links are listed in the phishing links database.
`UseHeuristicForPhishing`	Enables or disables the use of heuristic analysis for scanning web pages for phishing links.	`Yes` (default value) — Use heuristic analysis to detect phishing links. If this value is specified, the level of heuristic analysis is `Light` (the least thorough scan with minimal load on the system). You cannot change the heuristic analysis level for the Web Threat Protection task. `No` — Do not use heuristic analysis to detect phishing links.
`CheckAdware`	Enables or disables checking of links against the databases of adware web addresses.	`Yes` — Check if the links are listed in the adware links database. `No` (default value) — Do not check if the links are listed in the adware links database.
`CheckOther`	Enables or disables the scanning of links against the database of web addresses containing legitimate applications that intruders can use to compromise the devices or data.	`Yes` —Check if the links are listed in the database of web addresses that contain legal applications that may be used by intruders to damage your devices or data. `No` (default value) — Do not check if the links are listed in the database of web addresses that contain legal applications that may be used by intruders to damage your devices or data.

Setting	Description	Values
`UseTrustedAddresses`	Enables or disables the usage of a list of trusted web addresses. The application does not scan trusted web addresses for viruses or other malicious objects. You can specify trusted web addresses using the `TrustedAddresses.item_#` setting.	`Yes` (default value) — Use a list of trusted web addresses. `No` — Do not use a list of trusted web addresses.
`TrustedAddresses.item_#`	Specifies trusted web addresses.	The default value is not defined. You can use **masks** to specify web addresses. When creating an address mask, use an asterisk (*) as a placeholder for one or more characters. If you enter the *abc* address mask, it is applied to all web resources that contain the "abc" sequence (for example, www.virus.com/download_virus/page_0-9abcdef.html). To include the asterisk in the address mask as a character, but not as a mask, enter the * character twice (for example, www.virus.com/**/page_0-9abcdef.html means www.virus.com/*/page_0-9abcdef.html). Masks are not supported to specify IP addresses.

Scanning network traffic

Network traffic scanning settings are used by Web Threat Protection, Network Threat Protection, Mail Threat Protection, and Web Control. The Web Threat Protection, Mail Threat Protection, and Web Control components can decrypt and inspect network traffic. The encrypted connections scan is enabled by default.

You can manage the following network traffic scan settings:

- Enable or disable encrypted connections scanning.
- Select the action to be performed by the application upon detection of an untrusted certificate.
- Select the action to be performed when a network traffic scan error occurs on a website.
- Enable or disable the use of the Internet for certificate verification.
- View and configure a list of trusted domains. The application will not scan connections established when visiting specified domains.
- Configure a list of root certificates that the application will consider trusted when performing an encrypted connections scan.
- Configure traffic interception exclusions You can specify connections to be excluded from traffic interception. An excluded connection is defined by the following parameters:
  - Traffic direction, inbound or outbound.
  - Remote IP address, the IP address to which the traffic excluded from interception is going to or coming from (depending on the direction of traffic).
  - Destination port, a port on a protected device (in an inbound traffic interception exclusion) or a port on a remote device (in an outbound traffic interception exclusion).

  Traffic interception exclusions are applied only to TCP connections and do not affect network packet rules. Traffic interception exclusions affect Web Threat Protection, Network Threat Protection, and Web Control protection components.

  You can also configure traffic interception exclusions for Kaspersky Endpoint Security using operating system tools.
- Configure a list of network ports to be monitored by the application. You can specify the network ports or network port ranges to be monitored.

  If you want to intercept network connections to the NFS server, you need to make sure that the NFS server is started with the `insecure` option (so that it accepts connections from ports outside the 1–1024 range), otherwise the NFS server may reject such connections.
- Select the traffic interception mode that the application uses.

When the network traffic scan settings are changed, the application records a *NetworkSettingsChanged* event in the log file.

About network traffic interception modes

An application can work in one of two network traffic interception modes:

- *Use eBPF*. If this mode is selected, the application uses the eBPF technology to intercept traffic. If the application is unable to use the eBPF technology to intercept network traffic, the iptables utility will be used instead.

- *Use iptables*. If this mode is selected, the application uses the iptables technology to intercept traffic. This mode is selected by default.

In the **Use eBPF** mode, the application creates its own separate network namespace (network linux namespace), where it redirects network packets using eBPF programs associated with `tc` (linux traffic control) queues of local network interfaces. The redirected network traffic is then analyzed in accordance with active network tasks and then is returned to the original network interface.

For communication between namespaces, pairs of `veth` virtual network interfaces are used (each side of a pair is in its own network namespace):

- The kesl_in – kesl_worm_in pair transmits network traffic of inbound connections.

- The kesl_out – kesl_worm_out pair transmits network traffic of outbound connections.

Through these pairs of interfaces, network traffic is sent for scanning from the default namespace to the namespace created by the application, and through the same interfaces, the traffic is returned back after analysis.

Network traffic reaches these interfaces from other network interfaces in the system only if the application is running and network interception is enabled. These interfaces cannot be used for data transmission over the network between remote devices.

If your device is sensitive to network port enumeration attacks (for example, if the operating system firewall with port filtering is configured on the local device), then we do not recommend selecting the **Use eBPF** mode. We also do not recommend using this traffic interception mode on devices of the organization's network perimeter.

If the device is located in an isolated network segment, in a local network, or inside the perimeter of the organization's network, the traffic interception mode **Use eBPF** mode may be selected.

You can select the traffic interception mode in the Web Console, the Administration Console, or on the command line.

To change the traffic interception mode, you need to restart the application. Restarting breaks established network connections.

Configuring network traffic scanning in the Web Console

In the Web Console, you can manage network traffic scan settings in the policy properties (**Application settings → General Settings → Network Settings** and **Application settings → Trusted Zone**).

Configuring network traffic scanning in the Administration Console

In the Administration Console, you can manage network traffic scan settings in the policy properties (Managing policies in the Administration Console, Creating a policy using the Administration Console) (**Security Controls → Network settings**).

Encrypted connections scan settings

Setting	Description
Enable encrypted connection scans	This check box enables or disables encrypted connection scans. This check box is selected by default.

Settings for encrypted connections	This section contains the encrypted connections scan settings:
	• **Visit to a domain with an untrusted certificate** specifies the action that the application must perform when a domain with an untrusted certificate is visited:
	  • **Allow** (default value) — Allow connecting to the domain with an untrusted certificate.
	  • **Block** — Block connection to the domain with an untrusted certificate.
	• **Visit to a domain with a network traffic scan error** specifies the action that the application must perform when a domain with a network traffic scan error is visited:
	  • **Allow and add domain to exclusions** (default value) — Add the domain that resulted in the error to the list of domains with scan errors and do not scan encrypted network traffic when this domain is visited.
	  • **Block** — Block connection to the domain with a scan error.
	• **Certificate verification policy** is the method the application uses to verify certificates:
	  • **Local check**: the application does not use the internet to verify a certificate.
	  • **Full check** (default value): the application uses the internet to check and download the missing chains that are needed to verify a certificate.

Trusted domains	This group of settings contains the **Configure** button, which opens the **Trusted domains** window, where you can configure the list of trusted domain names.
Trusted root certificates	This group of settings contains the **Configure** button. Clicking this button opens the **Trusted root certificates** window. In this window, you can configure the list of root certificates that Kaspersky Endpoint Security must consider trusted when scanning encrypted connections.
Traffic interception exclusions	This group of settings contains the **Configure** button, which you can click to open the **Traffic interception exclusions** window. In this window, you can manage the settings of connections that the application excludes from traffic interception.
Network ports settings	This group of settings contains the **Configure** button. Clicking this button opens the **Monitored ports** window.

Setting	Description
Advanced settings	This group of settings contains the **Configure** button, which you can click to open the **Traffic interception mode** window. In this window, you can configure the traffic interception mode: • **Use eBPF**. If this option is selected, the application uses the eBPF technology to intercept traffic. • **Use iptables** (default). If this option is selected, the application uses the iptables technology to intercept traffic. To change the traffic interception mode, you need to restart the application. Restarting breaks established network connections.

Trusted domains window

This list contains the domain names and domain name masks that will be excluded from scanning. The application does not scan connections established when visiting specified domains.

Example: `*example.com`. For example, `*example.com/*` is incorrect because a domain address, not a web page, needs to be specified.

By default, the list is empty. You can add, edit, or remove domains from the list of trusted domains.

Trusted certificates window

You can configure a list of root certificates considered trusted by Kaspersky Endpoint Security. The list of trusted root certificates is used when scanning encrypted connections.

The following information is displayed for each certificate:

- Certificate subject
- Certificate serial number
- Certificate issuer
- Certificate start date
- Certificate expiration date
- SHA256 certificate fingerprint

By default, the certificate list is empty.

You can add or remove certificates.

Clicking the **Add** button opens a window in which you can add a certificate to the list of trusted certificates in one of the following ways:

- Indicate the path to the certificate file. The **Browse** button opens the standard file selection window. Indicate the path to the file that contains the certificate, in DER or PEM format.
- Copy the contents of the certificate file to the **Enter certificate details** field.

Traffic interception exclusions window

The table contains the settings of connections that the application excludes from traffic interception:

- **Remote IP address** is the IP address to which the traffic excluded from interception is going to or from which it is coming from (depending on the direction of traffic).
- **Destination port** is a port on a protected device (in an inbound traffic interception exclusion) or a port on a remote device (in an outbound traffic interception exclusion).
- **Traffic direction** is the direction of traffic in the connection: inbound or outbound.

You can add, edit, or delete exclusions.

Traffic interception exclusion window

In this window, you can add a traffic interception exclusion. To do this, you need to specify the following connection settings:

- **Remote IP address** is the IPv4 or IPv6 address of the remote device. Depending on the traffic direction, traffic coming from the specified IP address (exclusion for inbound traffic) or traffic going to the specified IP address (exclusion for outgoing traffic) is excluded.
- **Destination port**, depending on traffic direction:
  - Port on the protected device (exclusion for inbound traffic). Traffic to this port from remote devices is excluded from interception.
  - Port on the remote device (exclusion for outbound traffic). Traffic to this port from the protected device is excluded from interception.
- **Traffic direction** is the direction of traffic in the excluded connection. You can configure an exclusion for inbound traffic or for outbound traffic.

Monitored ports

Network ports settings

Setting	Description
Monitor all network ports	If this option is selected, the application monitors all network ports.
Monitor selected network ports only	If this option is selected, the application monitors only the network ports specified in the table. This option is selected by default.
Network ports settings	This table contains network ports monitored by the application if the **Monitor selected network ports only** option is selected. The table contains two columns: • **Port** – monitored port. • **Description** – description of the monitored port. By default, the table displays a list of network ports that are usually used for the transmission of mail and network traffic. The list of network ports is included in the application package. You can add, edit, and delete items in the table.

Configuring network traffic scanning on the command line

On the command line, you can use special management commands to manage network traffic scan settings. You can use network traffic scan settings management commands to:

- Manage network traffic scan settings.
- View exclusions from the encrypted connections scan.
- Clear the list of domains that the application automatically excluded from the scan.
- Configure the list of trusted root certificates that the application uses when scanning encrypted connections.
- Configure and view traffic interception exclusions.

Viewing and editing network traffic scan settings

You can use special network traffic scan settings management commands to:

- Output the current values of network traffic scan settings to the console or to a configuration file. You can use this file to edit the settings.
- Manage all network traffic scan settings using the configuration file. You can get a configuration file that you can edit using the display the network traffic scan settings output command.
- Edit individual settings using command line options in the format `<setting name>=<setting value>`. You can get the current values of the settings using the command to output network traffic scan settings.

To output the current network traffic scan settings to the console, execute the following command:

```
kesl-control --get-net-settings [--json]
```

where `--json` is specified to output the settings in JSON format. If the `--json` option is not specified, the settings are output in the INI format.

To output the current network traffic scan settings to a file, run the following command:

```
kesl-control --get-net-settings --file <path to configuration file> [--json]
```

where:

- `--file <configuration file path>` is the path to the configuration file to which you want to save the network traffic scan settings. If you specify the name of a file without specifying its path, the file will be created in the current directory. If a file with the specified name already exists in the specified path, it will be overwritten. If the specified directory cannot be found on the disk, file will not be created.
- `--json` is specified to output the settings in JSON format. If the `--json` option is not specified, the settings are output in the INI format.

To manage network scan settings using a configuration file:

1. Output the network traffic scan settings to the configuration file, as described above.
2. Edit the values of the necessary parameters in the file and save the changes.
3. Execute the command:

   `kesl-control --set-net-settings --file <path to configuration file> [--json]`

   where:

   - `--file <configuration file path>` is the full path to the configuration file with network traffic scan settings.
   - `--json` is specified to import the settings from the configuration file into the application in JSON format. If the `--json` option is not specified, the application attempts to import from an INI file. If the import fails, an error is displayed.

   All network traffic scan settings configured in the file are imported into the application.

To edit network traffic scan settings on the command line, run the following command:

`kesl-control --set-net-settings <setting name>=<setting value> [<setting name>=<setting value>]`

where `<setting name>=<setting value>` is the name and value of one of the network traffic scan settings.

The values of the specified settings are modified.

Viewing exclusions from encrypted connections scan

You can view the following lists of exclusions from the encrypted connections scan:

- a list of exclusions added by the user;
- a list of exclusions added by the application;
- list of exclusions received from the application databases.

To view the list of encrypted connection scan exclusions added by a user, execute the following command:

```
kesl-control -N --query user
```

To view the list of encrypted connection scan exclusions added by a user, execute the following command:

```
kesl-control -N --query auto
```

To view the list of encrypted connection scan exclusions received from the application databases, execute the following command:

```
kesl-control -N --query kl
```

To clear a list of domains that the application automatically excluded from scan, execute the following command:

```
kesl-control [-N] --clear-web-auto-excluded
```

Managing the list of trusted root certificates

To add a certificate to the list of trusted root certificates, run the following command:

```
kesl-control --add-certificate <path to certificate>
```

where:

`<path to certificate>` is the path to the certificate file that you want to add (PEM or DER format).

To remove a certificate from the list of trusted root certificates, run the following command:

```
kesl-control --remove-certificate <certificate subject>
```

To view the list of trusted root certificates, execute the following command:

```
kesl-control --list-certificates
```

The following information is displayed for each certificate:

- Certificate subject
- serial number
- Certificate issuer
- Certificate start date
- Certificate expiration date
- SHA256 certificate fingerprint

Configuring and viewing traffic interception exclusions

To add a traffic interception exclusion, run the following command:

```
kesl-control --add-bypass-endpoints --direction <in|out> --remote-ip <remote IP address> --dst-port <destination port>
```

where:

- `<in|out>` is the direction of traffic in the excluded connection. You can configure an exclusion for inbound traffic or for outbound traffic.
- `<remote IP address>` is the IPv4 or IPv6 address of the remote device. Depending on the traffic direction, traffic coming from the specified IP address (exclusion for inbound traffic) or traffic going to the specified IP address (exclusion for outgoing traffic) is excluded.
- `<destination port>`, depending on traffic direction:
  - Port on the protected device (exclusion for inbound traffic). Traffic to this port from remote devices is excluded from interception.
  - Port on the remote device (exclusion for outbound traffic). Traffic to this port from the protected device is excluded from interception.

In an exclusion, you may specify an IP address of the remote device without a port or a destination port without an IP address.

If you specify only the IP address of the remote device in an exclusion for inbound traffic (without specifying a port on the protected device), all traffic from the remote device is excluded from interception. We recommend configuring this exclusion only for traffic from devices that you trust.

To view the list of configured traffic interception exclusions, run the following command:

```
kesl-control --list-bypass-endpoints
```

The following information is displayed for each exclusion:

- Serial number of the exclusion
- Direction of traffic
- IP address of the remote device
- Port number

To delete a traffic interception exclusion, run the following command:

```
kesl-control --remove-bypass-endpoints --direction <in|out> --remote-ip <remote IP address> --dst-port <destination port>
```

where:

- `<in|out>` is the direction of traffic in the excluded connection.
- `< remote IP address >` is the IPv4 or IPv6 address of the remote device whose traffic is excluded from interception (depending on the direction of traffic).
- `< destination port >` is a port on the protected device (exclusion for inbound traffic) or a port on the remote device (exclusion for outbound traffic).

Exclusions from traffic interception using the tools of the operating system

In Kaspersky Endpoint Security settings, you can configure exclusions from traffic interception by traffic direction, destination IP address and port. If such exclusions are not sufficient to resolve the conflict of the Kaspersky Endpoint Security application with client applications, you can use the special chain of allow rules, kesl_bypass.

The kesl_bypass chain is a special list of rules that Kaspersky Endpoint Security creates in the mangle table of the operating system firewall (iptables/ip6tables). The rules of the kesl_bypass chain make it possible to exclude traffic from interception by Kaspersky Endpoint Security. The kesl_bypass chain is added to the top of the network packet processing process, which means that kesl_bypass rules are processed before all other iptables rules.

If the application uses the eBPF technology to intercept traffic, kesl_bypass rules are not applied.

In contrast to exclusions that you can connect in Kaspersky Endpoint Security settings, the kesl_bypass chain allows configuring exclusions not only by traffic direction, destination IP address and port, but also by other parameters of connections.

The rules in the kesl_bypass chain can be changed by means of the operating system.

For example, you can add a rule to the kesl_bypass chain by running the following command: `iptables -t mangle -I kesl_bypass -m tcp -p tcp --dport http -j ACCEPT`.

This rule allows excluding inbound and outbound HTTP traffic on port 80 at any IP address from interception by Kaspersky Endpoint Security. This can help avoid potential conflict with web services that you trust.

If traffic exclusion rules are configured in the chain, these rules affect the Web Threat Protection, Network Threat Protection, and Web Control components.

When the application is removed, the kesl_bypass rule chain is removed from iptables and ip6tables only if it was empty.

Network Threat Protection

The Network Threat Protection component allows you to scan inbound network traffic for activity that is typical for network attacks.

Kaspersky Endpoint Security receives TCP port numbers from the current application databases and scans incoming traffic for these ports. Network Threat Protection uses port 9789 to intercept connections.

> To scan network traffic, the Network Threat Protection component receives port numbers from the application databases and accepts connections via all these ports. During the network scan process, it may look like an open port on the device, even if no application on the system is listening to this port. It is recommended to close unused ports by means of a firewall.

Current connections for intercepted TCP ports are reset when Network Threat Protection is enabled.

If Network Threat Protection is enabled, upon detecting an attempted network attack on a protected device, the application blocks network activity from the attacking device and creates the *Network attack detected* event. The event contains information about the attacking device. By default, network traffic from the attacking device is blocked for one hour. Once the blocking time has expired, the application unblocks the device.

By default, Network Threat Protection is disabled.

You can enable or disable Network Threat Protection, and also configure the protection settings:

- Select the action that the application will perform upon detection of network activity that is typical of network attacks.
- Enables or disables the blocking of network activity when a network attack attempt is detected.
- Set the duration for blocking an attacking device.
- Configure a list of IP addresses whose network activity will not be blocked by the application.

You can use the commands for administering blocked devices in the command line to view the list of blocked devices and manually unblock these devices. Kaspersky Security Center does not provide tools for monitoring and managing blocked devices, except for the *Network attack detected* events.

> If you have configured traffic interception exclusions for Kaspersky Endpoint Security, these affect Network Threat Protection.

Configuring Network Threat Protection in the Web Console

In the Web Console, you can manage Network Threat Protection settings in the policy properties (**Application settings** → **Communication & Web Protection** → **Network Threat Protection**).

Configuring Network Threat Protection in the Administration Console

In the Administration Console, you can manage Network Threat Protection settings in the policy properties (Managing policies in the Administration Console, Creating a policy using the Administration Console) (**Essential Threat Protection → Network Threat Protection**).

Network Threat Protection component settings

Setting	Description
Enable Network Threat Protection	This check box enables or disables Network Threat Protection. This check box is cleared by default.
Action on threat detection	Actions performed upon detection of network activity that is typical of network attacks. • **Inform** user. The application allows network activity and logs information about detected network activity. • **Block** network activity from an attacking device and log information about detected network activity (default value).
Block attacking devices	This check box enables or disables the blocking of network activity when a network attack attempt is detected. This check box is selected by default.
Block the attacking device for (min)	In this field you can specify the duration an attacking device is blocked in minutes. After the specified time, Kaspersky Endpoint Security allows network activity from this device. Possible values: integers from 1 to 32768. Default value: 60.
Exclusions	This group of settings contains the **Configure** button, which opens the **Exclusions** window, where you can specify a list of IP addresses. Network attacks from these IP addresses will not be blocked.

Exclusions window

In this window, you can add IP addresses from which network attacks will not be blocked.

By default, the list is empty.

You can add, edit, and remove IP addresses in the list. You can specify IP addresses in IPv4 and IPv6 formats.

Configuring Network Threat Protection on the command line

In the command line, you can manage Network Threat Protection using the Network Threat Protection predefined task (*Network_Threat_Protection*).

By default, the Network Threat Protection task does not run. You can start and stop the task manually.

You can configure Network Threat Protection settings by editing the settings of the Network Threat Protection predefined task.

Setting	Description	Values
`ActionOnDetect`	Action performed when network activity typical of network attacks is detected. Changing the value of this setting from `Block` to `Notify` clears the list of blocked devices.	`Notify` – allow network activity, log information about detected network activity. If this value is specified, the value of the `BlockAttackingHosts` parameter is ignored. `Block` (default value) – block network activity and log information about it.
`BlockAttackingHosts`	Blocking network activity from attacking devices.	`Yes` (default value) — Block network activity of an attacking device. `No` – Do not block network activity of the attacking device. If this value is specified and the `ActionOnDetect` parameter is set to `Block`, the application blocks network activity from the attacking device, but does not add the device to the list of blocked devices.
`BlockDurationMinutes`	Specifies how long attacking devices will be blocked (in minutes).	1 to 32768 Default value: 60.
`UseExcludeIPs`	The usage of a list of IP addresses whose network activity will not be blocked when a network attack is detected. The application will only log information about dangerous activity from these devices. You can add IP addresses to the exclusion list by using the `ExcludeIPs.item_#` setting.	`Yes` — Use the list of excluded IP addresses. `No` (default value) — Do not use the list of excluded IP addresses.
`ExcludeIPs.item_#`	Specifies an IP address whose network activity will not be blocked by the application. By default, the list is empty.	`d.d.d.d` — IPv4 address, where d is a decimal number from 0 to 255. `d.d.d.d/p` — Subnet of IPv4 addresses, where p is a number from 0 to 32. `x:x:x:x:x:x:x:x` — IPv6 address, where x is a hexadecimal number from 0 to ffff. `x:x:x:x::0/p` — Subnet of IPv6 addresses, where p is a number from 0 to 64. The default value is not defined.

Mail Threat Protection

The Mail Threat Protection component scans the attachments of incoming and outgoing email messages for viruses and other threatening applications. This component protects the device using anti-virus databases, the Kaspersky Security Network cloud service, and heuristic analysis.

Mail Threat Protection can scan incoming as well as outgoing messages.

The application supports the POP3, SMTP, and IMAP protocols in all mail clients, and extended protocol versions (POP3S, SMTPS, and IMAPS) in the MyOffice Mail and R7-Office Organizer mail clients. Mail Threat Protection does not support other protocols.

For the Mail Threat Protection component to work, network ports 25, 465, 587, 110, 995, 143, and 993 must be monitored in the network settings. These network ports are added to the list of monitored ports by default. Removing these ports from the list may prevent the component from working correctly.

By default, the Mail Threat Protection component is enabled. You can enable, disable, or configure Mail Threat Protection using the Web Console, Administration Console, and the command line.

Configuring Mail Threat Protection in the Web Console

In the Web Console, you can manage Mail Threat Protection settings in the policy properties (**Application settings** → **Communication & Web Protection** → **Mail Threat Protection**).

Configuring Mail Threat Protection in the Administration Console

In the Administration Console, you can manage Mail Threat Protection settings in the policy properties (Managing policies in the Administration Console, Creating a policy using the Administration Console) (**Essential Threat Protection** → **Mail Threat Protection**).

Mail Threat Protection component settings

Setting	Description
Mail Threat Protection	This check box enables or disables Mail Threat Protection. This component is enabled by default.
Configure (Protection settings)	Clicking this button opens the **Mail Threat Protection settings** window, in which you can configure the Mail Threat Protection scope and the scan settings for compound files.
Configure (Attachment filter)	Clicking this button opens the **Attachment filter** window, in which you can configure the filtering of email attachments.
Use the heuristic analyzer **Heuristic analysis level**	This check box enables or disables the use of the heuristic analyzer. When scanning files for malicious code, the heuristic analyzer executes instructions in executable files. How many instructions the heuristic analyzer executes depends on the specified heuristic analysis level. The heuristic analysis level sets the balance between the thoroughness of searches for novel threats, the load on the operating system's resources, and the duration of heuristic analysis. By default, the heuristic analyzer is enabled and the medium heuristic analysis level is selected.

Setting	Description
Actions on threat detection	The action that Mail Threat Protection performs when a threat is detected in email messages: • **Disinfect; delete if disinfection is not possible**. When an infected object is detected in an incoming message, the application attempts to disinfect the detected object. The message with the safe attachment is then made available to the user. If disinfection fails, the application deletes the infected object. The application adds information about the performed action to the message subject, for example, *[The message has been processed] <message subject>*. This action is selected by default. • **Disinfect; block if disinfection fails**. When an infected object is detected in an incoming message, the application attempts to disinfect the detected object. The message with the safe attachment is then made available to the user. If disinfection fails, the application adds a warning to the subject of the message. The message with the original attachment is then made available to the user. • **Block**. If an infected object is detected in an incoming message, the application adds a warning to the message subject. The message with the original attachment is then made available to the user.

Mail Threat Protection settings window

In this window, you can configure the Mail Threat Protection scope and compound file scan settings.

Mail Threat Protection settings

Setting	Description
Protection scope	The *protection scope* specifies which objects the component must scan: incoming and outgoing messages or only incoming messages. By default, the **Incoming and outgoing messages** option is selected.
Scan archive attachments	Enables or disables the scanning of attached archives. This includes the scanning of ZIP, GZIP, BZIP, RAR, TAR, ARJ, CAB, LHA, JAR, ICE and other types of archives. The application identifies archives not just by extension, but also by format. When scanning archives, the application performs recursive unpacking. This makes it possible to detect threats in nested archives (archive inside an archive). This check box is selected by default.
Scan attached office application files	Enables or disables the scanning of attached files in office formats. The application scans office-format attachments smaller than 1 MB regardless of the state of whether this check box is selected or not. This check box is selected by default.
Do not scan archives larger than (MB)	If this check box is selected, Mail Threat Protection excludes from scanning any attached archives that are larger than the specified limit. If this check box is cleared, Mail Threat Protection scans attached archives of any size. This check box is cleared by default.
Limit archive scan duration to (seconds)	If this check box is selected, the scan duration for archives attached to email messages is limited. This check box is cleared by default.

Attachment filter window

In this window, you can configure email attachment filtering.

Attachment filtering settings

Setting	Description
Do not apply filter	If this option is selected, Mail Threat Protection does not filter files attached to email messages.
Rename attachments of specified types	If this option is selected, Mail Threat Protection replaces the last character of the extension with an underscore character for specified file types (for example, attachment.doc_). Thus, to open the file, the user needs to rename the file. Selected by default.
Delete attachments of specified types	If this option is selected, Mail Threat Protection deletes attachments of the specified types from email messages. You can specify the types of attachments to rename or delete from email messages in the list of file masks.

Setting	Description
Merge inherited values	This check box enables or disables the merging of the list when inherited in child policies. If the check box is selected, items in the list of the parent policy are displayed in child policies, and items can be added to the list of the child policy. If the check box is cleared, the list items are not merged when inheriting policy settings. This check box is cleared by default.
Table of attachment types	This table lists the types of attachments that you want to rename or delete from email messages. You can add, edit, or remove attachment types using the corresponding buttons.

Configuring Mail Threat Protection in the command line

On the command line, you can manage Mail Threat Protection using the Mail Threat Protection predefined task (*Mail_Monitoring*).

The Mail Threat Protection task is started by default. You can start and stop this task manually.

Administrator role privileges are required to start and stop the Mail Threat Protection task from the command line.

You can manage Mail Threat Protection settings by editing the settings of the Mail Threat Protection predefined task.

The following table describes available values and default values of settings that you can specify for the Mail Threat Protection task.

Mail Threat Protection task settings

Setting	Description	Values
`CheckIncomingMessagesOnly`	The *protection scope* specifies which objects the component must scan: incoming and outgoing messages or only incoming messages.	`Yes` means the application scans only incoming messages. `No` (default) means the application scans incoming as well as outgoing messages.
`ScanFileArchive`	Enables or disables the scanning of attached archives. This includes the scanning of ZIP, GZIP, BZIP, RAR, TAR, ARJ, CAB, LHA, JAR, ICE and other types of archives. The application identifies archives not just by extension, but also by format. When scanning archives, the application performs recursive unpacking. This makes it possible to detect threats in nested archives (archive inside an archive).	`Yes` (default) means the application scans attached archives. `No` means the application does not scan attached archives.
`ScanFileOffice`	Enables or disables the scanning of attached files in office formats.	`Yes` (default) means the application scans attached office format files. `No` means the application does not scan office format attachments.
`UseSizeLimit`	Limits the size of scanned archives.	`Yes` means the application excludes from scanning archive attachments larger than the `SizeLimit`. `No` (default) means the application scans archives of any size attached to email messages.
`SizeLimit`	Sets the maximum size of archives that can be scanned.	1 to 9999 (MB).

Setting	Description	Values
`UseTimeLimit`	Limits the maximum scan duration for attached archives.	`Yes` means the application stops scanning attached archives after the `TimeLimit` is reached. `No` (default) means the scanning time for attached archives is not limited.
`TimeLimit`	Sets the maximum scan duration for attached archives.	1 to 9999 (seconds).
`ExtensionFilter`	Configures email attachment filtering.	`Disable` means the application does not filter files attached to email messages. `Rename` (default) means the application replaces the last character of the extension for the specified file types with an underscore character (for example, attachment.doc_). Thus, to open the file, the user needs to rename the file. `Delete` means the application deletes attached files of the specified types from email messages.

`ExtensionMasks`	Specifies extensions for the types of attachments that you want to rename or remove from email messages.	A list of multiple extensions can be specified as follows:
		`[ExtensionMasks.item_0000]`
		`UseExtensionMask=Yes`
		`ExtensionMask=*.txt`
		`[ExtensionMasks.item_0001]`
		`UseExtensionMask=Yes`
		`ExtensionMask=*.run`
		`[ExtensionMasks.item_0002]`
		`UseExtensionMask=Yes`
		`ExtensionMask=*.exe`
		`...`
		By default, files with the TXT, RUN, EXE, JS, JSE, MSI, SCR, VBE, VBS, SH extensions are processed.
		To change the list of extensions, you need to export the task settings to an INI file, then edit the list in the file and import the INI file into the application.

`UseAnalyzer`	Enables or disables the heuristic analyzer.	`Yes` (default) means the heuristic analyzer is enabled. `No` means the heuristic analyzer is disabled.
`AnalyzerLevel`	When scanning files for malicious code, the heuristic analyzer executes instructions in executable files. How many instructions the heuristic analyzer executes depends on the specified heuristic analysis level. The heuristic analysis level sets the balance between the thoroughness of searches for novel threats, the load on the operating system's resources, and the duration of heuristic analysis.	`Light` —Least detailed scan, minimum system load. `Medium` (default) – medium scan, balanced system load. `Deep` —Most detailed scan, maximum system load.

Setting	Description	Values
`ActionOnThreat`	The action that Mail Threat Protection performs when a threat is detected in incoming email messages. The `ActionOnThreat` setting is not applicable to outgoing messages. If an infected object is detected in an outgoing message, the application blocks the message from being sent.	`DisinfectDeleteIfNotPossible` (default) – disinfect; delete if disinfection fails. When an infected object is detected in an incoming message, the application attempts to disinfect the detected object. The message with the safe attachment is then made available to the user. If disinfection fails, the application deletes the infected object. The application adds information about the performed action to the message subject, for example, *[The message has been processed] <message subject>*. This action is selected by default. `DisinfectBlockIfNotPossible` – disinfect; block if disinfection fails. When an infected object is detected in an incoming message, the application attempts to disinfect the detected object. The message with the safe attachment is then made available to the user. If disinfection fails, the application adds a warning to the subject of the message. The message with the original attachment is then made available to the user. `Block` – block. If an infected object is detected in an incoming message, the application adds a warning to the message subject. The message with the original attachment is then made available to the user.

BadUSB Attack Prevention

Some viruses modify the firmware of USB devices to trick the operating system into detecting the USB device as a keyboard. As a result, the virus can execute commands under your user account, for example, to download malware.

The BadUSB Attack Prevention protection component allows preventing the connection of infected USB devices that imitate a keyboard to the device.

When a USB device identified by the operating system as a keyboard is connected to the device, the application prompts the user to enter a numeric code generated by the application from the newly connected keyboard or using the on-screen keyboard (if available). This procedure is known as keyboard authorization.

If the code is entered correctly, the application saves the identification parameters, that is, the VID/PID of the keyboard and the port number to which it is connected, in the list of authorized keyboards. Keyboard authorization does not need to be repeated when the keyboard is reconnected or after the operating system is restarted.

> When an authorized keyboard is connected to a different USB port of the device, the application requires it to be authorized again.

If the numeric code is entered incorrectly, the application generates a new code. You can configure the number of attempts to enter the authorization code. If the numeric code is entered incorrectly multiple times or the keyboard authorization window is closed, the application blocks input from this keyboard. When the USB device blocking time elapses or the operating system is restarted, the application prompts the user to perform keyboard authorization again.

The application allows use of an authorized keyboard and blocks a keyboard that has not been authorized.

By default, the BadUSB Attack Prevention protection component is disabled. You can enable, disable, or configure BadUSB Attack Prevention using the Web Console, Administration Console, and the command line.

Configuring BadUSB Attack Prevention in the Web Console

In the Web Console, you can manage BadUSB Attack Prevention settings in the policy properties (**Application settings** → **Host Threat Protection** → **BadUSB Attack Prevention**).

Configuring BadUSB Attack Prevention in the Administration Console

In the Administration Console, you can manage Web Threat Protection settings in the policy properties (Managing policies in the Administration Console, Creating a policy using the Administration Console) (**Essential Threat Protection** → **BadUSB Attack Prevention**).

BadUSB Attack Prevention component settings

Setting	Description
Enable BadUSB Attack Prevention	This check box enables or disables the BadUSB Attack Prevention component. The component is disabled by default.
Maximum USB device authorization attempts:	Automatically block the USB device if the authorization code is entered incorrectly the specified number of times. Valid values are 1 to 10. For example, if you allow five attempts to enter the authorization code, the application blocks the USB device after the fifth unsuccessful attempt. Kaspersky Endpoint Security displays the time for which the USB device is blocked. After this time elapses, you will once again have five attempts to enter the authorization code. Default value: 5.
Blocking duration when the maximum number of authorization attempts is reached (minutes):	USB device block duration after the specified number of unsuccessful attempts to enter the authorization code. Possible values: 1 to 180 (minutes) Default value: 5.
Do not allow using an on-screen keyboard when authorizing USB devices	If the check box is selected, the application blocks use of On-Screen Keyboard for authorization of a USB device from which an authorization code cannot be entered. This check box is cleared by default.

Configuring BadUSB Attack Prevention on the command line

On the command line, you can also manage BadUSB Attack Prevention using the BadUSB Attack Prevention predefined task (*Bad_USB*).

The BadUSB Attack Prevention task is not started by default. You can start and stop this task manually.

Administrator role privileges are required to start and stop the BadUSB Attack Prevention task from the command line.

You can manage BadUSB Attack Prevention settings by editing the settings of the BadUSB Attack Prevention predefined task.

The following table describes available values and default values of settings that you can specify for the BadUSB Attack Prevention task.

BadUSB Attack Prevention task settings

Setting	Description	Values
`MaxAuthAttempts`	Maximum number of USB device authorization attempts after which the application blocks the USB device and further attempts to authorize the USB device for the duration specified in the `TimeoutAfterAttempts` parameter.	Possible values: 1 to 10 Default value: 5.
`TimeoutAfterAttempts`	USB device blocking duration after `MaxAuthAttempts` unsuccessful attempts to enter an authorization code.	Possible values: 1 to 180 minutes. Default value: 5 minutes.
`ProhibitOnScreenKeyboard`	Prohibit or allow the on-screen keyboard for authorizing USB devices.	If `Yes`, the application does not allow using the on-screen keyboard for keyboard authorization of a USB device that cannot be used to enter an authorization code. If `No`, the application allows using the on-screen keyboard for keyboard authorization of a USB device that cannot be used to enter an authorization code.

Protection against remote malicious encryption

Anti-Cryptor component allows you to protect your files in local directories with network access by SMB/NFS protocols from remote malicious encryption.

To use the component, a license that includes the corresponding function is required.

If Anti-Cryptor is enabled, Kaspersky Endpoint Security scans the actions of remote devices with file resources located in shared network directories of the protected device for the presence of malicious encryption. If an application considers the actions of a remote device accessing shared network resources to be malicious encryption, the application creates and enables a rule for the firewall of the operating system that blocks network traffic from the compromised device. The compromised device is added to the list of untrusted devices, and access to shared network directories is blocked for all untrusted devices. The application creates an *Encryption detected* event that contains information about the compromised device.

By default, the application blocks access of untrusted devices to network file resources for 30 minutes. When the blocking time expires, the application deletes the compromised device from the list of untrusted devices, and the device's access to network file resources is automatically restored.

Firewall rules created by the Anti-Cryptor component cannot be deleted using the iptables utility, since the application restores a set of rules every minute.

Protection against remote malicious encryption is disabled by default.

You can enable or disable protection against malicious encryption (Anti-Cryptor), and also configure the protection settings:

- Select the action that the application will perform when encryption is detected: notify the user or block the device performing the malicious encryption.

  If the *Inform* action is selected, the application still scans remote devices' actions on network file shares to check for malicious encryption when Anti-Cryptor is enabled. If malicious activity is detected, the *Encryption detected* event is created, but the compromised device is not blocked.

- Set the duration for blocking an untrusted device.

- Specify the files and directories that the application protects against malicious encryption.

- Specify the files and directories that are excluded from protection against malicious encryption.

  The application does not consider actions to be encryption if encryption activity is detected in directories excluded from protection against encryption (Anti-Cryptor).

You can use the commands for administering blocked devices in the command line to view the list of blocked devices and manually unblock these devices. Kaspersky Security Center does not provide tools for monitoring and managing blocked devices, except for the *Encryption detected* events.

For the Anti-Cryptor component to operate correctly, at least one of the services (Samba or NFS) must be installed in the operating system. The NFS service requires the rpcbind package to be installed.

The Anti-Cryptor component runs correctly with SMB1, SMB2, SMB3, NFS3, TCP/UDP, and IP/IPv6 protocols. Working with NFS2 and NFS4 protocols is not supported. It is recommended to configure your server settings so that the NFS2 and NFS4 protocols cannot be used to mount resources.

Kaspersky Endpoint Security does not block access to network file resources until the device's activity is identified as malicious. So, at least one file will be encrypted before the application detects malicious activity.

Configuring Anti-Cryptor in the Web Console

In the Web Console, you can manage Anti-Cryptor settings in the policy properties (**Application settings** → **Host Threat Protection** → **Behavior Analysis** → **Anti-Cryptor**).

Configuring Anti-Cryptor in the Administration Console

In the Administration Console, you can manage Anti-Cryptor settings in the policy properties (Managing policies in the Administration Console, Creating a policy using the Administration Console) (**Advanced Threat Protection** → **Anti-Cryptor**).

Anti-Cryptor component settings

Setting	Description
Enable Anti-Cryptor	This check box enables or disables the protection of files in local directories with network access by SMB/NFS protocols from remote malicious encryption. This check box is cleared by default.
Protection scopes	This group of settings contains buttons that open windows where you can configure the scan scopes and protection settings.
Exclusions	This group of settings contains the **Configure** button. Clicking this button opens the **Exclusion scopes** window. In this window, you can define the list of scopes to be excluded from scans.
Exclusions by mask	This group of settings contains the **Configure** button, which opens the **Exclusions by mask** window. In this window, you can configure the exclusion of objects from scans by name mask.

Scan scopes window

The table contains the scan scopes. The application will scan files and directories located in the paths specified in the table. By default, the table contains one scan scope that includes all directories of the local file system.

Scan scope settings

Setting	Description
Merge inherited values	This check box enables or disables the merging of the list when inherited in child policies. If the check box is selected, items in the list of the parent policy are displayed in child policies, and items can be added to the list of the child policy. If the check box is cleared, the list items are not merged when inheriting policy settings. This check box is cleared by default.
Scope name	Scan scope name.
Path	Path to the directory that the application scans.
Status	The status indicates whether the application scans this scope.

You can add, edit, delete, move up, and move down items in the table.

Kaspersky Endpoint Security scans objects in the specified scopes in the order they appear in the list of scopes. If necessary, place the subdirectory higher in the list than its parent directory, to configure security settings for a subdirectory that are different from the security settings of the parent directory.

New scan scope window

In this window, you can add or configure protection scope for the Anti-Cryptor component.

Protection scope settings

Setting	Description
Scope name	Field for entering the protection scope name. This name will be displayed in the table in the Scan scopes window. The entry field must not be blank.
Use this scope	This check box enables or disables scans of this scope by the application. If this check box is selected, the application processes this protection scope during the component operation. If this check box is cleared, the application does not process this protection scope during the component operation. You can later include this scope in the component operation settings by selecting the check box. This check box is selected by default.
File system, access protocol, and path	The settings block lets you set the scan scope. You can select the file system type in the drop-down list of file systems: • **Local**, for local directories. • **Shared** displays server file system resources accessible via the Samba or NFS protocol. • **All shared** (default value) displays all server file system resources accessible via the Samba and NFS protocols.
	If **Shared** is selected in the drop-down list of file systems, you can select the remote access protocol in the drop-down list on the right: • **NFS**: remote directories mounted on a device using the NFS protocol. • **Samba**: remote directories mounted on a device using the Samba protocol.
	If **Local** is selected in the drop-down list of file systems, then in the input field you can enter a path to a directory that you want to add to the protection scope. You can use **masks** to specify the path. You can use the `*` (asterisk) character to create a file or directory name mask. You can indicate a single `*` character to represent any set of characters (including an empty set) preceding the `/` character in the file or directory name. For example, `/dir/*/file` or `/dir/*/*/file`. You can indicate two consecutive `*` characters to represent any set of characters (including an empty set and the `/` character) in the file or directory name. For example, `/dir/**/file*/` or `/dir/file**/`. The `**` mask can be used only once in a directory name. For example, `/dir/**/**/file` is an incorrect mask. To exclude the mount point `/dir`, you need to specifically indicate `/dir` (no asterisk). The mask `/dir/*` excludes all mount points at the level below `/dir` but not `/dir` itself. The `/dir/**` mask excludes all mount points below the level of `/dir` but not `/dir` itself. You can use a single `?` character to represent any one character in the file or directory name. The field must not be blank.
Masks	This list contains name masks of the objects that the application scans during operation of the Anti-Cryptor component. By default the list contains the * mask (all objects). You can add, edit, or delete masks.

Protection settings window

Protection settings

Setting	Description
Action on encryption detection	The action to be performed by Kaspersky Endpoint Security upon detecting malicious encryption: • **Inform** user. Kaspersky Endpoint Security does not block the device performing encryption; it only records in the event log an event about the detection of malicious encryption. • **Block** the device performing encryption (default value).
Block untrusted host for (min)	In this field you can specify the untrusted host blocking duration in minutes. After the specified time, Kaspersky Endpoint Security removes the untrusted devices from the list of blocked devices. The access of the host to network file resources is restored automatically, after it is deleted from the list of untrusted hosts. If a compromised host is blocked and you change this setting value, the blocking time for this host will not change. The blocking time is not a dynamic value, and it is calculated at the moment of blocking. Possible values: integers from 1 to 2147483647. Default value: 30.

Exclusion scopes window

This window contains scan exclusion scopes. The application does not scan files and directories located at the paths specified in the table.

Exclusion scope settings

Setting	Description
Merge inherited values	This check box enables or disables the merging of the list when inherited in child policies. If the check box is selected, items in the list of the parent policy are displayed in child policies, and items can be added to the list of the child policy. If the check box is cleared, the list items are not merged when inheriting policy settings. This check box is cleared by default.
Exclusion scope name	Exclusion scope name.
Path	Path to the directory excluded from scan.
Status	The status indicates whether the application uses this exclusion.

By default, the table of exclusion scopes is empty. You can add, edit, and delete items in the table.

You can also import the list of exclusions from a file by clicking **Advanced** -> **Import** and export the list of added exclusions to a file by clicking **Advanced** -> **Export selected** or **Advanced** -> **Export all**.

New exclusion scope window

In this window, you can add and configure scan exclusion scopes.

Exclusion scope settings

Setting	Description
Exclusion scope name	Field for entering the exclusion scope name. This name will be displayed in the table in the **Exclusion scopes** window. The entry field must not be blank.
Use this scope	The check box enables or disables exclusion of the scope from scan when the application is running. If this check box is selected, the application excludes this area during scans. If this check box is cleared, the application includes this area in the scan scope. You can later exclude this scope by selecting the check box. This check box is selected by default.

Setting	Description
File system, access protocol, and path	The settings block lets you set the exclusion scope. In the drop-down list of file systems, you can select the type of file system of the directories to be excluded from scans: • **Local**, for local directories. • **Mounted** – mounted directories. • **All remote mounted** – all remote directories mounted on the device using the Samba and NFS protocols.
	If **Mounted** is selected in the drop-down list of file systems, you can select the remote access protocol in the drop-down list on the right: • **NFS**: remote directories mounted on a device using the NFS protocol. • **Samba**: remote directories mounted on a device using the Samba protocol. • **Custom** – resources of the device's file system specified in the field below.
	If **Local** is selected in the drop-down list of file systems, then in the input field you can enter a path to a directory that you want add to the exclusion scope. You can use **masks** and **tags** to specify the path. You can use special tags to specify a container or image: • `[container-id:<id>]/<path to local directory>` • `[container-name:<name>]/<path to local directory>` • `[image-id:<id>]/<path to local directory>` • `[image-name:<name>]/<path to local directory>` Where: `<id>` is the container ID. `<name>` is a container name `<path to local directory>` is the path to the local directory. You can also use unique combinations of tags: `[container-id:<id>]`, `[container-name:<name>]`, `[image-id:<id>]`, and `[image-name:<name>]/path to local directory>`. Any combination of 1 to 4 unique tags within one area is allowed. The order they are listed in is not important. For example: • `[container-name:<name>][image-name:<name>]/path to local directory>` • `[container-id:<id>][image-name:<name>]/<path to local directory>` • `[image-name:<name>][image-id:<id>]/<path to local directory>` • `[container-name:<name>][container-id:<id>][image-name:<name>]/<path to local directory>` • `[container-name:<name>][image-id:<id>][container-id:<id>][image-name:<name>]/path to local directory>` You can use masks (`?` and `*` characters) in names and identifiers. You can use the `*` (asterisk) character to create a file or directory name mask. You can indicate a single `*` character to represent any set of characters (including an empty set) preceding the `/` character in the file or directory name. For example, `/dir/*/file` or `/dir/*/*/file`. You can indicate two consecutive `*` characters to represent any set of characters (including an empty set and the `/` character) in the file or directory name. For example, `/dir/**/file*/` or `/dir/file**/`. The `**` mask can be used only once in a directory name. For example, `/dir/**/**/file` is an incorrect mask. You can use a single `?` character to represent any one character in the file or directory name. The **/** path is specified by default. The application excludes all directories of the local file system from scan.
Filesystem name	The field for entering the name of the file system where the directories that you want to add to the exclusion scope are located. The field is available if the **Mounted** type is selected in the drop-down list of file systems and the **Custom** item is selected in the drop-down list on the right.

Setting	Description
Masks	The list contains name masks of the objects that the application excludes from scan. Masks are only applied to objects in the directory specified in the path field. By default the list contains the * mask (all objects). You can add, edit, or delete masks.

Exclusions by mask window

You can configure scan exclusions for objects by name mask. The application will not scan files whose names contain the specified mask. By default, the list of masks is empty.

You can add, edit, or delete masks.

Clicking the **Add** button opens the **Object mask** window. In this window, in the **Define object mask** field, you can specify the name template for files that Kaspersky Endpoint Security excludes from scans.

Examples:
The `*.txt` mask refers to all text files.
The `*_my_file_??.html` mask refers to html files starting with any characters, and ending with `_my_file_` followed by any two characters (for example, 2020_my_file_09.html).

You can enable the merging of the list of exclusions when inherited by child policies. If you want to merge list items, select the **Merge inherited values** check box. If the check box is selected, items in the list of the parent policy are displayed in child policies, and items can be added to the list of the child policy. If the check box is cleared, the list items are not merged when inheriting policy settings. This check box is cleared by default.

Configuring Anti-Cryptor on the command line

In the command line, you can manage Anti-Cryptor using the Anti-Cryptor task (*Anti_Cryptor*).

By default, the Anti-Cryptor task does not run. You can start and stop this task manually.

You can configure Anti-Cryptor settings by editing the settings of the Anti-Cryptor predefined task.

Anti-Cryptor task settings

Setting	Description	Values
`ActionOnDetect`	Enables untrusted hosts blocking.	`Block` (default value) – enable untrusted hosts blocking. `Notify`: disable untrusted hosts blocking.
`BlockTime`	The time in minutes for which an untrusted device is blocked. If a compromised host is blocked, and you change a value for the `BlockTime` setting, the blocking time for this host will not change. The blocking time is not a dynamic value, and is calculated at the moment of blocking.	Integer from 1 to 4294967295. Default value: 30.
`UseExcludeMasks`	Enables exclusion of the objects specified by the `ExcludeMasks.item_#` setting from the protection scope. This setting applies only if the `ExcludeMasks.item_#` setting is specified.	`Yes` — Exclude the objects specified by the `ExcludeMasks.item_#` setting from the protection scope. `No` (default value) — Do not exclude the objects specified by the `ExcludeMasks.item_#` setting from the protection scope.

Setting	Description	Values
`ExcludeMasks.item_#`	Excludes objects from the protection scope by names or masks. You can use this setting to exclude an individual file from the specified protection scope by name or exclude multiple files at the same time using masks in the shell format. Before specifying a value for this setting, make sure that the `UseExcludeMasks` setting is enabled. If you want to specify several masks, specify each mask on a new line with a new index.	The default value is not defined.
The **[ScanScope.item_#]** section contains the scopes protected by the application. For the Anti-Cryptor task, you need to specify at least one protection scope; you can only specify shared directories. You can specify several [ScanScope.item_#] sections in any order. The application processes the scopes by index in ascending order. The [ScanScope.item_#] section contains the following settings:		
`AreaDesc`	Description of protection scope; contains additional information about the protection scope.	Default value: `All shared directories`.
`UseScanArea`	Enables protection of the specified scope. To run the task, enable protection of at least one scope.	`Yes` (default value) — Protect the specified scope. `No` — Do not protect the specified scope.
`AreaMask.item_#`	Protection scope limitation. In the protection scope, the application protects only the objects that are specified using the masks in the shell format. You can specify several `AreaMask.item_#` items in any order. The application processes the scopes by index in ascending order.	Default value: `*` (protect all objects)
`Path`	Path to the directory with the objects to be protected.	`< path to local directory >` – Protect a local directory accessible via SMB/NFS. You can use **masks** to specify the path. You can use the `*` (asterisk) character to create a file or directory name mask. You can indicate a single `*` character to represent any set of characters (including an empty set) preceding the `/` character in the file or directory name. For example, `/dir/*/file` or `/dir/*/*/file`. You can indicate two consecutive `*` characters to represent any set of characters (including an empty set and the `/` character) in the file or directory name. For example, `/dir/**/file*/` or `/dir/file**/`. The `**` mask can be used only once in a directory name. For example, `/dir/**/**/file` is an incorrect mask. You can use a single `?` character to represent any one character in the file or directory name. `AllShared` (default value) — Protect all resources accessible via SMB/NFS. `Shared:SMB` — Protect resources accessible via SMB. `Shared:NFS` — Protect resources accessible via NFS.
The **[ExcludedFromScanScope.item_#]** section contains the objects to be excluded from all [ScanScope.item_#] sections. The objects that match the rules of any [ExcludedFromScanScope.item_#] section are not scanned. The format of the [ExcludedFromScanScope.item_#] section is similar to the format of the [ScanScope.item_#] section. You can specify several [ExcludedFromScanScope.item_#] sections in any order. The application processes the scopes by index in ascending order. The [ExcludedFromScanScope.item_#] section contains the following settings:		
`AreaDesc`	Description of the protection exclusion scope, which contains additional information about the exclusion scope.	Default value: `All objects`.
`UseScanArea`	Excludes the specified scope from protection.	`Yes` (default value) — Exclude the specified scope from protection. `No` — Do not exclude the specified scope from protection.

Setting	Description	Values
`AreaMask.item_#`	Limitation of the protection exclusion scope. In the exclusion scope, the application excludes only the objects that are specified using masks in the shell format. You can specify several `AreaMask.item_#` items in any order. The application processes the scopes by index in ascending order.	Default value: `*` (exclude all objects).
`Path`	Path to the directory with objects excluded from protection.	`< path to local directory >` — Exclude objects in the specified directory from protection. You can use **masks** to specify the path. You can use the `*` (asterisk) character to create a file or directory name mask. You can indicate a single `*` character to represent any set of characters (including an empty set) preceding the `/` character in the file or directory name. For example, `/dir/*/file` or `/dir/*/*/file`. You can indicate two consecutive `*` characters to represent any set of characters (including an empty set and the `/` character) in the file or directory name. For example, `/dir/**/file*/` or `/dir/file**/`. The `**` mask can be used only once in a directory name. For example, `/dir/**/**/file` is an incorrect mask. You can use a single `?` character to represent any one character in the file or directory name. `Mounted:NFS` – Exclude the remote directories mounted on a client device using the NFS protocol from protection. `Mounted:SMB` – Exclude the remote directories mounted on a client device using the Samba protocol from protection. `AllRemoteMounted` – Exclude all remote directories mounted on a client device using the Samba and NFS protocols from protection.

Managing blocked devices

While protecting a device against network threats and remote malicious encryption, Kaspersky Endpoint Security can block remote devices whose actions are considered to be malicious:

- If malicious encryption is detected, the application blocks access of the remote device to the shared network directories of the protected device.
- Upon detecting network attack attempts on the protected device, the application blocks network traffic from the attacking device.

You can change the blocking duration in the Network Threat Protection and Protection Against Remote Malicious Encryption settings. Once the specified period of time has elapsed, the application unblocks the device.

If you are managing the application using the command line, you can use the commands for managing blocked devices to view a list of devices that are blocked as a result of the application running on the device and manually unblock these devices before the blocking time expires. Kaspersky Security Center does not provide tools for monitoring and managing blocked devices, except for the *Network attack detected* and *Encryption detected* events.

To view the list of blocked devices, execute the following command:

```
kesl-control --get-blocked-hosts
```

As a result of the command execution, the application outputs the list of blocked devices to the console.

To unblock devices, execute the following command:

```
kesl-control --allow-hosts <address>
```

where `<address>` is one or more IP addresses of the devices or subnets (IPv4/IPv6, including addresses in short form). You can specify multiple IP addresses of devices or subnets by separating them with a space.

As a result of the command execution, the application unblocks the specified devices.

Examples:
IPv4 addresses:

```
dec - 192.168.0.1
dec - 192.168.0.0/24
```

IPv6 addresses:

```
hex - FEDC:BA98:7654:3210:FEDC:BA98:7654:3210
hex - FEDC:BA98:7654:3210:FEDC:BA98:7654:3210%1
hex - 2001:db8::ae21:ad12
hex - ::ffff:255.255.255.254
hex - ::
```

Application Control

The Application Control component allows you to manage the launch of applications on protected devices. Application Control lowers the risk of device infection by limiting users' access to applications. You can receive information about applications installed on protected devices using the Inventory task.

To use the component, a license that includes the corresponding function is required.

Application launching is regulated by *Application Control rules*.

The Application Control component can operate in one of two modes:

- *Denylist*. In this mode Kaspersky Endpoint Security allows all users to launch any applications that are not specified in the Application Control rules. By default, the Application Control component operates in this mode.
- *Allowlist*. In this mode Kaspersky Endpoint Security prevents all users from launching any applications that are not specified in the Application Control rules.

If the Application Control rules are created to the fullest extent possible, Kaspersky Endpoint Security prohibits the launching of all new applications that are not verified by the administrator of the organization's local network, but ensures the performance of the operating system and verified applications that users need to perform their job duties.

The Kaspersky Security Center administrator or a local user with the admin role assigned in the application can allow or deny process start under the root account using the Application Control.

Application Control is disabled by default. You can enable or disable Application Control, and also configure the component's operation settings:

- Select the Application Control mode: *allowlist* or *denylist*.
- Create Application Control rules for each of the modes.
- Select the action that Kaspersky Endpoint Security performs upon detecting an attempt to run an application that matches the rules. Kaspersky Endpoint Security can *apply rules* and perform the actions specified in the rules, or *test the rules* and only inform about an attempt to run an application that matches the rules.
- Exporting and importing Application Control settings.

Application Control does not control the launch of Snap, Flatpak, or AppImage applications.

The Application Control task does not control the launching of scripts from interpreters that are not supported by Kaspersky Endpoint Security, or the launching of scripts that are not passed to the interpreter via the command line. Kaspersky Endpoint Security supports the following interpreters: python, perl, bash, ssh.

If the interpreter is allowed to launch by the Application Control rules, Kaspersky Endpoint Security does not block the script launched from this interpreter. If the launch of at least one script specified in the interpreter command line is prohibited by the Application Control rules, Kaspersky Endpoint Security blocks all the scripts specified in the interpreter command line. Exclusion: cat script.py | python.

About Application Control rules

An *Application Control rule* is a set of settings that contain the conditions for triggering a rule and the actions of the Application Control component when a rule is triggered (allow or block users from starting an application):

- The application belonging to the application category. An *application category* is a group of applications that have something in common. For example, a category that includes executable files of installed applications, or a category of applications required for operation, which includes a standard set of applications used by the organization. Each category can only be used in one rule.

  Kaspersky Endpoint Security does not support use of the KL categories of Kaspersky Security Center.

- Allow selected users and/or user groups to run applications or prevent them from running applications. You can specify a user and/or user group that is allowed or not allowed to run applications of the specified category.

- Rule-triggering condition. A condition is represented by the following correspondence: "condition type – condition criterion – condition value". Based on the rule triggering condition, Kaspersky Endpoint Security applies or does not apply the rule to the application. The rules use inclusive and exclusive conditions:

  - *Inclusive conditions*. Kaspersky Endpoint Security applies the rule to the application if the application meets at least one inclusive condition.

  - *Exclusive conditions*. Kaspersky Endpoint Security does not apply the rule to the application if the application meets at least one exclusive condition or does not meet any of the inclusive conditions.

  Rule triggering conditions are created using the following criteria:

  - Name of the application's executable file.

  - Name of the directory with the application's executable file.

  - Hash of the application's executable file. Only SHA256 can be used.

  For each criterion used in the condition, a value must be specified.

  You can use **masks** to specify the names of files and directories.

  You can use the * character (any sequence of characters) or the ? character (any one character) as the file or directory name mask.

You can put the * character to represent any set of characters (including an empty set) in a file or directory name that includes the / character. For example, `/dir/*/file*/` or `/dir/file*/`.

You can put a single ? character to represent any one character (including `/`) in the file or directory name.

If the settings of the application being launched match the criteria specified in the inclusive condition, the rule is triggered. In this case, Kaspersky Endpoint Security performs the action specified in the rule. If application settings match the criteria specified in the exclusive condition, Kaspersky Endpoint Security does not control the application launch.

Application control rules can have one of the following *operation statuses*:

- *Enabled*: the rule is enabled, Kaspersky Endpoint Security applies this rule for the Application Control.
- *Disabled*: the rule is disabled and is not applied to Application Control.
- *Test* – Kaspersky Endpoint Security allows launching applications that meet the rule criteria, but logs information about launches of these applications in the report.

The priority of the rule operation status is higher than the priority of the action specified in the rule.

Application Control rules test mode

To ensure that Application Control rules do not block applications required for work, it is recommended to enable *testing of Application Control rules*. In this mode, Kaspersky Endpoint Security will not block third-party applications from running, but will send notifications about their launch to the Administration Server.

By default, Application Control allows all third-party applications to run, except those prohibited by the rules.

Testing Application Control rules

1. **Create the Application Control rules**

   Configure and enable Application Control rules that you want to test. For example, you can create rules that prevent execution of any third-party applications, except for applications from the "Golden Image" and "Work applications" categories.

2. **Enable Application Control in test mode**

   How to enable the Test mode of Application Control in the Web Console

   1. In the main window of the Web Console, select **Asset management** → **Policies**.
   2. Click the name of the Kaspersky Endpoint Security policy.

      The policy properties window opens.
   3. Select the **Application settings** tab.
   4. Go to **Security Controls** → **App Control**.
   5. Make sure the toggle switch for the component is in the **App Control ENABLED** position.

6. Under **Action on starting applications**, select the **Inform** action for Application Control.

7. To apply the policy to computers, close the padlock icons and save your changes.

How to enable the Test mode of Application Control on the command line

To select the test mode for Application Control, run the following command:

```
kesl-control --set-settings 21 AppControlRulesAction=TestRules
```

3 Review the test results

Review the Application Control report and events of the component, which are sent to Kaspersky Security Center.

How to view the Application Control report in the Web Console

1. In the main window of the Web Console, select **Asset management** → **Policies**.

2. Click the name of the Kaspersky Endpoint Security policy.

   The policy properties window opens.

3. Select the **Application settings** tab.

4. Go to **Security Controls** → **App Control**.

5. Make sure the toggle switch for the component is in the **App Control ENABLED** position.

6. In the table with Application Control rules, click the **View report** button.

7. The **Report on prohibited applications in test mode** window opens.

8. Review the information about the prohibited applications starting in testing mode.

How to view events resulting from a test run of Application Control

1. In the main window of the Web Console, select **Monitoring** → **Event selections**.

2. Click **Add**.

3. In the opened **New event selection** window, specify a name for the selection. For example, "Testing of Application Control rules".

4. Go to the **Events** section and manage the following settings:

   - **Application name** – Kaspersky Endpoint Security for Linux.
   - **Severity level** – **Info**.
   - Select the **Include selected general events** option.
   - Select the check boxes opposite the **Application startup prohibited in test mode** and **Application startup allowed in test mode** events.

5. If necessary, configure the remaining settings.

6. Save your changes.

7. Click the name of the selection to view the result of the selection of events.

4 **Adjust the rules**

If test mode results in no blocked startup events for all applications required for the work of the computer user, this means that the correct rules were created.

Otherwise, edit the settings of the rules you have created, create additional rules, or delete the existing rules.

Configuring Application Control in the Web Console

In the Web Console, you can manage Application Control settings in the policy properties (**Application settings** → **Security Controls** → **App Control**).

Configuring Application Control in the Administration Console

In the Administration Console, you can manage Device Control settings in the policy properties (Managing policies in the Administration Console, Creating a policy using the Administration Console) (**Security Controls** → **Application Control**).

Application Control component settings

Setting	Description
Enable Application Control	The check box enables the Application Control component. This check box is cleared by default.
Action on application startup attempt	The action that Kaspersky Endpoint Security performs upon detecting an attempt to start an application that matches the configured rules: • **Apply rules** (default value). If you select this option, Kaspersky Endpoint Security applies Application Control rules and performs the action specified in the rules. • **Test rules**. If you select this option, Kaspersky Endpoint Security tests the rules and generates an event about an attempt to start an application that matches the rules.
Application Control mode	Application Control task operation mode: • **Allowlist**. If you select this option, Kaspersky Endpoint Security prevents all users from launching any applications except those specified in the Application Control rules. • **Denylist** (default value). If you select this option, Kaspersky Endpoint Security allows all users to launch any applications except those specified in the Application Control rules.
Application Control rules	This group of settings contains the **Configure** button. Clicking this button opens the **Application Control rules** window.
Applying rules	In the drop-down list, you can select how rules are added: • **Replace local rules with policy rules**. When you select this item, the application applies only the rules specified in the policy. • **Add policy rules to local rules** (default value). If this item is selected, the application applies rules configured in the policy together with local rules configured on the protected device.

Application Control rules window

The **Application Control rules** table contains the rules used by the Application Control component. The Application Control rules table is empty by default.

Application Control rules settings

Setting	Description
Category name	The name of the application category that is used by the rule.
Status	Operation status of the Application Control rule: • *Enabled* – the rule is enabled, Application Control applies this rule during operation. • *Disabled* – the rule is disabled and is not used when the Application Control is running. • *Test* – Application Control allows launching applications that meet the rule criteria, but logs information about launches of these applications in the report. You can change the rule status in the **Add new rule** window.

You can add, modify, or delete Application Control rules.

Adding rule window

In this window, you can configure the settings for the Application Control rule.

Adding the Application Control rule

Setting	Description
Description	Description of the Application Control rule.
Rule status	In the drop-down list, you can select the status of the Application Control rule: • *Enabled* – the rule is enabled, Application Control applies this rule during operation. • *Disabled* – the rule is disabled and is not used when the Application Control is running. • *Test* – Application Control allows launching applications that meet the rule criteria, but logs information about launches of these applications in the report.
Category	The group of settings contains the **Configure** button. Clicking this button opens the **Application categories** window.
Users and their rights	The table contains a list of users or user groups to which the Application Control rule applies, and the types of access assigned to them, and consists of the following columns: • **User or group name** – names of users or names of user groups to which the Application Control rule applies. • **Access** – the type of access: **Allow** launching the applications or **Block** launching the applications. You can add, edit, or delete users or user groups.

Application categories window

In this window, you can add a new category or configure the category settings for an Application Control rule.

Kaspersky Endpoint Security does not support use of the KL categories of Kaspersky Security Center.

Application Control categories

Setting	Description
Category name	List of the added Application Control categories.
Add	Clicking the button starts the category creation wizard. Follow the instructions of the Wizard. For details about creating a category, refer to the Kaspersky Security Center Help.
Edit	Clicking this button opens the category properties window, where you can change the category settings. The **Golden Image (local)** category cannot be edited.

User or group window

In this window, you can specify a local or domain user or user group for which you want to configure a rule.

Adding the Application Control rule

Setting	Description
Type	The **User** or **Group** to which the Application Control rule applies.
User or group name	Name of the user or user group to which the Application Control rule applies.
Access	Access type: **Allow** launching the applications or **Block** launching the applications.

Configuring Application Control on the command line

In the command line, you can manage Application Control by using the Application Control predefined task (*Application_Control*).

By default, the Application Control task does not run. You can start and stop the task manually.

You can configure Application Control on a device by editing the settings of the Application Control predefined task.

If you change the list of allowed applications or prohibit the launch of all applications or applications affecting Kaspersky Endpoint Security's operation, then when modifying the task settings using the configuration file or using command line options, run the `kesl-control --set-settings` command with the `--accept` flag.

You can also configure Application Control using Application Control commands:

- Create and edit lists of categories.
- View the list of categories created in the application.
- Configure the list of application control rules.

Application Control task settings

The table describes all possible values and the default values of all the settings that you can specify for the Application Control task.

Application Control task settings

Setting	Description	Values
`AppControlMode`	Application Control task operation mode.	`AllowList` – Kaspersky Endpoint Security prevents users from launching any applications that are not specified in the Application Control rules. `DenyList` (default value) – Kaspersky Endpoint Security allows users to launch any applications that are not specified in the Application Control rules.
`AppControlRulesAction`	The action that Kaspersky Endpoint Security performs upon detecting an attempt to start an application that matches the configured rules.	`ApplyRules` (default value) – Kaspersky Endpoint Security applies Application Control rules and performs the action specified in the rules. `TestRules` – Kaspersky Endpoint Security tests the rules and generates an event about the detection of an application that satisfies the rule.
The **[Categories.item_#]** section contains the following settings:		
`Name`	Name of the application category to which the rule applies.	
`UseIncludes`	Usage of inclusive conditions to trigger the rule.	`Yes` – apply the rule to the application if the application meets at least one inclusive condition. `No` (default value) – do not apply the rule to the application, even if the application meets the inclusive conditions.
`IncludeFileNames.item_#`	Name of the executable file that triggers the rule.	You can use **masks** to specify the file name. You can use the * character (any sequence of characters) or the ? character (any one character) as the file or directory name mask. You can put the * character to represent any set of characters (including an empty set) in a file or directory name that includes the / character. For example, `/dir/*/file*/` or `/dir/file*/`. You can put a single ? character to represent any one character (including `/`) in the file or directory name.
`IncludeFolders.item_#`	Name of the directory with the application's executable file that triggers the rule.	You can use **masks** to specify the directory name. You can use the * character (any sequence of characters) or the ? character (any one character) as the file or directory name mask. You can put the * character to represent any set of characters (including an empty set) in a file or directory name that includes the / character. For example, `/dir/*/file*/` or `/dir/file*/`. You can put a single ? character to represent any one character (including `/`) in the file or directory name.
`IncludeHashes.item_#`	SHA256 hash of the executable file that triggers the rule.	Only SHA256 can be used.
`UseExcludes`	Usage of excluding conditions to trigger the rule.	`Yes` – do not apply the rule to the application if the application meets at least one exclusive condition or does not meet any of the inclusive conditions. `No` (default value) – apply the rule to the application, even if the application meets at least one exclusive condition.
`ExcludeFileNames.item_#`	Name of the executable file that triggers the rule.	You can use **masks** to specify the file name. You can use the * character (any sequence of characters) or the ? character (any one character) as the file or directory name mask. You can put the * character to represent any set of characters (including an empty set) in a file or directory name that includes the / character. For example, `/dir/*/file*/` or `/dir/file*/`. You can put a single ? character to represent any one character (including `/`) in the file or directory name.

Setting	Description	Values
`ExcludeFolders.item_#`	Name of the directory with the application's executable file that triggers the rule.	You can use **masks** to specify the directory name. You can use the * character (any sequence of characters) or the ? character (any one character) as the file or directory name mask. You can put the * character to represent any set of characters (including an empty set) in a file or directory name that includes the / character. For example, `/dir/*/file*/` or `/dir/file*/`. You can put a single ? character to represent any one character (including `/`) in the file or directory name.
`ExcludeHashes.item_#`	SHA256 hash of the executable file that triggers the rule.	Only SHA256 can be used.
The **[AllowListRules.item_#]** section contains a list of Application Control rules for the *AllowList* operation mode. Each [AllowListRules.item_#] section contains the following settings:		
`Description`	Description of the Application Control rule.	
`AppControlRuleStatus`	Operation status of the Application Control rule:	`On` (default value): the rule is enabled, Kaspersky Endpoint Security applies this rule for the Application Control. `Off`: the rule is not used for the Application Control. `Test` – Kaspersky Endpoint Security allows applications covered by the rule to be launched, but logs information about the launch of these applications in the report.
`Category`	Name of the application category for which the rule applies. You can specify the "Golden Image" category.	
The **[AllowListRules.item_#.ACL.item_#]** section contains a list of users who are allowed or denied to run applications.		
`Access`	Access type assigned to a user or user group.	`Allow` (default value) — Allow running applications. `Block` – Deny running applications.
`Principal`	User or user group to which the Application Control rule applies.	`\Everyone` (default value): the rule applies to all users. `< user name >` is the name of the user to which the rule applies. `@< group name >` is the name of the group of users to which the rule applies.
The **[DenyListRules.item_#]** section contains a list of Application Control rules for the *DenyList* operation mode. Each [DenyListRules.item_#] section contains the following settings:		
`Description`	Description of the Application Control rule.	
`AppControlRuleStatus`	Operation status of the Application Control rule:	`On` (default value): the rule is enabled, Kaspersky Endpoint Security applies this rule for the Application Control. `Off`: the rule is not used for the Application Control. `Test` – Kaspersky Endpoint Security allows applications covered by the rule to be launched, but logs information about the launch of these applications in the report.
`Category`	Name of the created application category to which the rule applies. You can specify the "Golden Image" list of applications as a category.	
The **[DenyListRules.item_#.ACL.item_#]** section contains a list of users who are allowed or denied to run applications.		
`Access`	Access type assigned to a user or user group.	`Allow` – allow applications to start. `Block` (default value) – do not allow applications to start.
`Principal`	User or user group to which the Application Control rule applies.	`\Everyone` (default value): the rule applies to all users. `< user name >` is the name of the user to which the rule applies. `@< group name >` is the name of the group of users to which the rule applies.

Creating and editing a list of categories

You can create a new category in two ways:

- using the "kesl --set-settings" command and the Application Control task settings configuration file (Application_Control);
- using the kesl --set-categories command and the category settings configuration file.

To create application categories, run the following command:

```
kesl-control --set-categories --file <path to configuration file>
```

where:

`--file <path to configuration file>` is the path to the configuration file with the category settings.

The file with category settings must have the following structure:

```
[
    {
        "Exclude" : [ "(FilePath like <full path to the executable file of the
   application>)", "(FileHash == <hash of the executable file>)" ],
        "GUID" : "<unique category ID>",
        "Include" : [ "(FilePath like <full path to the executable file of the
   application>)", "(FileHash == <hash of the executable file>)" ],
        "Name" : "<name of category 1>"
    },
  {
        "Exclude" : [ "(FilePath like <full path to the executable file of the
   application>)", "(FileHash == <hash of the executable file>)" ],
        "GUID" : "<unique category ID>",
        "Include" : [ "(FilePath like <full path to the executable file of the
   application>)", "(FileHash == <hash of the executable file>)" ],
        "Name" : "<name of category 2>"
    }
]
```

To specify the file name in the `Exclude` and `Include` fields, you can use **masks**.

You can use the * character (any sequence of characters) or the ? character (any one character) as the file or directory name mask.

You can put the * character to represent any set of characters (including an empty set) in a file or directory name that includes the / character. For example, `/dir/*/file*/` or `/dir/file*/`.

You can put a single ? character to represent any one character (including `/`) in the file or directory name.

The `Name` setting is required. If you do not specify the name of the category, it will not be created or will be deleted. The `GUID` setting is also required. If you do not specify it, an error message is displayed and the category is not created. The `GUID` setting must be specified without hyphens.

To edit the list of created application categories, run the following command:

```
kesl-control --set-categories [--names <name of category 1> <name of category 2> …
<name of category N>] --file <path to configuration file>
```

where:

- `<name of category 1> <name of category 2> … <name of category N>` are names of categories for which you want to change information. If you want to change information about several categories, specify the names of the categories, separated by a space. If you do not specify a category name, existing categories are deleted and new categories are created from the specified file.
- `--file <path to configuration file>` is the path to the configuration file with the category settings.

Viewing the list of categories

On the command line, you can view the list of created application categories using the Application Control command, `kesl-control --get-categories`.

The list of created categories contains the following categories:

- Categories created in Kaspersky Security Center.
- Categories added in the Application Control task settings using the command line.
- The "GoldenImage" category created using the Inventory task (in Kaspersky Security Center or using the command line).

To view the list of all created application categories, run the following command:

```
kesl-control --get-categories [--file <path to configuration file>] [--json]
```

where:

- `--file <path to configuration file>` is the full path to the JSON configuration file to which the settings will be written.
- `--json` is specified to output the settings in JSON format. If the --json option is omitted, the settings are output in the INI format.

Kaspersky Endpoint Security displays the following information about the each application category:

- Unique identifier (GUID) of the category
- Category name
- list of inclusive conditions to trigger the rule
- list of exclusive conditions to trigger the rule

To view the list of separate application categories, execute the following command:

```
kesl-control --get-categories [--names <name of category 1> <name of category 2> ...
<name of category N>] [--file <path to configuration file>] [--json]
```

where:

- `<name of category 1> <name of category 2> ... <name of category N>` are names of categories for which you want to view information. If you want to view information about several categories, specify the names of the categories, separated by a space.
- `--file <path to configuration file>` – full path to the JSON configuration file to which the category list will be exported.
- `--json` is specified to output the settings in JSON format. If the --json option is omitted, the settings are output in the INI format.

If in the Application Control task settings, in the `[Categories.item_#]` section for inclusive or exclusive conditions for triggering a rule, you specify symbolic links to an application file or directory with executable files, then when viewing the list of categories for these conditions, the source path to which the symbolic link points is displayed.

Configuring the Application Control rule list

To view the list of Application Control rules, run the following command:

```
kesl-control --get-settings 21 [--file <path to configuration file>] [--json]
```

where:

- `--file <path to configuration file>` is the full path to the configuration file to which you want to output the settings.
- `--json`: output data in JSON format.

Kaspersky Endpoint Security displays the following information about Application Control rules:

- Application Control task operation mode.
- Action that Application Control takes upon detecting an attempt to launch an application that matches the configured rule.
- Description of the Application Control rule (if any).
- Operation status of the Application Control rule.
- Name of the application category the rule applies to.

- Access type assigned to a user or user group.
- Uuser or user group to which the Application Control rule applies.

To edit the list of application categories and Application Control rules, run the following command:

```
kesl-control --set-settings 21 [--file <path to configuration file>] [--json]
```

where:

- `--file <path to configuration file>` is the full path to the configuration file from which you want to import the settings.
- `--json` – import data from a JSON file.

To delete the list of application categories and Application Control rules, run the following command:

```
kesl-control --set-settings 21 --set-to-default
```

Exporting and importing Application Control settings

To simplify the configuration of the Application Control component on user devices, you can export and import the Application Control settings and the list of application categories.

Exporting and importing Application Control settings in the Web Console

In the Web Console, you can export or import Application Control settings and the list of application categories in the properties of a managed device (**Assets (Devices)** → **Managed devices** → <device name> link → **Applications** tab → <name of the Kaspersky Endpoint Security application> link → **Application settings** tab → **Application Control** section).

Clicking the **Export** button under **Application Control settings** opens a window in which you can specify the file to which you want to save the settings. Clicking the **Import** button under **Application Control settings** opens a window in which you can specify the file from which you want to import the settings.

Clicking the **Export** button under **Application categories** opens a window in which you can specify the file to which you want to save the added application categories. Clicking the **Import** button under **Application categories** opens a window in which you can specify the file from which you want to import application categories.

Exporting and importing Application Control settings in the Administration Console

In the Administration Console, you can export and import Application Control settings and the list of application categories in the properties of the managed device (**Managed devices** → **Devices** tab → device properties window → **Applications** section → <application name> → **Properties** button → **<application name> settings** window → **Application Control** section).

Clicking the **Export** button under **Application Control settings** opens a window in which you can specify the file to which you want to save the settings. Clicking the **Import** button under **Application Control settings** opens a window in which you can specify the file from which you want to import the settings.

Clicking the **Export** button under **Application categories** opens a window in which you can specify the file to which you want to save the added application categories. Clicking the **Import** button under **Application categories** opens a window in which you can specify the file from which you want to import application categories.

Exporting and importing Application Control settings on the command line

On the command line, you can export or import Application Control settings and the list of application categories using Application Control management commands.

Inventory

The Inventory task provides information about all applications executable files stored on the client devices. Obtaining information about the applications installed on the devices can be useful, for example, for creating Application Control rules.

To use the task, a license that includes the corresponding function is required.

You can configure the following inventory settings:

- Select the types of objects that the application will detect on the device during inventory (files, scripts).
- Configure inventory scopes (paths to directories in which to search for executable application files).
- Configure exclusions from the inventory.
- Select the action that Kaspersky Endpoint Security must perform with the "Golden Image" application category upon completion of the Inventory task. You can add applications that the task discovers on the device to the category, leave the category unchanged, or delete it.
- Enable or disable the transmission of information about applications that the Inventory task discovers on the device to the Kaspersky Security Center Administration Server. If information about applications on the device is transmitted to the Administration Server, it can be used to configure application categories for Application Control rules using the Kaspersky Security Center.

Configuring Inventory in the Web Console

In the Web Console, you can perform an inventory of the applications for the protected device using the *Inventory* task.

You can create and run Inventory user tasks. You can configure inventory settings by editing the settings of these tasks.

The Kaspersky Security Center database can store information about up to 150,000 processed files. When this number of records is reached, new files will not be processed. To resume the Inventory task, delete the files registered in the Kaspersky Security Center database as a result of previous inventories, from the device where Kaspersky Endpoint Security is installed.

Inventory task settings

Setting	Description
Action to perform on the "Golden image" category upon task completion	In the drop-down list, you can select the action that Kaspersky Endpoint Security must perform with the "Golden Image" application category upon completion of the Inventory task: • **No changes** – do not change the "Golden Image" application category after completing the inventory. This is the default. • **Update or create (if does not exist)** – add applications that the Inventory task discovers on the device to the "Golden Image" category. If the category does not exist, it is created. If the category exists, the list of applications in the category is updated. • **Delete** – delete the "Golden Image" category after completing the inventory. You can use the "Golden Image" category in Application Control rules.

Setting	Description
Scan all executables	This check box enables or disables of executable file scans. This check box is selected by default.
Scan binaries	The check box enables or disables scans of binary files (files with the extensions .elf, .java and .pyc). This check box is selected by default.
Scan scripts	This check box enables or disables script scans. This check box is selected by default.
Inventory scopes	The table contains the inventory scopes scanned by the application. The application will scan files and directories located in the paths specified in the table. By default, the table contains one inventory scope – /usr/bin. You can add, edit, delete, move up, or move down inventory scopes in the table. You can also import the list of inventory scopes from a file by clicking **Import** or export the list of inventory scopes to a file in JSON format by clicking **Export**. When importing, you are prompted to replace the list of inventory scopes or add inventory scopes to the existing list.

Add scan scope window

In this window, you can add and configure scan scope for the Inventory task.

Inventory scope settings

Setting	Description
Scope name	Field for entering the inventory scope name. This name will be displayed in the table in the **Scan settings** section. The entry field must not be blank.
Use this scope	This check box enables or disables the scan of this scope when the task is performed. If this check box is selected, the application processes this inventory scope while running the task. If this check box is cleared, the application does not process this inventory scope while running the task. You can later include this scope in task settings by selecting the check box. This check box is selected by default.
File system, access protocol, and path	Entry field for the path to the local directory that you want to include in the inventory scan scope. You can use **masks** to specify the path. You can use the `*` (asterisk) character to create a file or directory name mask. You can indicate a single `*` character to represent any set of characters (including an empty set) preceding the `/` character in the file or directory name. For example, `/dir/*/file` or `/dir/*/*/file`. You can indicate two consecutive `*` characters to represent any set of characters (including an empty set and the `/` character) in the file or directory name. For example, `/dir/**/file*/` or `/dir/file**/`. The `**` mask can be used only once in a directory name. For example, `/dir/**/**/file` is an incorrect mask. You can use a single `?` character to represent any one character in the file or directory name. The field must not be blank. The **/** path is specified by default – the application scans all directories of the local file system.
Masks	This list contains name masks of the objects that the application scans while running the task. By default the list contains the ***** mask (all objects). You can add, edit, or delete masks.

Exclusion scopes section

In the **Exclusion scopes** section for the Inventory task, you can configure the scopes to be excluded from scans.

Exclusion scopes window

This window contains scan exclusion scopes. The application does not scan files and directories located at the paths specified in the table.

Exclusion scope settings

Setting	Description
Merge inherited values	This check box enables or disables the merging of the list when inherited in child policies. If the check box is selected, items in the list of the parent policy are displayed in child policies, and items can be added to the list of the child policy. If the check box is cleared, the list items are not merged when inheriting policy settings. This check box is cleared by default.
Exclusion scope name	Exclusion scope name.
Path	Path to the directory excluded from scan.
Status	The status indicates whether the application uses this exclusion.

By default, the table of exclusion scopes is empty. You can add, edit, and delete items in the table.

You can also import the exclusion list from a file using the **Import** button and export the exclusion list to a JSON file using the **Export** button. When importing, you will be prompted to replace the list of exclusions or add the exclusions to the existing list.

Add exclusion scope window

In this window, you can add and configure scan exclusion scope for the Inventory task.

Exclusion scope settings

Setting	Description
Exclusion scope name	Field for entering the exclusion scope name. This name will be displayed in the table in the **Exclusion scopes** window. The entry field must not be blank.
Use this scope	This check box enables or disables the exclusion of the scope when the task is executed. If this check box is selected, the application excludes this scope during task execution. If this check box is cleared, the application includes this scope during task execution. You can later exclude this scope from scanning by selecting the check box. This check box is selected by default.
File system, access protocol, and path	Entry field for the path to the local directory that you want to exclude from the inventory. You can use **masks** to specify the path. You can use the `*` (asterisk) character to create a file or directory name mask. You can indicate a single `*` character to represent any set of characters (including an empty set) preceding the `/` character in the file or directory name. For example, `/dir/*/file` or `/dir/*/*/file`. You can indicate two consecutive `*` characters to represent any set of characters (including an empty set and the `/` character) in the file or directory name. For example, `/dir/**/file*/` or `/dir/file**/`. The `**` mask can be used only once in a directory name. For example, `/dir/**/**/file` is an incorrect mask. You can use a single `?` character to represent any one character in the file or directory name. The field must not be blank.
Masks	The list contains name masks of the objects that the application excludes from scan. You can add, edit, or delete masks.

Configuring Inventory in the Administration Console

In the Kaspersky Security Center Administration Console, you can perform an inventory of the applications for the protected device using the *Inventory* task.

You can create and run Inventory user tasks. You can configure the scan settings by editing the settings of the tasks.

The Kaspersky Security Center database can store information about up to 150,000 processed files. When this number of records is reached, new files will not be processed. To resume the Inventory task, delete the files registered in the Kaspersky Security Center database as a result of previous inventories, from the device where Kaspersky Endpoint Security is installed.

Inventory task settings

Setting	Description
Action to perform on the "Golden image" category upon task completion	In the drop-down list, you can select the action that Kaspersky Endpoint Security must perform with the "Golden Image" application category upon completion of the Inventory task: • **No changes** – do not change the "Golden Image" application category after completing the inventory. This is the default. • **Update or create (if does not exist)** – add applications that the Inventory task discovers on the device to the "Golden Image" category. If the category does not exist, it is created. If the category exists, the list of applications in the category is updated. • **Delete** – delete the "Golden Image" category after completing the inventory. You can use the "Golden Image" category in Application Control rules.
Scan all executables	This check box enables or disables of executable file scans. This check box is selected by default.
Scan binaries	The check box enables or disables scans of binary files (files with the extensions .elf, .java and .pyc). This check box is selected by default.
Scan scripts	This check box enables or disables script scans. This check box is selected by default.
Inventory scopes	The group of settings contains the **Configure** button. Clicking this button opens the **Scan scopes** window.

In the **Exclusions** section for the Inventory task, you can also configure scopes to be excluded from scans.

Scan scopes window

The table contains the scan scopes. The application will scan files and directories located in the paths specified in the table. By default, the table contains one scan scope – /usr/bin.

Scan scope settings for the Inventory task

Setting	Description
Scope name	Scan scope name.
Path	Path to the directory that the application scans.
Status	The status indicates whether the application scans this scope.

You can add, edit, delete, move up, and move down items in the table.

Kaspersky Endpoint Security scans objects in the specified scopes in the order they appear in the list of scopes. If necessary, place the subdirectory higher in the list than its parent directory, to configure security settings for a subdirectory that are different from the security settings of the parent directory.

New scan scope window

In this window, you can add and configure scan scope for the Inventory task.

Inventory scope settings

Setting	Description
Scan scope name	Field for entering the scan scope name. This name will be displayed in the table in the **Scan scopes** window. The entry field must not be blank.
Use this scope	This check box enables or disables the scan of this scope when the task is performed. If this check box is selected, the application processes this scan scope while running the task. If this check box is cleared, the application does not process this scan scope while running the task. You can later include this scope in task settings by selecting the check box. This check box is selected by default.
File system, access protocol, and path	Entry field for the path to the local directory that you want to include in the scan scope. You can use **masks** to specify the path. You can use the `*` (asterisk) character to create a file or directory name mask. You can indicate a single `*` character to represent any set of characters (including an empty set) preceding the `/` character in the file or directory name. For example, `/dir/*/file` or `/dir/*/*/file`. You can indicate two consecutive `*` characters to represent any set of characters (including an empty set and the `/` character) in the file or directory name. For example, `/dir/**/file*/` or `/dir/file**/`. The `**` mask can be used only once in a directory name. For example, `/dir/**/**/file` is an incorrect mask. You can use a single `?` character to represent any one character in the file or directory name. The field must not be blank.
Masks	This list contains name masks of the objects that the application scans while running the task. By default the list contains the ***** mask (all objects). You can add, edit, or delete masks.

Exclusions section

Settings of scan exclusions

Group of settings	Description
Exclusion scopes	This group of settings contains the **Configure** button. Clicking this button opens the **Exclusion scopes** window. In this window, you can define the list of scopes to be excluded from monitoring.

Exclusion scopes window

This window contains scan exclusion scopes. The application does not scan files and directories located at the paths specified in the table.

Exclusion scope settings

Setting	Description
Merge inherited values	This check box enables or disables the merging of the list when inherited in child policies. If the check box is selected, items in the list of the parent policy are displayed in child policies, and items can be added to the list of the child policy. If the check box is cleared, the list items are not merged when inheriting policy settings. This check box is cleared by default.
Exclusion scope name	Exclusion scope name.
Path	Path to the directory excluded from scan.
Status	The status indicates whether the application uses this exclusion.

By default, the table of exclusion scopes is empty. You can add, edit, and delete items in the table.

You can also import the list of exclusions from a file by clicking **Advanced** -> **Import** and export the list of added exclusions to a file by clicking **Advanced** -> **Export selected** or **Advanced** -> **Export all**.

New exclusion scope window

In this window, you can add and configure scan exclusion scope for the Inventory task.

Exclusion scope settings

Setting	Description
Exclusion scope name	Field for entering the exclusion scope name. This name will be displayed in the table in the **Exclusion scopes** window. The entry field must not be blank.
Use this scope	This check box enables or disables the exclusion of the scope when the task is executed. If this check box is selected, the application excludes this scope during task execution. If this check box is cleared, the application includes this scope during task execution. You can later exclude this scope from scanning by selecting the check box. This check box is selected by default.
File system, access protocol, and path	Entry field for the path to the local directory that you want to exclude from the inventory. You can use **masks** to specify the path. The field must not be blank. You can use the `*` (asterisk) character to create a file or directory name mask. You can indicate a single `*` character to represent any set of characters (including an empty set) preceding the `/` character in the file or directory name. For example, `/dir/*/file` or `/dir/*/*/file`. You can indicate two consecutive `*` characters to represent any set of characters (including an empty set and the `/` character) in the file or directory name. For example, `/dir/**/file*/` or `/dir/file**/`. The `**` mask can be used only once in a directory name. For example, `/dir/**/**/file` is an incorrect mask. You can use a single `?` character to represent any one character in the file or directory name.
Masks	The list contains name masks of the objects that the application excludes from scan. You can add, edit, or delete masks.

Configuring Inventory on the command line

You can use the command line to inventory applications on the protected device as follows:

- With the help of the Inventory_Scan *predefined task*. You can manually start or stop this task, and configure the task run schedule. You can configure scan settings by editing the settings of this task.

- With the help of user inventory tasks (tasks of the *InventoryScan* type). You can manually start, stop, pause, or resume user tasks and configure the task schedule.

You can view the list of applications detected on the device as a result of the Inventory task by using Application Control management commands.

Inventory task settings

The table describes all possible values and the default values of all the settings that you can specify for the Inventory task.

Inventory task settings

Setting	Description	Values
`ScanScripts`	Enables script scanning.	`Yes` (default value) — Scan scripts. `No` — Do not scan scripts.
`ScanBinaries`	Enables binary files scanning (elf, java, and pyc).	`Yes` (default value) — Scan binaries. `No` — Do not scan binaries.
`ScanAllExecutable`	Enables the scanning of files with an executable bit.	`Yes` (default value) — Scan files with an executable bit. `No` — Do not scan files with an executable bit.
`GoldenImageAction`	The action that Kaspersky Endpoint Security must perform with the "Golden Image" application category upon completion of the Inventory task: You can use the "Golden Image" category in Application Control rules.	`DoNothing` (default) – do not change the "Golden Image" application category after completing the inventory. `Create` – add detected applications to the "Golden Image" application category. If the category does not exist, it is created. If the category exists, the list of applications in the category is updated. `Remove` – delete the "Golden Image" category after completing the inventory.
The **[ScanScope.item_#]** section contains the following settings:		
`AreaDesc`	Description of the inventory scope. The maximum length of the string specified using this setting is 4096 characters.	Default value: `All objects`.
`UseScanArea`	Enables scans of the specified inventory scope. To run the task, enable scans of at least one inventory scope.	`Yes` (default value) — Scan the specified inventory scope. `No` — Do not scan the specified inventory scope.
`AreaMask.item_#`	Inventory scan scope limitation. In the inventory scan scope, the application scans only the files that are specified using the masks in the shell format. If this setting is not specified, the application scans all the objects in the inventory scope. You can specify several values for this setting.	The default value is `*` (scan all objects).
`Path`	Path to the directory with objects to be scanned.	`< path to local directory >` — scan objects in the specified directory. Default value: `/usr/bin`

Setting	Description	Values
The **[ExcludedFromScanScope.item_#]** section contains the following settings:		
`AreaDesc`	Description of the inventory exclusion scope.	The default value is not defined.
`UseScanArea`	Excludes the specified scope from the inventory.	`Yes` (default value) — Exclude the specified scope. `No` — Do not exclude the specified scope.
`AreaMask.item_#`	Limiting the inventory exclusion scope using shell masks. If this setting is not specified, the application excludes all the objects in the inventory scope. You can specify several values for this setting.	Default value: `*` (exclude all objects)
`Path`	Path to the directory with objects to be excluded.	`< path to local directory >` excludes objects in the specified directory from the scan. You can use **masks** to specify the path. You can use the `*` (asterisk) character to create a file or directory name mask. You can indicate a single `*` character to represent any set of characters (including an empty set) preceding the `/` character in the file or directory name. For example, `/dir/*/file` or `/dir/*/*/file`. You can indicate two consecutive `*` characters to represent any set of characters (including an empty set and the `/` character) in the file or directory name. For example, `/dir/**/file*/` or `/dir/file**/`. The `**` mask can be used only once in a directory name. For example, `/dir/**/**/file` is an incorrect mask. You can use a single `?` character to represent any one character in the file or directory name.

Viewing a list of detected applications

To view the list of applications detected on the device, execute the following command:

```
kesl-control --get-app-list [--json]
```

where `--json` means output data in JSON format.

Kaspersky Endpoint Security displays the following information about the detected applications:

- **Date and time of inventory**. Date and time when the Inventory task was performed
- **Number of applications**. The number of applications detected on the device
- The list of applications containing the following information:
  - **Path**. Path to the application.
  - **Hash**. Application hash sum.
  - **Type**. Application type. For example, `Script`, `Executable`.
  - **Categories**. Categories that the application belongs to (if they were previously created). You can view the list of created application categories using the command `kesl-control --get-categories`.

When you add a new category, its information is not automatically updated in the application list. To update the application list, you need to restart the Inventory task.

Device Control

The *Device Control* component allows you to manage user access to the devices that are installed on or connected to the client device (for example, hard drives, cameras, or Wi-Fi modules). Access management lets you protect the client device from infection when external devices are connected, and prevent data loss or leaks.

The Device Control component is enabled automatically with the default settings when Kaspersky Endpoint Security starts.

Device Control manages user access on the following levels:

- **Device type** as classified by Device Control, such as printers, removable drives, or CD/DVD drives. One of the following access modes can be applied to each device type:
  - *Allow*, to allow access to devices of this type.
  - *Block*: block access to devices of this type.
  - *Depends on bus*: allow or block access to devices depending on the access mode set for the bus through which the device is connected.
  - *By rule*: allow or block access to devices depending on the access rules. A *device access rule* is a set of options that determine which users can access devices that are installed on the client device or connected to it, and at what time. This access mode can be specified only for storage devices (hard drives, removable drives, floppy disk drives, CD/DVD drives). When a forbidden device is connected, the application denies access to the device to the users specified in the rule and displays a notification. During attempts to read and write on this device, the application silently blocks the users specified in the rule from reading/writing. If you try to perform an operation with a device whose access mode is set to *By rule*, but no rule active at the time of access is found, the operation is blocked.
  - *Read only*: allow read-only access to devices of the selected type, while blocking write access. This access mode can be specified only for storage devices (hard drives, removable drives, floppy disk drives, CD/DVD drives). If the device has the "read-only" access type, when the trusted device is assigned to a specific user, the assigned user is ignored and the device is made available for writing to all users.
- **Connection bus**. *Connection bus* is an interface that devices use to connect to the client device, such as USB or FireWire. One of the following access modes can be applied to connection buses:
  - *Allow*: grant access to devices connected through this connection bus.
  - *Block*: deny access to devices connected using this connection bus.

  For example, access may be denied to all devices connected via USB.

By default, the *Depends on connection bus* access mode is selected for all device types. The *Allow* access mode is selected for connection buses. Device Control grants users full access to all devices accordingly.

When Device Control is enabled for the first time, it generates a *DeviceAllowed* event for all detected devices with a known device or bus type. No repeat events are generated upon subsequent component runs unless there were changes in the control settings for these devices.

When Device Control is disabled, the application unblocks access to blocked devices.

Device Control does not block system drives. If the application cannot automatically detect the system drive, the Device Control component terminates with an error.

Blocking devices by device type or connection bus via the system device driver is not supported on the following Linux kernels: 3.10, 5.14, 5.15, 5.17, 6.1, 6.8. On these kernels and in the *By rule* access mode, only the opening of files and reading of directories (that is, getting the names of files and directories) are blocked. On systems that do not support fanotify, blocking the reading of directories is also not supported.

Device Control ignores mount point exclusions. Access to a device mounted at an excluded point can be limited with Device Control settings.

You can enable, disable, and configure Device Control:

- Select the application's operation mode when there is an attempt to access a device to which access is prohibited by Device Control settings: block or only notify about the attempt to access the device.
- Select a device access mode depending on the type.
- Select a device access mode depending on the bus the devices are connected to.
- Remove individual devices from the scope of Device Control by adding them to the list of trusted devices. *Trusted devices* are devices to which users have full access. For example, you can limit access to specific USB devices or only to USB drives; access to other USB devices is denied. Additionally, you can specify users or groups for which devices are to be trusted.

  You can manage the list of trusted devices on the command line or using Kaspersky Security Center.

  You can add devices to a list of trusted devices by identifier or identifier mask. You can get information about devices installed on client devices or connected to client devices using the command line on a client device or using Kaspersky Security Center. Information sharing with the Kaspersky Security Center Administration Server is enabled by default.

  > Information about devices is transferred if the client device is under the control of an active policy and synchronized with Network Agent (performed with the frequency specified in the Network Agent policy properties, by default – every 15 minutes).

  If you manage the application using Kaspersky Security Center, you can also use the following to add devices to the trusted list:

  - List of devices discovered on managed client devices. The list is displayed in the policy properties in the Web Console or the Administration Console.
  - List of devices generated based on Device Control events in Kaspersky Security Center. You can create this list in the policy properties in the Administration Console.

  In the Administration Console, you can also export the configured list of trusted devices to a file or import a list of trusted devices from a file.
- Configure an access schedule for storage devices (hard drives, removable drives, floppy disk drives, CD/DVD drives).

  > In general application settings, if blocking access to files during scans is disabled, you cannot use a device access schedule to block access to devices.

- You can define access rules for devices depending on their type. Allow or block access for specified users at a specified time.
- Allow the user to request temporary access to a blocked device and grant the user access to the device.

> Granting access to a blocked device is available only if Kaspersky Security Center 16.2 is deployed in the organization and the client device is able to establish a connection with the Administration Server.

Configuring Device Control in the Web Console

In the Web Console, you can manage Device Control settings in the policy properties (**Application settings →Security Controls → Device Control**).

Configuring Device Control in the Administration Console

In the Administration Console, you can manage Device Control settings in the policy properties (Managing policies in the Administration Console, Creating a policy using the Administration Console) (**Security Controls → Device Control.**).

Device Control settings

Setting	Description
Enable Device Control	This check box enables or disables Device Control. This check box is selected by default.
Trusted devices	This group of settings contains the **Configure** button. Clicking this button opens the **Trusted devices** window. In this window, you can add a device to the list of trusted devices.
Device Control operating mode	Response to attempts to access a device that is restricted according to Device Control rules: • **Inform**. If you select this option, Kaspersky Endpoint Security tests the selected access mode and generates an event for the detected attempt to access a device. • **Block** (default value). If you select this option, Kaspersky Endpoint Security applies the access mode set for the device or bus.
Device Control settings	This group of settings contains buttons that open windows where you can configure access mode for devices by type and connection buses.
Allow requesting temporary access	If this check box is selected, the user can request temporary access to the blocked device in the graphical interface of the application or on the command line.
Message templates	This group of settings contains the **Configure** button. Clicking this button opens the **Message templates** window.

Trusted devices window

The table contains a list of trusted devices. The table is empty by default.

Trusted device settings

Setting	Description
Device ID	ID of a trusted device.
Device name	Trusted device name.

Setting	Description
Device type	Trusted device type (for example, Hard drive or Smart card reader).
Host name	Name of the client device the trusted device is connected to.
User or group name	Name of the user or group for which the device is trusted.
Comment	Comment related to a trusted device.

You can add devices to the trusted device list using the **Add** button as follows:

- Specify a device ID or device ID mask (**Add** → **Add device by ID or mask**).
- Select the desired device from the list of devices detected on managed devices (**Add** → **Select a device from the list of devices detected on hosts**).
- Select the desired device from the list of devices detected in Device Control events in Kaspersky Security Center (**Add** → **Add device based on events**).

You can edit and delete trusted devices in the table.

You can also export the list of added devices to a file by clicking the **Advanced** → **Export selected** or **Advanced** → **Export all** button and import a list of devices from a JSON file by clicking the **Advanced** → **Import** button.

Three import modes are possible:

- **Combine with existing** to merge the lists of trusted devices upon import. If the file already has an entry for this device ID, settings of the existing entry are updated. For devices that were not previously on the list, entries are added.
- **Add to existing** to add trusted devices to the list upon import. Only entries for devices not previously on the list of devices are added to the list.
- **Replace existing** to replace the list of trusted devices. The existing list of trusted devices is replaced with the list from the file.

Trusted device (Device ID) window

In this window, you can add a device to the list of trusted devices by its identifier.

Adding device by ID

Setting	Description
Device ID	The field for entering the identifier or the identifier mask of the device that you want to add to the list of trusted devices. To specify an identifier, you can use the following wildcards: * (any sequence of characters) or ? (any single character). For example, you can specify the USBSTOR* mask to allow access to all USB drives.
Find on hosts	Clicking the button displays the devices found on the connected client devices using the specified ID or mask. The button is available if the **Device ID** field is not empty.
Devices found	The table contains the following columns: • **Device type** – type of device found (for example, Hard drive or Smart card reader). • **Device ID** – ID of the device found. • **Device name** – name of the device found. • **Host name** — name of the client device that the found device is connected to.
Comment	The field for entering a comment for the device that you want to add to the list of trusted devices (optional).

Setting	Description
Allow access for users and/or groups of users	This field displays the name of the user and/or group for which the device is trusted. The default value is **\Everyone** (all users).
Configure	Clicking the button opens the Access to trusted device window.

Device window on client devices

In this window you can add a device to the list of trusted devices by selecting it in the list of existing managed devices.

Information about existing devices is available only if an active policy has been created and synchronization with the Network Agent has been performed (the synchronization interval is specified in the Network Agent policy, 15 minutes by default).

When you create a new inactive policy, the list will be empty.

Adding a device from the list of devices detected on managed client devices

Setting	Description
Host name	Field for entering the name or the name mask for the managed device for which you want to find connected devices. The default mask is * – all managed devices.
Device type	In this drop-down list, you can select the type of connected device to search for (for example, Hard drives or Smart card readers). The **All devices** option is selected by default.
Device ID	Field for entering the identifier or identifier mask for the device you want to find. The default mask is * – all devices.
Find on hosts	When you click this button, the application searches for devices with the specified parameters. The search results are displayed in the table below.
List of detected devices	The table contains the following columns: • **Host name** — name of the client device that the found device is connected to. • **Device type** – type of device found (for example, Hard drive or Smart card reader). • **Device name** – name of the device found. • **Device ID** – ID of the device found.

List of devices based on Device Control events window

In this window, you can create a list of devices detected in Device Control events in Kaspersky Security Center. You can then add devices from this list to the list of trusted devices.

You can select one or more devices to add to the list of trusted devices.

Information about devices is available if Device Control is enabled, there is an active policy, and synchronization with Network Agent has been performed (synchronization is performed at the frequency specified in the Network Agent policy; by default – every 15 minutes).

When you create a new inactive policy, the list will be empty.

Adding devices from the list of devices detected in Kaspersky Security Center events

Setting	Description
Event types	You can use check boxes to select the types of Device Control events sent to Kaspersky Security Center. The list includes the devices detected in events of the specified types. All check boxes are selected by default.
Administration group	A field for entering the name of the administration group containing the client devices that the detected devices are connected to. Only devices connected to client devices from the specified administration group are included in the list. You can specify part of the group name. By default, the list includes devices connected to client devices in any administration group.
Events from period	In the drop-down list, you can select the time period when the events occurred. The list includes devices that were detected in events sent to Kaspersky Security Center during the specified period. By default, the list includes devices detected in events over the last month.
Search for devices	When you click this button, the application searches for devices with the specified parameters. The search results are displayed in the table below.
Devices found	The table contains the following columns: • **Device type** – type of device found (for example, Hard drive or Smart card reader). • **Device ID** – ID of the device found. • **Device name** – name of the device found. • **Host name** — name of the client device that the found device is connected to. • **Connection date** is the date when the found device was connected. • **Administration group** is the name of the administration group containing the client device that the detected device is connected to.
Comment	The field for entering a comment for the device that you want to add to the list of trusted devices (optional).
Allow access for users and/or groups of users	This field displays the name of the user and/or group for which the device is trusted. The default value is **\Everyone** (all users).
Configure	Clicking the button opens the **Access to trusted device** window.

Access to trusted device window

In this window, you can configure access of users or user groups to a selected trusted device.

Access to trusted device

Setting	Description
Users and/or user groups	List of users and groups for which you want to make the added device trusted. By default, the table contains the **\Everyone** item (all users). You can add, edit, or delete users or user groups.

User or group window

In this window, you can specify a user or a user group for which you want to make the device trusted.

Trusted device settings

Setting	Description
Type	The **user** or **group** for which you want to make the device trusted.
User or group name	Name of a local or domain user (without specifying the full name with the domain, if the system allows entering user names in this format, or in the <domain name>\<user name> or <user name>@<domain name>) format, or the name of a group of users for which you want to make the device trusted.

Device type window

In this window, you can configure access mode for various types of devices.

Access mode for device types

Setting	Description
Device type	Device type (for example, Hard drives, Printers).
Access mode	Device access mode. Right-clicking with the mouse opens a context menu where you can select one of the following items: • **Allow**: allow access to devices of the selected type. • **Block**: prohibit access to devices of the selected type. • **Depends on bus** (default value): allow or block access to the devices depending on the access mode for a connection bus. • **By rule**: allow or block access to devices depending on the access rule and schedule. This menu command is available only for storage devices (hard drives, removable drives, floppy disk drives, CD/DVD drives). • **Read only**: allow read-only access to devices of the selected type. This menu command is available only for storage devices (hard drives, removable drives, floppy disk drives, CD/DVD drives).

You can configure access rules and schedules in the **Configure device access rule** window, which opens when you double-click the device type.

Configure device access rule window

In this window, you can configure access rules and schedules for the selected device type.

This window is opened by double-clicking the device type in the **Device type** window.

Device access rules and schedules

Setting	Description
Users and/or user groups	The list contains users and groups for which you can configure access schedule. By default, the table contains the **\Everyone** item (all users). You can add, edit, or delete users or user groups.
Device access rules	This table contains access schedules for users and user groups. It consists of the following columns: • **Access schedule** – names of existing access schedules. The check box next to the schedule indicates whether this schedule is used by the component. • **Access** – access type for the schedule: **Allow** (grant access to devices of the selected type) or **Block** (deny access to devices of the selected type). You can configure schedules only for hard drives, removable drives, floppy disks, and CD/DVD drives. By default, the table contains the **Default** access schedule, which provides all users with full access to devices (the **\Everyone** item is selected in the **Users and/or user groups** list) at any time if access via the connection bus is allowed for this type of device. You can add, edit, or delete access schedules for selected users. The **Default** schedule cannot be modified or removed.

User or group window

In this window, you can specify a user or group of users to which the device access rule applies.

Configure device access rule

Setting	Description
Type	The **User** or **Group** to which the Application Control rule applies.
User or group name	Name of a local or domain user (without specifying the full name with the domain, if the system allows entering user names in this format, or in the <domain name>\<user name> or <user name>@<domain name>) format, or the name of a group of users to which the rule applies.

Access schedule window

In this window, you can configure the device access schedule.

Schedule for access to devices

Setting	Description
Name	Entry field for the access schedule name.
Time intervals	The table where you can select time intervals for the schedule (days and hours). Intervals highlighted in green are included to the schedule. To exclude an interval from the schedule, click the corresponding cells. Intervals excluded from the schedule are highlighted in gray. By default, all intervals (24/7) are included to the schedule.

Connection buses window

In this window, you can configure access mode for connection buses.

Access mode for connection buses

Setting	Description
Connection bus	Connection bus used by devices to connect to the client device: • **FireWire** • **USB**
Access mode	Connection bus access mode. Right-clicking with the mouse opens a context menu where you can select one of the following items: • **Allow** (default): provide access to devices connected through this bus. • **Block**: deny access to devices connected using this connection bus.

Configuring the Device Control message template

When a user tries to gain access to a blocked device, the application displays a message about access denial or the blocking of an operation with the device.

Access denial messages are based on a template that describes the reasons for blocking. You can use special variables (for example,%USER_NAME%) in the message template. Such variables allow using the same message template for different devices. When generating a message, the application substitutes the values of variables corresponding to the specific device, user, and event into the message.

You can edit the message template.

To edit the message template in the Web Console:

1. In the policy properties window, select **Application settings** → **Security Controls** → **Device Control**.
2. In the **Message templates** section, click the **Block messages** link.
3. This opens the **Message templates** window; in that window, configure the Device Control message template on the **Message to user** tab.

   You can add variables and links to the body of the message for the user by clicking the **Add variable** and **Add link** buttons. To add a variable to the template, place the cursor in the required place in the text, click the **Add variable** button, and select a variable in the drop-down list. To add a link to the template, place the cursor in the required place in the text and click the **Add link** button.

   You can also restore the text of the message template by clicking the **Reset to default** button.
4. Click **OK**.
5. Click the **Save** button to save the changes made.

To change a message template in the Administration Console:

1. In the **Managed devices** folder in the Administration Console tree, open the folder with the name of the administration group to which the required devices belong.
2. In the workspace, select the **Policies** tab.
3. In the list of policies, select the required policy and double-click it to open the **Properties: <Policy name>** window.

   You can also open the policy properties window by using the **Properties** item in the policy context menu or by clicking the **Configure policy settings** link located to the right of the list of policies in the section with the policy settings.
4. In the policy window, select **Security Controls** → **Device Control**.
5. In the **Message templates** section, click the **Configure** button.
6. This opens the **Message templates** window; in that window, configure the Device Control message template on the **Block message** tab.

   You can add variables and links to the body of the message for the user by clicking the **Variable** and **Link** buttons. To add a variable to the template, place the cursor in the required place in the text, click the **Variable** button, and select a variable in the drop-down list. To add a link to the template, place the cursor in the required place in the text and click the **Link** button.

   You can also restore the text of the message template by clicking the **Default** button.
7. Click **OK**.
8. Click **Apply**.

Configuring Device Control on the command line

You can manage Device Control in the command line with the help of the Device Control predefined task (*Device_Control*).

The Device Control task is not started by default. You can start and stop the task manually.

You can configure Device Control by editing the settings of the Device Control predefined task.

You can also use Device Control management commands to:

- view the list of connected devices and export it to file
- view and change the list of trusted devices

Device Control task settings

The table describes all possible values and the default values of all the settings that you can specify for the Device Control task.

Device Control task settings

Setting	Description	Values
`OperationMode`	Response to attempts to access a device that is restricted according to Device Control rules.	`Block` (default value) – the application applies the access mode defined for the device or bus. `Notify` – the application tests the selected access mode and generates an event about the detection of an attempt to access a device.
`AllowToRequestTemporaryAccess`	Allow requesting temporary access to a blocked device. Granting access to a blocked device is available only if Kaspersky Security Center 16.1 is deployed in the organization and the client device is able to establish a connection with the Administration Server.	`Yes` – allow the user to request temporary access to the blocked device in the graphical interface of the application or on the command line. `No` (default) – do not allow the user to request temporary access to a blocked device.
The **[DeviceClass]** section contains access modes for devices depending on their type.		
`HardDrive`	Access mode for the hard drives connected to a client device.	`Allow` — Users are allowed access to hard drives. `DependsOnBus` (default): access to the hard drive depends on the access mode defined for the bus through which it is connected. `Block` — Access to all hard drives (except system hard drives, which are never blocked by the Device Control) is blocked for users. `ByRule` — Access to the hard drives depends on the access rules. `ReadOnly` — Users have read only access to hard drives, writing is blocked.
`RemovableDrive`	Access mode for the removable drives connected to a client device.	`Allow` — Access to the removable drives is allowed for users. `DependsOnBus` (default): access to the removable drive depends on the access mode defined for the bus through which it is connected. `Block` — Access to the removable drives is blocked for users. `ByRule` — Access to the removable drives depends on the access rules. `ReadOnly` — Users have read only access to removable drives, writing is blocked.

Setting	Description	Values
`FloppyDrive`	Access mode for the floppy disk drives connected to a client device. The application does not block floppy disk drives connected to the client device using the ISA bus.	`Allow` — Users are allowed access to floppy disk drives. `DependsOnBus` (default): access to the floppy disk drive depends on the access mode defined for the bus through which it is connected. `Block` — Access to floppy disk drives is blocked for users. `ByRule` — Access to floppy disk drives depends on the access rules. `ReadOnly` — Users have read only access to floppy disk drives, writing is blocked.
`OpticalDrive`	Access mode for the CD/DVD drives connected to a client device.	`Allow` — Users are allowed access to CD/DVD drives. `DependsOnBus` (default): access to the CD/DVD drive depends on the access mode defined for the bus through which it is connected. `Block` — Access to CD/DVD drives is blocked for users. `ByRule` — Access to CD/DVD drives depends on the access rules. `ReadOnly` — Users have read only access to CD/DVD drives, writing is blocked.
`SerialPortDevice`	Access mode for the devices connected to a client device via a serial port. The application does not block the devices connected to a client device via a serial port using the ISA bus.	`Allow` — Users are allowed access to devices connected through a serial port. `DependsOnBus` (default): access to a device connected through a serial port depends on bus access mode. `Block` — Access to devices connected through a serial port is blocked for users.
`ParallelPortDevice`	Access mode for the devices connected to a client device via a parallel port.	`Allow` — Users are allowed access to devices connected through a parallel port. `DependsOnBus` (default): access to a device connected through a parallel port depends on bus access mode. `Block` — Access to devices connected through a parallel port is blocked for users.
`Printer`	Access mode for the printers connected to a client device.	`Allow` — Users are allowed access to printers. `DependsOnBus` (default): access to a printer depends on the access mode defined for the bus through which it is connected. `Block` — Access to printers is blocked for users.
`Modem`	Access mode for the modems connected to a client device.	`Allow` — Users are allowed access to modems. `DependsOnBus` (default): access to a modem depends on the access mode defined for the bus through which it is connected. `Block` — Access to modems is blocked for users.
`TapeDrive`	Access mode for the tape devices connected to a client device.	`Allow` — Users are allowed access to tape devices. `DependsOnBus` (default): access to a tape device depends on the access mode defined for the bus through which it is connected `Block` — Access to tape devices is blocked for users.
`MultifuncDevice`	Access mode for the multifunctional devices connected to a client device.	`Allow` — Users are allowed access to multifunctional devices. `DependsOnBus` (default): access to a multifunctional device depends on the access mode defined for the bus through which it is connected. `Block` — Access to multifunctional devices is blocked for users.
`SmartCardReader`	Access mode for the smart card readers connected to a client device.	`Allow` — Access to smart card readers is allowed for users. `DependsOnBus` (default): access to a smart card reader depends on the access mode defined for the bus through which it is connected. `Block` — Access to smart card readers is blocked for users.

Setting	Description	Values
`WiFiAdapter`	Access mode for the Wi-Fi adapters connected to a client device.	`Allow` — Users are allowed access to Wi-Fi adapters. `DependsOnBus` (default): access to a Wi-Fi adapter depends on connection bus access mode. `Block` — Access to the Wi-Fi adapters is blocked for users.
`NetworkAdapter`	Access mode for the external network adapters connected to a client device.	`Allow` — Users are allowed access to external network adapters. `DependsOnBus` (default): access to an external network adapter depends on the access mode defined for the bus through which it is connected. Device Control does not allow denying access to external network adapters to avoid disconnecting the client device from the network.
`PortableDevice`	Access mode for the portable devices connected to a client device.	`Allow` — Users are allowed access to portable devices. `DependsOnBus` (default): access to a portable device depends on the access mode defined for the bus through which it is connected. `Block` — Access to portable devices is blocked for users.
`BluetoothDevice`	Access mode for the Bluetooth devices connected to a client device.	`Allow` — Users are allowed access to Bluetooth devices. `DependsOnBus` (default): access to a Bluetooth device depends on the access mode defined for the bus through which it is connected. `Block` — Access to Bluetooth devices is blocked for users.
`ImagingDevice`	Access mode for the imaging devices connected to a client device.	`Allow`—Access to all imaging devices is allowed for users. `DependsOnBus` (default): access to an imaging device depends on the access mode defined for the bus through which it is connected. `Block`—Access to all imaging devices is blocked for users.
`SoundAdapter`	Access mode for the sound adapters connected to a client device.	`Allow`—Access to all sound adapters is allowed for users. `DependsOnBus` (default): access to a sound adapter depends on the access mode defined for the bus through which it is connected. `Block`—Access to all sound adapters is blocked for users.
`InputDevice`	Access mode for the input devices (keyboards, mouse, touchpad, and others) connected to a client device.	`Allow` — Users are allowed access to input devices. `DependsOnBus` (default): access to an input device depends on the access mode defined for the bus through which it is connected. `Block` — Access to input devices is blocked for users.
The **[DeviceBus]** section contains access modes for connection buses.		
`USB`	Access mode for devices connected to the client device via USB.	`Allow` (default value) — Users are allowed access to USB-devices. `Block` — Access to USB-devices is blocked for users.
`FireWire`	Access mode for devices connected to the client device via FireWire.	`Allow` (default value) — Users are allowed access to devices connected via the FireWire interface. `Block` — Access to devices connected via the FireWire interface is blocked for users.
The **[TrustedDevices.item_ #]** section contains trusted devices.		

Setting	Description	Values
`DeviceId`	Specifies ID or ID mask of a trusted device.	You can use the masks * (any sequence of characters) or ? (any single character) to indicate the device ID. Examples: *To deny access to all USB devices except the specified one, specify the following settings:* In the `[DeviceBus]` section, specify `USB=Block` In the `[TrustedDevices.item_#]` section, specify `DeviceId=<device ID>` *To deny access to all USB devices, but allow access to all USB drives, specify the following settings:* In the `[DeviceBus]` section, specify `USB=Block` In the `[TrustedDevices.item_#]` section, specify `DeviceId=USBSTOR*`
`Comment`	Comment to the specified trusted device.	—
The **[TrustedDevices.item_#.Principals.item_#]** section contains the rules for accessing a trusted device.		
`Principal`	The user or group for which the device is trusted. If the device has the "read-only" access type, when the trusted device is assigned to a specific user, the assigned user is ignored and the device is made available for writing to all users.	`\Everyone` (default): the device is trusted for all users. `<user name>` is the name of a local or domain user for which the device is trusted (without specifying the full name with the domain, if the system allows entering user names in this format, or in the `<domain name>\<user name>` or `<user name>@<domain name>`) format. `@<group name>` is the name of the (local or domain) group of users for which the device is trusted.
The **[Schedules.item_#]** section contains the device access schedule. You can configure a schedule only for hard drives, removable drives, floppy disk drives, and CD/DVD drives.		
`ScheduleName`	Specifies a schedule name. The schedule name must be unique.	Default value: `Default`. The `Default` schedule provides users full access to devices at any time if the connection bus is allowed to access the corresponding device type. You cannot delete the `Default` schedule.

`DaysHours`	Specifies time intervals for a schedule.	`All` (default value) — The schedule is valid 24/7 (no time limitation).
		`<weekday>` is the day of the week. You can use either the full week day names or abbreviations (for example, for Monday, you can specify `Mo`, or `Mon`, or `Monday`). For week days, you can specify intervals or specific days. The week starts from Sunday.
		`<hour>` is the hours [0:24]. For hours, you can specify only intervals.
		Examples:
		Schedule_1 is valid from Sunday till Saturday from 0 a.m. to 11 a.m., from 12 p.m. to 3 p.m., and from 4 p.m. to 12 a.m.:
		`[Schedules.item_0001]`
		`ScheduleName=schedule_1`
		`DaysHours=Su-Sa:0..11,12..15,16..24`
		Schedule_2 is valid for the following intervals: on Thursdays from 12 p.m. to 2 p.m. and on Fridays from 2 a.m. to 3 p.m. and from 4 p.m. to 12 a.m.:
		`[Schedules.item_0002]`
		`ScheduleName=schedule_2`
		`DaysHours=Th:12..14;Fr:2..15,16..24`
		Schedule_3 is valid 24 hours 7 days a week:
		`[Schedules.item_0003]`
		`ScheduleName=schedule_3`
		`DaysHours=All`

Setting	Description	Values
The **[HardDrivePrincipals.item_#]** section contains hard drive access rules. For hard drives, at least one schedule must always be enabled. You can assign several access rules to a hard drive. Also, multiple schedules can be specified for a user or group of users. If an access rule conflict occurs for a user or group, the minimum access rights are granted.		
`Principal`	Specifies a user or group of users for whom the access rule is applied.	`\Everyone` (default value) is the access rule applies to all users. `<user name>` is the name of a local or domain user to which the access rule applies (without specifying the full name with the domain, if the system allows entering user names in this format, or in the `<domain name>\<user name>` or `<user name>@<domain name>` format). `@<group name>` is the name of the (local or domain) group of users to which the access rule applies.
`[HardDrivePrincipals.item_#.AccessRules.item_#]` contains access rule settings.		
`UseRule`	Specifies whether the rule is enabled or disabled.	`Yes` (default value) — The access rule is enabled. `No` — The access rule is disabled.
`ScheduleName`	Schedule specified in the `[Schedules.item_#]` section.	Default value: `Default`.
`Access`	Specifies access type.	`Allow` (default value) — Access to hard drives is allowed. `Block` — Access to hard drives is blocked.
The **[RemovableDrivePrincipals.item_#]** section contains the access rules for removable drives. For removable drives, at least one schedule must always be enabled. You can assign several access rules to a removable drive. Also, multiple schedules can be specified for a user or group of users. If an access rule conflict occurs for a user or group, the minimum access rights are granted.		
`Principal`	Specifies a user or group of users for whom the access rule is applied.	`\Everyone` (default value) is the access rule applies to all users. `<user name>` is the name of a local or domain user to which the access rule applies (without specifying the full name with the domain, if the system allows entering user names in this format, or in the `<domain name>\<user name>` or `<user name>@<domain name>` format). `@<group name>` is the name of the (local or domain) group of users to which the access rule applies.
`[RemovableDrivePrincipals.item_#.AccessRules.item_#]` contains access rule settings.		
`UseRule`	Specifies whether the rule is enabled or disabled.	`Yes` (default value) — The access rule is enabled. `No` — The access rule is disabled.
`ScheduleName`	Schedule specified in the `[Schedules.item_#]` section.	Default value: `Default`.
`Access`	Specifies access type.	`Allow` (default value) — Access to removable drives is allowed. `Block` — Access to removable drives is blocked.
The **[FloppyDrivePrincipals.item_#]** section contains access rules for floppy drives. For floppy drives, at least one schedule must always be enabled. You can assign several access rules to a floppy drive. Also, multiple schedules can be specified for a user or group of users. If an access rule conflict occurs for a user or group, the minimum access rights are granted.		
`Principal`	Specifies a user or group of users for whom the access rule is applied.	`\Everyone` (default value) is the access rule applies to all users. `<user name>` is the name of a local or domain user to which the access rule applies (without specifying the full name with the domain, if the system allows entering user names in this format, or in the `<domain name>\<user name>` or `<user name>@<domain name>` format). `@<group name>` is the name of the (local or domain) group of users to which the access rule applies.
`[FloppyDrivePrincipals.item_#.AccessRules.item_#]` contains access rule settings.		
`UseRule`	Specifies whether the rule is enabled or disabled.	`Yes` (default value) — The access rule is enabled. `No` — The access rule is disabled.

Setting	Description	Values
ScheduleName	Schedule specified in the [Schedules.item_#] section.	Default value: Default.
Access	Specifies access type.	Allow (default value) — Access to floppy drives is allowed. Block — Access to floppy drives is blocked.
The **[OpticalDrivePrincipals.item_#]** section contains the access rules for CD/DVD drives. For CD/DVD drives, at least one schedule must always be enabled. You can assign several access rules to a CD/DVD drive. Also, multiple schedules can be specified for a user or group of users. If an access rule conflict occurs for a user or group, the minimum access rights are granted.		
Principal	Specifies a user or group of users for whom the access rule is applied.	\Everyone (default value) is the access rule applies to all users. < user name > is the name of a local or domain user to which the access rule applies (without specifying the full name with the domain, if the system allows entering user names in this format, or in the <domain name>\<user name> or <user name>@<domain name> format). @< group name > is the name of the (local or domain) group of users to which the access rule applies.
[OpticalDrivePrincipals.item_#.AccessRules.item_#] contains access rule settings.		
UseRule	Specifies whether the rule is enabled or disabled.	Yes (default value) — The access rule is enabled. No — The access rule is disabled.
ScheduleName	Schedule specified in the [Schedules.item_#] section.	Default value: Default.
Access	Specifies access type.	Allow (default value) — Access to CD/DVD drives is allowed. Block — Access to CD/DVD drives is blocked.

Viewing and exporting the list of connected devices on the command line

To view the list of connected devices, execute the following command:

```
kesl-control --get-device-list [--all] [--json]
```

where:

- `--all` lists all connected devices.
- `--json` lists connected devices in JSON format.

Kaspersky Endpoint Security displays the following information about connected devices:

- **Device type**. Type of the connected device. For example, `OpticalDrive` or `HardDrive`.
- **Identifier**. ID of the connected device.
- **Name**. Name of the connected device.
- **Path**. Path to the device in the sysfs virtual operating system.
- **System drive**. The setting indicates whether the connected device is a system drive (Yes or No).

- **Bus**. Connection bus. Possible values: `UnknownBus`, `USB`, `FireWire`.
- **Driver**. Name of the driver read by the sysfs virtual operating system.

To export the list of connected devices, run the following command:

```
kesl-control --get-device-list --export <file>
```

where `<file>` is the full path to the JSON file in which you want to save the list of connected devices.

The list of trusted devices is exported.

Managing the list of trusted devices on the command line

The list of trusted devices contains information about devices that are allowed to be accessed (for specific users or groups).

In the command line, you can view the list of trusted devices, add and remove devices from the list, and import the list of trusted devices from a file.

To view the list of trusted devices, run the following command:

```
kesl-control --trusted-devices --list
```

To add a device to the list of trusted devices, run the following command:

```
kesl-control --trusted-devices --add <ID>
```

where `<identifier>` is the device ID or device ID mask.

To remove a device from the list of trusted devices, run the following command:

```
kesl-control --trusted-devices --delete <ID>
```

where `<identifier>` is the device ID or device ID mask.

To import a list of trusted devices from a file, run the following command:

```
kesl-control --trusted-devices --merge|--add|--replace --file <file>
```

where:

- `--merge` merges the lists of trusted devices. If the current list and the imported list contain entries for a device with the same ID, the existing entries are updated. For devices that are not in the current list, entries are added.
- `--add` adds the current list of trusted devices when importing. Only entries for devices not previously on the list of devices are added to the list.

- `--replace` replaces the current list of trusted devices. The existing list of trusted devices is replaced with the imported list.
- `--file <file>` is the full path to the JSON file that the list of trusted devices will be imported from.

Granting temporary access to device

When configuring Device Control, the administrator may mistakenly block access to a device that the user needs for work. If the user believes that access to a device or an operation with device content was blocked by mistake, the user can request temporary access to the blocked device from the administrator of the corporate local network.

The user can request temporary access if the administrator has the user allowed to do so. The administrator can configure this permission in the policy properties in the Web Console, in the Administration Console, or in the settings of the Device Control task).

Granting access to a blocked device involves the following steps:

1. The user creates an *access request file* and sends it to the administrator, for example, by email or in any available way (the administrator can configure this in the block message template). The user can request temporary access to the blocked device in the graphical interface of the application or on the command line.
2. The administrator creates an *access key* based on the access request file and passes it to the user, for example, by email or in any other way. Access to a blocked device is granted in the Web Console.
3. The user uploads the access key and gains temporary access to the blocked device. The user can upload the access key in the graphical user interface or on the command line of the application.

Granting access to a blocked device is available only if Kaspersky Security Center 16.1 is deployed in the organization and the client device is able to establish a connection with the Administration Server.

Granting access to a blocked device in the Web Console

Granting access to a blocked device is available only if Kaspersky Security Center 16.1 is deployed in the organization and the client device is able to establish a connection with the Administration Server.

When the administrator receives a temporary access request from a user, the administrator can create an access key from the access request file in the Web Console.

To provide temporary access to the device, the administrator must have read, write, and execute permissions for the **Data Encryption** function (**Users & roles** → **Roles** → <user role> → user role properties window → **Access rights** tab → <application name> → **Data Encryption** → **Read/Write/Execute**).

To create an access key for a blocked device:

1. In the main window of the Web Console, select **Assets (Devices)** → **Managed devices**.

   The list of managed devices opens.

2. Select the administration group containing the relevant device and select the check box next to the name of the device.

3. Above the list of managed devices, click the **Grant access to the device in offline mode** button. If this button is not displayed above the list of devices, click the three dots button and select the **Grant access to the device in offline mode** command from the menu.

4. This opens the **Application Settings** window; in that window, in the **Device Control** section, click the **Browse** button and download the access request file received from the user.

   Information about the blocked device to which the user has requested access is displayed.

5. If necessary, change the duration in hours in the **Access duration** field.

   By default, **Access duration** is set to the value specified by the user when generating the access request file.

6. If necessary, change the value in the **Specify how long an access key can be used on the client device (in hours)** field.

   This field contains the time period during which the access key can be uploaded by the user.

7. Click the **Create key** button.

8. Save the access key file with the *.acode extension.

Gaining temporary access to the device on the command line

If the user believes that access to the device was blocked or an operation with the contents of the device was prohibited by mistake, the user can request temporary access to the blocked device from the administrator of the local network of the organization using the following Device Control managementcommand: `kesl-control --request-temporary-device-access`.

To request temporary access to a blocked device, run the following command:

```
kesl-control --request-temporary-device-access --device-id <device ID> --access-duration <access duration> --path <path to access request file>
```

where:

`--device-id <device ID>` specifies the ID of the blocked device to which you want to gain access.

`--access-duration <access duration>` specifies the time period during which you want to be able to gain access to the device (in hours). Possible values: 1 to 100

`--path <path to the access request file>` specifies the path to the directory in which you want to save the access request file with the .akey extension.

This command creates an access request file, which must be sent to the administrator, for example, by email or in any other way (the administrator can describe the preferred method in the template of the blocking message).

After getting an access key from the administrator, you need to upload the access key using the command `kesl-control --upload-temporary-device-access-key` to gain temporary access to the device.

To gain temporary access to a blocked device, run the following command:

```
kesl-control --upload-temporary-device-access-key --path <path to the file with the access key>
```

where:

`--path <path to the file with the access key>` is the path to the file containing the access key to the device (file with the .acode extension).

This command outputs information about the granted access to the device and the access duration.

Web Control

Web Control controls user access to web resources. This allows you to reduce traffic consumption and reduce inappropriate use of work time. When a user attempts to open a website whose access is restricted by Web Control, Kaspersky Endpoint Security blocks access or displays a warning message telling the user that the website is undesirable.

Kaspersky Endpoint Security monitors only HTTP and HTTPS traffic.

Web Control allows you to configure access to websites in the following ways:

- By content category. Website content is categorized based on Kaspersky Security Network, heuristic analysis, and a database of known websites (included in the application databases). You can restrict user access to, for example, the "Social networks" content category or other categories.
- By data type category. You can restrict user access to data on the website, and hide graphics, for example. The application determines the data type by the file format, not the extension.

  The application does not scan files inside archives. For example, if image files are archived, the application detects the data type as Archives rather than Image files.

- By web address. You can specify a web address or a web address mask.

You can use several methods to regulate access to websites at the same time. For example, you can restrict access to the "Office Application Files" data type only for the "Webmail" website category.

By default, the *default rule* selected for all web resources is **Allow**. In accordance with this rule, Web Control allows users to gain access to web resources if no other *web resource access rules* are defined.

You can change the default rule for Web Control, which governs how the application regulates access to web resources that are not covered by other rules, and set the *default rule* to **Block**. In accordance with this rule, Web Control prevents users from gaining access to web resources if no other *web resource access rules* are defined.

If you have configured traffic interception exclusions for Kaspersky Endpoint Security, these affect Web Control.

About web resource access rules

A *web resource access rule* is a set of filters and an action that the application performs when users visit web resources described in the rule at a time specified in the rule schedule. Filters let you specify web resources to which access is monitored by the Web Control component.

The following filters are available:

- **Filter by content category**. Web Control can categorize web resources based on content. You can control user access to web resources that have content defined by these categories. When users visit web resources that belong to a selected content category, the application performs the action specified in the rule.

- **Filter by data type category**. Web Control can categorize web resources based on data type. You can control user access to data located on web resources related to certain types of data. When users visit web resources that relate to a selected data type category, the application performs the action specified in the rule.

- **Filter by web resource address**. You can control user access to all addresses of a web resource or to individual addresses of a web resource and/or to groups of addresses of a web resource.

  If you define both a filter by content category and/or data type category and a filter by web resource address, and the specified addresses of web resources and/or groups of web resource addresses belong to the selected content categories or data type categories, then the application does not control access to all of the web resources of the selected content categories and/or data type categories, but rather only controls access to the specified addresses of the web resources and/or groups of addresses of web resources.

- **Filter by name of users and user groups**. You can define users and/or user groups whose access to web resources is controlled according to the rule. For example, you can restrict Internet access through a browser for all users of the company except the IT department.

- **Rule schedule**. You can set a rule schedule. The rule schedule determines the time when the application controls access to the web resources specified in the rule. For example, you can restrict Internet access through a browser during working hours only.

For each rule, you can specify the action that Web Control performs when a user visits a web resource that matches the rule settings:

- *Allow.* Web Control allows the user to access the web resource.

- *Block.* Web Control blocks the user's access to the web resource and displays a message that access is blocked. By clicking the links in the blocking message, the user can send a complaint message to the administrator of the corporate LAN about the mistaken blocking and request access to the blocked web resource.

- *Inform.* Web Control displays a warning that the web resource is undesirable. By clicking the links in the warning message, the user can send a complaint message to the administrator of the corporate LAN about the mistaken warning. Meanwhile, the user's access to the web resource is not blocked.

Each rule has a priority. The higher the rule is on the list, the higher its priority. If a website is added to multiple rules, Web Control controls access to websites in accordance with the highest-priority rule. For example, the application may identify the corporate portal as a social network. To restrict access to social networks while allowing access to the corporate web portal, create two rules: a blocking rule for the "Social networks" category and an allowing rule for the corporate web portal. The corporate web portal access rule must have a higher priority than the social network access rule.

If no blocking rules are created, HTTPS traffic is not decrypted.

Configuring Web Control in the Web Console

In the Web Console, you can configure Web Control settings in the policy properties (**Application settings** → **Security Controls** → **Web Control**).

Configuring Web Control in the Administration Console

In the Administration Console, you can manage Web Control settings in the policy properties (Managing policies in the Administration Console, Creating a policy using the Administration Console) (**Security Controls** → **Web Control**).

Web Control component settings

Setting	Description
Enable Web Control	The check box enables the Web Control component. This check box is cleared by default.

Web Control settings	The table contains a list of web resource access rules. Web Control applies rules in the order in which they are listed in the table.
	The table contains the following columns:
	• **Status**. Status of the web resource access rule:
	  • *Enabled* – the rule is enabled, Web Control applies this rule during operation.
	  • *Disabled* – the rule is disabled and is not used when Web Control is running.
	  You can select or clear the check box in the table, you can also select or clear the **Use this rule** check box in the **Web Control rule** window.
	• **Action**. The action to be taken by the application when it detects an attempt to access web resources that match the rule.
	• **Name**. Web resource access rule name.
	You can add, edit, delete, **move up**, and **move down** items in the table.
	Clicking the **Move down** button moves the selected item down in the table.
	This button is available if only one item is selected in the table.
	Clicking the **Move up** button moves the selected item up in the table.
	This button is available if only one item is selected in the table.
	You can also import a list of rules from a file by clicking **Advanced** → **Import** and export the list of added rules to a file by clicking **Additional** → **Export selected** or **Additional** → **Export all**. When importing, you will be prompted to replace the list of rules or add the rules to the existing list.

Default rule	In the drop-down list, you can select the default rule that governs how the application regulates access to web resources that are not covered by other rules: • **Allow** (default value) – allow access to the web resources. • **Block** – block access to the web resources.
Message templates	This group of settings contains the **Configure** button. Clicking this button opens the **Message templates** window.

Web Control rule window

In this window, you can configure the settings of the web resource access rule.

Setting	Description
Rule name	Field for entering the name of the web resource access rule. The rule name must be unique.
Use this rule	This check box enables or disables the use of this rule when the application is running. If the check box is selected, the rule is enabled, and Web Control applies this rule at runtime. If the check box is cleared, the rule is disabled and is not used when Web Control is running. You can enable the use of this Web Control rule later by selecting the check box. This check box is selected by default.
Filter content	In the drop-down list, you can select a content filter for the web resource: • **Do not filter** (default value). If this item is selected, no web resource content filter is used. • **By content category**. When this item is selected, the **Select** button becomes available. Clicking this button opens the Content category selection window. • **By data type category**. When this item is selected, the **Select** button becomes available. Clicking this button opens the Data type category selection window. • **By content category and data type category**. When this item is selected, the **Select** buttons become available. Clicking these buttons opens windows where you can select the necessary categories.
Filter addresses	In the drop-down list, you can select a filter for the address of a web resource: • **Any address** (default value). If this item is selected, the web resource address filter is not used; the Web Control rule is applied to all web resource addresses. • **Specified addresses**. When this item is selected, the **Select addresses** button becomes available. Clicking this button opens the Select addresses window, where you can select the necessary web resource addresses.
Apply to users	In the drop-down list, you can select the users that the web resource access rule applies to: • **All users** (default value). If this item is selected, the user filter is not used; the Web Control rule is applied to all users. • **Selected users**. When this item is selected, the **Select users** button becomes available. Clicking this button opens the Select users window.
Rule schedule	In the drop-down list, you can configure the schedule for the web resource access rule: • **Always** (default value). When this item is selected, the web resource access rule is applied without time limits, that is, at all times. • **<Schedule name>**. When this item is selected, the **Delete** and **Edit** buttons become available, which you can click to delete or configure the schedule. • **Add new schedule**. Selecting this item opens the Access schedule window where you can configure a new schedule for the web resource access rule.
Rule action	In the drop-down list, you can select the action that Web Control will perform when it detects an attempt to access a web resource that matches the rule: • **Allow** (default value) – allow access to the web resource. • **Block** – block access to the web resource and display a message that access is blocked. • **Inform** – display a warning that the web resource is undesirable. By clicking links in the warning message, the user can access the requested web resource.

Content category selection window

In this window, you can select the content categories for which you want to control access.

To do this, select check boxes next to categories.

All check boxes are cleared by default.

> Selecting check boxes for all nested content categories does not automatically select the check box for the parent content category.

Data type category selection window

In this window, you can select the type categories for which you want to control access.

To do this, select check boxes next to categories.

All check boxes are cleared by default.

Select addresses window

In this window, you can specify the addresses of web resources for which you want to control user access. You can specify multiple addresses; enter each address on a new line for convenience of copying them. You can use masks to specify addresses.

If you want to specify a group of addresses, open the **Select address groups** window by clicking the **Add address group** button.

Select address groups window

The table contains groups of addresses of web resources for which user access is controlled by the Web Control component.

If you want to add a group of addresses to the list of groups in the **Select addresses** window, select the check box next to a group name in the table and click the **Add** button below the table.

You can add, edit, or delete items in the table.

If you want to add a new group of addresses to the list of groups in this window, open the **Add address** group window by clicking the **Add** button above the table.

The table is empty by default.

Add address group window

In this window, you can specify the groups of addresses of web resources for which you want to control user access. You can specify multiple addresses in the address group; enter each address on a new line for convenience of copying them. You can use masks to specify addresses.

Select users window

The table contains the names of users and user groups for which access to web resources is controlled according to the rule.

You can add, edit, or delete items in the table

If you want to add a new user and/or user group to the user list in this window, click the **Add** button located above the table to open the **User or group** window.

The table is empty by default.

User or group window

In this window, you can specify a user or group of users to which the web resource access rule applies.

Configuring a web resource access rule

Setting	Description
Type	The **User** or **Group** to which the Application Control rule applies.
User or group name	Name of the user or user group to which the rule applies.

Access schedule window

In this window, you can configure the web resource access schedule.

Web resource access schedule

Setting	Description
Name	Entry field for the access schedule name.
Time intervals	The table where you can select time intervals for the schedule (days and hours). Intervals highlighted in green are included to the schedule. To exclude an interval from the schedule, click the corresponding cells. Intervals excluded from the schedule are highlighted in gray. By default, all intervals (24/7) are included to the schedule.

Configuring Web Control message templates

Depending on the action specified in the properties of Web Control rules, when a user attempts to access web resources, the application displays one of the following types of messages (by replacing the HTTP server response with an HTML page containing a message):

- Warning. This type of message warns the user that visiting the web resource is undesirable and/or violates the corporate security policy. The application displays a warning message if the **Inform** action is selected in the settings of the rule that matches this web resource.

  If the user believes the warning is a mistake, a link in the warning lets the user send an automatically-generated complaint message to the company's LAN administrator.

- Blocked web resource message The application displays a message that the web resource has been blocked if the **Block** action is selected in the settings of the rule that matches this web resource.

  If the user believes the web resource should not be blocked, a link in the blocked web resource message lets the user send an automatically-generated complaint to the company's LAN administrator.

Templates are provided for warning messages, blocked web resource messages, and complaint messages to the company's LAN administrator. You can edit their content.

To edit the message template in the Web Console:

1. In the main window of the Web Console, select **Assets (Devices)** → **Policies and policy profiles**.

   The list of policies opens.

2. Select the administration group containing the devices to which the policy is applied. To do so, click the link in the Current path field in the upper part of the window and select the administration group in the opened window.

   The list displays the policies configured for the selected administration group.

3. Click the name of the required policy in the list.

   The policy properties window opens.

4. In the policy properties window, select **Application settings** → **Security Controls** → **Web Control**.

5. In the **Message templates** section, configure the Web Control message templates on the following tabs:

   - **Warning**. The input field contains the template for the message that appears when a rule is triggered that warns about an attempt to access an undesirable web resource.
   - **Message about blocking**. The entry field contains the template of the message that appears if a rule that blocks access to a web resource is triggered.
   - **Message to administrator**. The input field contains the template for a complaint to be sent to the administrator of the corporate LAN when the user believes that a blocked web resource should not be blocked. After a user requests access, Kaspersky Endpoint Security sends a *Message to the administrator about denied access to a web page* event to Kaspersky Security Center. The event description contains the message to the administrator with the variables replaced by their values. If no Kaspersky Security Center solution is deployed in your organization or there is no connection with the Administration Server, the application will send a message to the administrator's specified email address.

   On the **Warning and Message about blocking** tabs, you can add variables and links to the messages for the user by clicking the **Add variable** and **Add link** buttons.

   You can restore the text of the message template by clicking the **Restore default** button.

6. Click **OK**.

7. Click the **Save** button to save the changes made.

To change a message template in the Administration Console:

1. In the **Managed devices** folder in the Administration Console tree, open the folder with the name of the administration group to which the required devices belong.

2. In the workspace, select the **Policies** tab.

3. In the list of policies, select the required policy and double-click it to open the **Properties: <Policy name>** window.

   You can also open the policy properties window by using the **Properties** item in the policy context menu or by clicking the **Configure policy settings** link located to the right of the list of policies in the section with the policy settings.

4. In the policy window, select **Security Controls** → **Web Control**.

5. In the **Message templates** section, click the **Configure** button.

6. This opens the **Message templates** window; in that window, configure the Web Control message templates on the following tabs:

   - **Warning**. The input field contains the template for the message that appears when a rule is triggered that warns about an attempt to access an undesirable web resource.

   - **Block message**. The entry field contains the template of the message that appears if a rule that blocks access to a web resource is triggered.

   - **Complaint to administrator**. The input field contains the template for a complaint to be sent to the administrator of the corporate LAN when the user believes that a blocked web resource should not be blocked. After a user requests access, Kaspersky Endpoint Security sends a *Message to the administrator about denied access to a web page* event to Kaspersky Security Center. The event description contains the message to the administrator with the variables replaced by their values. You can view these events in the Kaspersky Security Center Administration Console using the **User requests** selection. If no Kaspersky Security Center solution is deployed in your organization or there is no connection with the Administration Server, the application will send a message to the administrator's specified email address.

   On the **Warning** and **Block message** tabs, you can add variables and links to the messages for the user by using the **Variable** and **Link** buttons.

   You can restore the text of the message template by clicking the **Default** button.

7. Click **OK**.

8. Click **Apply**.

Configuring Web Control on the command line

On the command line, you can manage Web Control using the Web Control predefined task (*Web_Control*).

The Web Control task is stopped by default. You can start and stop the task manually.

You can edit Web Control settings by changing the settings of the Web Control predefined task.

You can also view and edit Web Control settings using Web Control management commands.

Web Control task settings

The table below describes all available values and the default values of all the settings that you can specify for the Web Control task.

Setting	Description	Values
`WebControlDefaultAction`	The default rule, that is, the action that Web Control performs when it detects an attempt to gain access to web resources that are not covered by other rules.	`Allow` (default value) – allow access to the web resources. `Block` – block access to the web resources.
`ComplaintRecipient`	The administrator's email address to which messages about mistaken blocking of web resources are sent.	
The **[Rules.item_#]** section contains the following settings:		
`Name`	Web resource access rule name. The rule name must be unique.	
`WebControlAction`	The action of the rule that Web Control will perform when it detects an attempt to access a web resource that matches the rule.	`Allow` (default value) – allow access to the web resource. `Block` – block access to the web resource. `Notify` – display a warning that the web resource is undesirable. By clicking links in the warning message, the user can access the requested web resource.
`Enabled`	Status of the web resource access rule.	`Yes` – the rule is enabled, Web Control applies this rule during operation. `No` (default value) – the rule is disabled and is not used when Web Control is running.
`ScheduleId`	Schedule ID that is used in the `[Schedules.item_#]` section.	
`UseUrls`	Use of a web resource address filter in a rule.	`Yes` – use a web resource address filter in the rule. `No` (default value) – do not use a web resource address filter, apply the rule to all web resource addresses.
`Urls.item_#`	The address of the web resource for which the rule controls access.	You can use masks to specify the web resource address.
`UseCategories`	Use of filters by content categories and data type categories in the rule.	`None` (default) – do not use a web resource content filter. `ContentOnly` – use the content category filter in the rule. `FormatOnly` – use the data type category filter in the rule. `ContentAndFormat` – use the content category filter and the data type category filter in the rule.
`[Rules.item_#.ContentCategories.item_#]`	Section for specifying the content category.	–

Setting	Description	Values
ContentCategory	Content categories.	AdultContent, AlcoholTobaccoNarcotics, Violence, Profanity, Weapons, ChatForum, WebMail, OnlineShops, SocialNets, Recruitment, HttpQueryRedirection, CreditCards, PoliceDecision, SoftwareAudioVideo, TechnologyElectronics, GamblingLotteriesSweepstakes, InternetCommunicationMedia, CryptocurAndMining, LegislationBE, ECommerce, ComputerGames, Religions, News, Torrents, FileSharing, AudioAndVideo, BankSites, Blogs, DatingSites, LegislationRF, LegislationGlobal, SexuallyExplicit, Sexuality, GenerativeAITools
[Rules.item_#.FormatCategories.item_#]	Section for specifying the data type category.	–
FormatCategories.item_#.FormatCategory	Data type category.	Video – Video Audio – Audio data OfficeDocument – Office application files Executable – Executable files Archives – Archives Images – Image files Scripts – Scripts
UsePrincipals	Use of a filter of users that are covered by the web resource access rule.	Yes – use the user filter in the rule. No (default value) – do not use the user filter, apply the rule to all users.
[Rules.item_#.Principals.item_#]	Section for specifying users that are covered by the web resource access rule.	
Name	User or group of users that is covered by the web resource access rule.	< user name > is the name of the user to which the rule applies. @< group name > is the name of the group of users to which the rule applies. Default value: The web resource access rule is applied for all users.
The **[UrlCategories.item_#]** section contains the following settings:		
Name	Name of the group of web resource addresses to which the rule controls access.	
Urls.item_#	Address of a web resource that belongs to the group.	You can use masks to specify the web resource address.
The **[Schedules.item_#]** section contains the rule schedule.		
Id	Schedule ID that is used in the [Rules.item_#] section.	1 – 999999 0 is the ID of the Default schedule which lets the rule work without any time limits, that is, at all times.

Setting	Description	Values
`Name`	Specifies a schedule name.	
`DaysHours`	Specifies time intervals for a schedule.	`< weekday >` is the day of the week. You can use either the full week day names or abbreviations (for example, for Monday, you can specify `Mo`, or `Mon`, or `Monday`). For week days, you can specify intervals or specific days. The week starts from Sunday. `< hour >` is the hours [0:24]. You can specify only intervals for hours.

Viewing and editing Web Control settings

To view Web Control settings, run the following command:

```
kesl-control --get-settings 26 [--file <path to configuration file>] [--json]
```

where:

`--file <path to configuration file>` is the full path to the configuration file to which the settings will be written.

`--json`: output data in JSON format.

To edit Web Control settings, run the following command:

```
kesl-control --set-settings 26 [--file <path to configuration file>] [--json]
```

where:

`--file <path to configuration file>` is the full path to the configuration file from which the settings will be imported.

`--json` – import data from a JSON file.

To delete configured settings and reset Web Control settings to the default rule, run the following command:

```
kesl-control --set-settings 26 --set-to-default
```

Rules for creating web resource address masks

A *web resource address mask* ("address mask") can be convenient when a lot of similar addresses of web resources must be entered when creating a web resource access rule. One skillfully-formed address mask can replace a large number of addresses of web resources.

When creating an address mask, the following rules apply:

1. The `*` character replaces any sequence of zero or more characters.

   For example, if you enter the address mask `*abc*`, the web resource access rule applies to all addresses containing the sequence `abc`. Example: `http://www.example.com/page_0-9abcdef.html`.

2. The character sequence `*.` lets you select all domains of an address, i.e. it represents a *domain mask*. The domain mask `*.` is interpreted as any domain name, subdomain name, or an empty string.

   Example: the following addresses match the `*.example.com` mask:

   - `http://pictures.example.com` – the domain mask `*.` matches `pictures.`.
   - `http://user.pictures.example.com` – the domain mask `*.` matches `pictures.` and `user.`.
   - `http://example.com` – the domain mask `*.` is interpreted as an empty string.

3. The character sequence `www.` at the beginning of an address mask is interpreted as the sequence `*.`.

   Example: The address mask `www.example.com` is interpreted as `*.example.com`. The mask matches the addresses `www2.example.com` and `www.pictures.example.com`.

4. If an address mask does not begin with a `*` character, the address mask matches the same content that it would match if it started with `*.`.

5. If an address mask ends with a character other than `/` or `*`, the address mask matches the same content that it would match if it ended with `/*`.

   Example: the address mask `http://www.example.com` matches addresses of the form `http://www.example.com/abc`, where `a`, `b`, `c` are any characters.

6. If an address mask ends with a `/` character, the address mask matches the same content that it would match if it ended with `/*`.

7. The character sequence `/*` at the end of an address mask is interpreted as `/*` or an empty string.

8. When web resource addresses are compared to an address mask, the protocol (http: or https:) is taken into consideration.

   - If there is no network protocol in the address mask, the address mask matches addresses with any network protocol.

     Example: The address mask `example.com` matches the addresses `http://example.com` and `https://example.com`.

   - If a network protocol is present in an address mask, only addresses with the same network protocol will match the address mask.

     Example: the address mask `http://*.example.com` matches the address `http://www.example.com` but does not match the address `https://www.example.com`.

9. An address mask enclosed in double quotes is interpreted without any further substitutions, except for the `*` character if it was initially included in the address mask. For address masks enclosed in double quotes, rules 5 and 7 are not enforced (see examples 14–18 in the table below).

10. The evaluation of a web resource address mask does not consider the user name and password, connection port, or case.

No.	Address mask	Web resource address	Does the address match the address mask?	Comment
1	*.example.com	http://www.123example.com	No	See rule 1.
2	*.example.com	http://www.123.example.com	Yes	See rule 2.
3	*example.com	http://www.123example.com	Yes	See rule 1.
4	*example.com	http://www.123.example.com	Yes	See rule 1.
5	http://www.*.example.com	http://www.123example.com	No	See rule 1.
6	www.example.com	http://www.example.com	Yes	See rules 3, 2, and 1.
7	www.example.com	https://www.example.com	Yes	See rules 3, 2, and 1.
8	http://www.*.example.com	http://123.example.com	Yes	See rules 3, 4, and 1.
9	www.example.com	http://www.example.com/abc	Yes	See rules 3, 5, and 1.
10	example.com	http://www.example.com	Yes	See rules 3 and 1.
11	http://example.com/	http://example.com/abc	Yes	See rule 6.
12	http://example.com/*	http://example.com	Yes	See rule 7.
13	http://example.com	https://example.com	No	See rule 8.
14	"example.com"	http://www.example.com	No	See rule 9.
15	"http://www.example.com"	http://www.example.com/abc	No	See rule 9.
16	"*.example.com"	http://www.example.com	Yes	See rules 1 and 9.
17	"http://www.example.com/*"	http://www.example.com/abc	Yes	See rules 1 and 9.
18	"www.example.com"	http://www.example.com; https://www.example.com	Yes	See rules 9 and 8.
19	www.example.com/abc/123	http://www.example.com/abc	No	An address mask contains more information than a web resource address.

System Integrity Monitoring

Kaspersky Endpoint Security monitors the integrity of the operating system on the protected device in real time or on demand.

- *System Integrity Monitoring* tracks in real time changes in files and directories that you have added to the monitoring scope in the component settings. You can track changes in files that may indicate a security breach on a protected device.
- You can use the *System Integrity Check* tasks to check for changes in files and directories that you have added to the monitoring scope by comparing the current state of a monitored object with a previously recorded state.

Using System Integrity Monitoring requires a license that includes this feature.

Upon detecting changes to files or directories in the monitoring scope, Kaspersky Endpoint Security generates events about changes in object access control lists. System Integrity Monitoring does not share data on exact changes that were made. The *System Integrity Check* task sends data on modified attributes, and moved files and directories.

Real-time System Integrity Monitoring

System Integrity Monitoring detects each change to an object within the monitoring scope by intercepting file operations in real time.

When System Integrity Monitoring runs, the application monitors changes in the following file settings:

- Content (write (), truncate (), etc.)
- Metadata (possession rights (chmod/chown))
- Time stamps (utimensat)
- Extended attributes ((setxattr) and others)

A file checksum is not calculated.

The technical limitations of the Linux operating system prevent the application from identifying the user or process that made the changes to the file.

System Integrity Monitoring is disabled by default. You can enable, disable, and configure System Integrity Monitoring:

- Define monitoring scopes for System Integrity Monitoring The application monitors operations on files within the monitoring scopes defined in the System Integrity Monitoring settings. You have to specify at least one monitoring scope for the component to work. The *Kaspersky internal objects* (/opt/kaspersky/kesl/) monitoring scope is defined by default.

  You can specify several monitoring scopes. You can change monitoring scopes in real-time mode.

The application task does not monitor changes in files (attributes and content) with hard links that are outside the monitoring scope.

- You can configure exclusion of objects from monitoring with the help of name masks.
- Set up exclusion scopes for System Integrity Monitoring. Exclusions are defined for each individual monitoring scope and only work for the indicated scope. You can specify several monitoring exclusions.

  An exclusion has a higher priority than a monitoring scope; an excluded object is skipped even if within the monitoring scope. If the monitoring scope is defined on a lower level than the excluded directory, the application skips this monitoring scope during system integrity monitoring.

When a directory is added to a monitoring or exclusion scope, the application does not check whether that directory exists.

Configuring System Integrity Monitoring in the Web Console

In the Web Console, you can manage System Integrity Monitoring settings in the policy properties (**Application settings** → **Security Controls** → **System Integrity Monitoring**).

Configuring System Integrity Monitoring in the Administration Console

In the Administration Console, you can manage System Integrity Monitoring settings in the policy properties (Managing policies in the Administration Console, Creating a policy using the Administration Console) (**Security Controls** → **System Integrity Monitoring**).

System Integrity Monitoring settings

Setting	Description
Enable System Integrity Monitoring	This check box enables or disables System Integrity Monitoring. This check box is cleared by default.
Monitoring scopes	The group of settings contains the **Configure** button. Clicking this button opens the **Scan scopes** window.
Monitoring exclusions	This group of settings contains the **Configure** button. Clicking this button opens the **Exclusion scopes** window.
Exclusions by mask	This group of settings contains the **Configure** button, which opens the **Exclusions by mask** window.

Scan scopes window

The table contains monitoring scopes for the System Integrity Monitoring component. The application monitors files and directories located in the paths specified in the table. By default, the table contains one monitoring scope, **Kaspersky internal objects** (/opt/kaspersky/kesl/).

Monitoring scope settings

Setting	Description
Merge inherited values	This check box enables or disables the merging of the list when inherited in child policies. If the check box is selected, items in the list of the parent policy are displayed in child policies, and items can be added to the list of the child policy. If the check box is cleared, the list items are not merged when inheriting policy settings. This check box is cleared by default.
Scope name	Monitoring scope name.
Path	Path to the directory that the application protects.
Status	The status indicates whether the application scans this scope.

You can add, edit, delete, move up, and move down items in the table.

Kaspersky Endpoint Security scans objects in the specified scopes, in the order they appear in the list of scopes. If necessary, place the subdirectory higher in the list than its parent directory, to configure security settings for a subdirectory that are different from the security settings of the parent directory.

New scan scope window

In this window, you can add and configure monitoring scopes for the System Integrity Monitoring component.

Monitoring scope settings

Setting	Description
Scan scope name	Field for entering the monitoring scope name. This name will be displayed in the table in the **Scan scopes** window. The entry field must not be blank.
Use this scope	This check box enables or disables scans of this scope by the application. If this check box is selected, the application controls this monitoring scope during the application's operation. If this check box is cleared, the application does not control this monitoring scope during the operation. You can later include this scope in the component settings by selecting the check box. This check box is selected by default.
File system, access protocol, and path	Entry field for the path to the local directory that you want to include in the monitoring scope. The field must not be blank. The default path is /opt/kaspersky/kesl.
Masks	The list contains name masks for the objects that the application scans. By default the list contains the * mask (all objects). You can add, edit, or delete masks.

Exclusion scopes window

The window contains monitoring exclusion scopes for the System Integrity Monitoring component. The application does not scan files and directories located at the paths specified in the table.

Monitoring exclusion scope settings

Setting	Description
Merge inherited values	This check box enables or disables the merging of the list when inherited in child policies. If the check box is selected, items in the list of the parent policy are displayed in child policies, and items can be added to the list of the child policy. If the check box is cleared, the list items are not merged when inheriting policy settings. This check box is cleared by default.
Exclusion scope name	Exclusion scope name.

Setting	Description
Path	Path to the directory excluded from monitoring.
Status	Indicates whether the application excludes this scope from monitoring during the component operation.

By default, the table of exclusion scopes is empty. You can add, edit, or delete items in the table.

You can also import the list of exclusion scopes from a file by clicking **Import** or export the list of exclusion scopes to a file in JSON format by clicking **Export**. When importing, you are prompted to replace the list of exclusion scopes or add exclusion scopes to the existing list.

New exclusion scope window

In this window, you can add or configure the monitoring exclusion scope for the System Integrity Monitoring component.

Monitoring exclusion scope settings

Setting	Description
Exclusion scope name	Field for entering the exclusion scope name. This name will be displayed in the table in the **Exclusion scopes** window. The entry field must not be blank.
Use this scope	The check box enables or disables the exclusion of the scope from monitoring when the application is running. If this check box is selected, the application excludes this scope from monitoring during the component operation. If this check box is cleared, the application monitors this scope during the component operation. You can later exclude this scope from monitoring by selecting the check box. This check box is selected by default.
File system, access protocol, and path	Entry field for the path to the local directory that you want to add to the exclusion scope. The field must not be blank. The **/** path is specified by default. The application excludes all directories of the local file system from scan.
Masks	The list contains name masks of the objects that the application excludes from the monitoring. By default the list contains the * mask (all objects). You can add, edit, or delete masks. Clicking the **Add** button opens the **Object mask** window. In this window, in the **Define object mask** field, you can specify the name template for files that Kaspersky Endpoint Security excludes from monitoring. Examples: The `*.txt` mask refers to all text files. The `*_my_file_??.html` mask refers to html files starting with any characters, and ending with `_my_file_` followed by any two characters (for example, 2020_my_file_09.html).

Exclusions by mask window

You can configure the exclusion of objects from monitoring based on name masks. The application does not scan the files with the names containing the specified masks. By default, the list of masks is empty.

You can add, edit, or delete masks.

Clicking the **Add** button opens the **Object mask** window. In this window, in the **Define object mask** field, you can specify the name template for files that Kaspersky Endpoint Security excludes from monitoring.

Examples:
The `*.txt` mask refers to all text files.
The `*_my_file_??.html` mask refers to html files starting with any characters, and ending with `_my_file_` followed by any two characters (for example, 2020_my_file_09.html).

You can also import the exclusion list from a file using the **Import** button and export the exclusion list to a JSON file using the **Export** button. When importing, you will be prompted to replace the list of exclusions or add the exclusions to the existing list.

You can enable the merging of the list of exclusions when inherited by child policies. If you want to merge list items, select the **Merge inherited values** check box. If the check box is selected, items in the list of the parent policy are displayed in child policies, and items can be added to the list of the child policy. If the check box is cleared, the list items are not merged when inheriting policy settings. This check box is cleared by default.

Configuring System Integrity Monitoring on the command line

You can manage system integrity monitoring in real time in the command line by using the System Integrity Monitoring predefined task (*System_Integrity_Monitoring*). Task type: *OAFIM*.

The System Integrity Monitoring task does not run by default. You can start and stop the task manually.

You can configure System Integrity Monitoring on the device by editing the settings of the System Integrity Monitoring predefined task.

On-access System Integrity Monitoring task settings

Setting	Description	Values
`UseExcludeMasks`	Enables monitoring scope exclusions for objects specified by the `ExcludeThreats.item_#` setting. This setting applies only if the `ExcludeMasks.item_#` setting is specified.	`Yes` — Exclude the objects specified by the `ExcludeMasks.item_#` setting from the monitoring scope. `No` (default value) — Do not exclude the objects specified by the `ExcludeMasks.item_#` setting from the monitoring scope.
`ExcludeMasks.item_#`	Excludes objects from monitoring by names or masks. You can use this setting to exclude an individual file from the specified scan scope by name or exclude several files at once using masks in the shell format. Before specifying a value for this setting, make sure that the `UseExcludeMasks` setting is enabled. You can specify several masks. Each mask must be specified on a new line with a new index.	The default value is not defined.
The **[ScanScope.item_#]** section contains the monitoring scopes of the System Integrity Monitoring task. At least one monitoring scope must be specified for the task. You can specify several [ScanScope.item_#] sections in any order. The application processes the scopes by index in ascending order. The [ScanScope.item_#] section contains the following settings:		
`AreaDesc`	Description of monitoring scope; contains additional information about the monitoring scope.	The default value is not defined.
`UseScanArea`	Enables monitoring of the specified scope.	`Yes` (default value) — Monitor the specified scope. `No` — Do not monitor the specified scope.

Setting	Description	Values
`Path`	Path to the monitoring directory.	You can use **masks** to specify the path. You can use the `*` (asterisk) character to create a file or directory name mask. You can indicate a single `*` character to represent any set of characters (including an empty set) preceding the `/` character in the file or directory name. For example, `/dir/*/file` or `/dir/*/*/file`. You can indicate two consecutive `*` characters to represent any set of characters (including an empty set and the `/` character) in the file or directory name. For example, `/dir/**/file*/` or `/dir/file**/`. The `**` mask can be used only once in a directory name. For example, `/dir/**/**/file` is an incorrect mask. You can use a single `?` character to represent any one character in the file or directory name. Default value: /opt/kaspersky/kesl/
`AreaMask.item_#`	Monitoring scope limitation. Within the monitoring scope, the application scans only the objects that are specified using the masks in the shell format. You can specify several `AreaMask.item_#` items in any order. The application processes the scopes by index in ascending order.	Default value: `*` (all objects are monitored)
[ExcludedFromScanScope.item_#] contains objects to be excluded from all [ScanScope.item_#] sections. You can specify multiple [ExcludedFromScanScope.item_#] sections in any order. The application processes the scopes by index in ascending order. The [ExcludedFromScanScope.item_#] section contains the following settings:		
`AreaDesc`	Description of the monitoring exclusion scope, which contains additional information about the monitoring exclusion scope.	The default value is not defined.
`UseScanArea`	Excludes the specified scope from monitoring.	`Yes` (default value) — Exclude the specified scope from monitoring. `No` — Do not exclude the specified scope from monitoring.
`Path`	Path to the directory with objects excluded from monitoring.	You can use **masks** to specify the path. You can use the `*` (asterisk) character to create a file or directory name mask. You can indicate a single `*` character to represent any set of characters (including an empty set) preceding the `/` character in the file or directory name. For example, `/dir/*/file` or `/dir/*/*/file`. You can indicate two consecutive `*` characters to represent any set of characters (including an empty set and the `/` character) in the file or directory name. For example, `/dir/**/file*/` or `/dir/file**/`. The `**` mask can be used only once in a directory name. For example, `/dir/**/**/file` is an incorrect mask. You can use a single `?` character to represent any one character in the file or directory name. The default value is not defined.
`AreaMask.item_#`	Limitation of monitoring exclusion scope. In the monitoring exclusion scope, the application only excludes the objects that are specified using masks in the shell format. You can specify several `AreaMask.item_#` items in any order. The application processes the scopes by index in ascending order.	Default value: `*` (exclude all objects from monitoring)

System Integrity Check

When the *System Integrity Check* task is running, a change in each object is found by comparing the current state of the monitored object with its original state. The following comparison criteria can be used:

- File hash
- File change time
- File size

The initial state of monitored objects is recorded as a *baseline*. The baseline contains paths to monitored objects and their metadata.

A baseline may also contain personal data.

A system baseline is created when a System Integrity Check task runs on the device for the first time. If you have created multiple System Integrity Check tasks, a separate baseline is created for each. The task is only executed if the baseline contains information about objects that belong to the monitoring scope defined for the task. If the baseline does not match the monitoring scope, Kaspersky Endpoint Security generates a system integrity violation event.

The baseline is updated whenever the task settings are modified (for example, when a new monitoring scope is added), as well as when the task is started with `RebuildBaseline=Yes` setting (or if the **Rebuild baseline on each task start** check box is selected in the task properties in Kaspersky Security Center).

The application creates a baseline storage on the protected device. By default, the storage for baselines is located in /var/opt/kaspersky/kesl/private/fim.db. Root privileges are required to access a database that contains baselines.

You can delete a baseline by deleting the appropriate System Integrity Check task.

You can run a system integrity check on demand and configure the scan settings:

- Enable or disable baseline rebuild every time a system integrity check task finishes.
- Select criteria for comparing the current state of the monitored file with the original state: use the file hash and change time, or only the file size.
- Configure monitoring scopes for checking system integrity.
- Configure exclusion scopes from the system integrity check. You can specify paths to excluded files and directories, and exclude individual objects by name mask.

Configuring System Integrity Check in the Web Console

You can run a system integrity check in the Web Console with the help of the *System Integrity Check* task.

You can create and run user system integrity check tasks. You can configure the scan settings by editing the settings of the tasks.

System Integrity Check task settings

Setting	Description
Rebuild baseline on each task start	This check box enables or disables the reestablishment of a system baseline upon every start of the *System Integrity Check* task. This check box is cleared by default.
Check SHA256 hash	This check box enables or disables the use of the file hash as a criterion when comparing the current state of the file with its original state. If this check box is cleared, the application compares only the file size (if the file size has not changed, then the modification time is not considered a critical parameter). This check box is cleared by default.
Track directories in monitoring scopes	This check box enables or disables directory monitoring while system integrity check is running. This check box is cleared by default.
Track the last time a file was accessed	This check box enables or disables tracking the file access time while the system integrity check runs. This check box is cleared by default.
Monitoring scopes	The table that contains the monitoring scopes scanned by the task. By default, the table contains the **Kaspersky internal objects** (/opt/kaspersky/kesl/) monitoring scope. You can add, edit, delete, move up, or move down monitoring scopes in the table. You can also import the list of monitoring scopes from a file by clicking **Import** or export the list of monitoring scopes to a file in JSON format by clicking **Export**. When importing, you are prompted to replace the list of monitoring scopes or add monitoring scopes to the existing list.

Add scan scope window

In this window, you can add or configure the monitoring scope for the System Integrity Check task.

Monitoring scope settings

Setting	Description
Scope name	Field for entering the monitoring scope name. This name will be displayed in the table in the **Scan settings** section. The entry field must not be blank.
Use this scope	This check box enables or disables scans of this scope by the application. If this check box is selected, the application controls this monitoring scope during the application's operation. If this check box is cleared, the application does not control this monitoring scope during the operation. You can later include this scope in the component settings by selecting the check box. This check box is selected by default.
File system, access protocol, and path	Entry field for the path to the local directory that you want to include in the monitoring scope. You can use **masks** to specify the path. You can use the `*` (asterisk) character to create a file or directory name mask. You can indicate a single `*` character to represent any set of characters (including an empty set) preceding the `/` character in the file or directory name. For example, `/dir/*/file` or `/dir/*/*/file`. You can indicate two consecutive `*` characters to represent any set of characters (including an empty set and the `/` character) in the file or directory name. For example, `/dir/**/file*/` or `/dir/file**/`. The `**` mask can be used only once in a directory name. For example, `/dir/**/**/file` is an incorrect mask. You can use a single `?` character to represent any one character in the file or directory name. The field must not be blank. The **/** path is specified by default – the application scans all directories of the local file system.
Masks	The list contains name masks for the objects that the application scans. By default the list contains the * mask (all objects). You can add, edit, or delete masks.

Exclusion scopes section

In the **Exclusion scopes** section for the System Integrity Check task, you can also configure exclusion scopes for the scan and exclusions by mask.

Exclusion scopes window

The table contains monitoring exclusion scopes for the System Integrity Check component. The application does not scan files and directories located at the paths specified in the table. By default, the table is empty.

Monitoring exclusion scope settings

Setting	Description
Exclusion scope name	Exclusion scope name.
Path	Path to the directory excluded from monitoring.
Status	Indicates whether the application excludes this scope from monitoring during the task operation.

You can add, edit, or delete items in the table.

You can also import the exclusion list from a file using the **Import** button and export the exclusion list to a JSON file using the **Export** button. When importing, you will be prompted to replace the list of exclusions or add the exclusions to the existing list.

Add exclusion scope window

In this window, you can add and configure the monitoring exclusion scope for the System Integrity Check task.

Monitoring exclusion scope settings

Setting	Description
Exclusion scope name	Field for entering the exclusion scope name. This name will be displayed in the table in the **Exclusion scopes** window. The entry field must not be blank.
Use this scope	The check box enables or disables the exclusion of the scope from monitoring when the application is running. If this check box is selected, the application excludes this scope from monitoring during the task operation. If this check box is cleared, the application monitors this scope during the task operation. You can later exclude this scope from monitoring by selecting the check box. This check box is selected by default.
File system, access protocol, and path	Entry field for the path to the local directory that you want to add to the exclusion scope. You can use **masks** to specify the path. You can use the `*` (asterisk) character to create a file or directory name mask. You can indicate a single `*` character to represent any set of characters (including an empty set) preceding the `/` character in the file or directory name. For example, `/dir/*/file` or `/dir/*/*/file`. You can indicate two consecutive `*` characters to represent any set of characters (including an empty set and the `/` character) in the file or directory name. For example, `/dir/**/file*/` or `/dir/file**/`. The `**` mask can be used only once in a directory name. For example, `/dir/**/**/file` is an incorrect mask. You can use a single `?` character to represent any one character in the file or directory name. The field must not be blank. The **/** path is specified by default. The application excludes all directories of the local file system from scan.

Setting	Description
Masks	The list contains name masks of the objects that the application excludes from the monitoring. By default the list contains the * mask (all objects). You can add, edit, or delete masks.

Exclusions by mask window

You can configure the exclusion of objects from monitoring based on name masks. The application does not scan the files with the names containing the specified masks. By default, the list of masks is empty.

You can add, edit, or delete masks.

Clicking the **Add** button opens the **Object mask** window. In this window, in the **Define object mask** field, you can specify the name template for files that Kaspersky Endpoint Security excludes from scans.

Examples:
The `*.txt` mask refers to all text files.
The `*_my_file_??.html` mask refers to html files starting with any characters, and ending with `_my_file_` followed by any two characters (for example, 2020_my_file_09.html).

You can also import the exclusion list from a file using the **Import** button and export the exclusion list to a JSON file using the **Export** button. When importing, you will be prompted to replace the list of exclusions or add the exclusions to the existing list.

You can enable the merging of the list of exclusions when inherited by child policies. If you want to merge list items, select the **Merge inherited values** check box. If the check box is selected, items in the list of the parent policy are displayed in child policies, and items can be added to the list of the child policy. If the check box is cleared, the list items are not merged when inheriting policy settings. This check box is cleared by default.

Configuring System Integrity Check in the Administration Console

You can perform a system integrity check in the Administration Console, with the help of the *System Integrity Check* task.

You can create and run user system integrity check tasks. You can configure the scan settings by editing the settings of the tasks.

In the **Settings** section of the properties of the System Integrity Check task, you can edit the settings listed in the table below.

System Integrity Check task settings

Setting	Description
Rebuild baseline on each task start	This check box enables or disables the rebuilding of the system baseline every time the System Integrity Check task is started. This check box is cleared by default.
Check SHA256 hash	This check box enables or disables the use of the file hash as a criterion when comparing the current state of the file with its original state. If this check box is cleared, the application compares only the file size (if the file size has not changed, then the modification time is not considered a critical parameter). This check box is cleared by default.

Setting	Description
Track directories in monitoring scopes	This check box enables or disables scanning of directories within the specified monitoring scopes during a system integrity check. This check box is cleared by default.
Track the last time a file was accessed	This check box enables or disables tracking the file access time while the system integrity check runs. This check box is cleared by default.
Monitoring scopes	The group of settings contains the **Configure** button. Clicking this button opens the **Scan scopes** window.

Under **Exclusion scopes** in the properties of the System Integrity Check, you can define monitoring exclusions and exclusions by mask.

Scan scopes window

The table contains monitoring scopes for the System Integrity Check task. The application monitors files and directories located in the paths specified in the table. By default, the table contains one monitoring scope, **Kaspersky internal objects** (/opt/kaspersky/kesl/).

Monitoring scope settings

Setting	Description
Scope name	Monitoring scope name.
Path	Path to the directory that the application protects.
Status	The status indicates whether the application scans this scope.

You can add, edit, delete, move up, and move down items in the table.

Kaspersky Endpoint Security scans objects in the specified scopes, in the order they appear in the list of scopes. If necessary, place the subdirectory higher in the list than its parent directory, to configure security settings for a subdirectory that are different from the security settings of the parent directory.

New scan scope window

In this window, you can add and configure monitoring scopes for the System Integrity Check task.

Monitoring scope settings

Setting	Description
Scan scope name	Field for entering the monitoring scope name. This name will be displayed in the table in the **Scan scopes** window. The entry field must not be blank.
Use this scope	This check box enables or disables scans of this scope by the application. If this check box is selected, the application controls this monitoring scope during the application's operation. If this check box is cleared, the application does not control this monitoring scope during the operation. You can later include this scope in the component settings by selecting the check box. This check box is selected by default.

Setting	Description
File system, access protocol, and path	Entry field for the path to the local directory that you want to include in the monitoring scope. You can use **masks** to specify the path. You can use the `*` (asterisk) character to create a file or directory name mask. You can indicate a single `*` character to represent any set of characters (including an empty set) preceding the `/` character in the file or directory name. For example, `/dir/*/file` or `/dir/*/*/file`. You can indicate two consecutive `*` characters to represent any set of characters (including an empty set and the `/` character) in the file or directory name. For example, `/dir/**/file*/` or `/dir/file**/`. The `**` mask can be used only once in a directory name. For example, `/dir/**/**/file` is an incorrect mask. You can use a single `?` character to represent any one character in the file or directory name. The field must not be blank. The default path is /opt/kaspersky/kesl.
Masks	The list contains name masks for the objects that the application scans. By default the list contains the * mask (all objects). You can add, edit, or delete masks.

Exclusion scopes section

Settings of scan exclusions

Group of settings	Description
Monitoring exclusions	This group of settings contains the **Configure** button. Clicking this button opens the **Exclusion scopes** window. In this window, you can define the list of scopes to be excluded from monitoring.
Exclusions by mask	This group of settings contains the **Configure** button, which opens the **Exclusions by mask** window. In this window, you can configure the exclusion of objects from monitoring by name mask.

Exclusion scopes window

The table contains scan exclusion scopes for the System Integrity Check component. The application does not scan files and directories located at the paths specified in the table. By default, the table is empty.

Scan exclusion scope settings for the System Integrity Check task

Setting	Description
Exclusion scope name	Exclusion scope name.
Path	Path to the directory excluded from scan.
Status	Indicates whether the application excludes this scope from monitoring during the component operation.

You can add, edit, or delete items in the table.

New exclusion scope window

In this window, you can add and configure the monitoring exclusion scope for the System Integrity Check task.

Monitoring exclusion scope settings

Setting	Description
Exclusion scope name	Field for entering the exclusion scope name. This name will be displayed in the table in the **Exclusion scopes** window. The entry field must not be blank.
Use this scope	The check box enables or disables the exclusion of the scope from monitoring when the application is running. If this check box is selected, the application excludes this scope from monitoring during the task operation. If this check box is cleared, the application monitors this scope during the task operation. You can later exclude this scope from monitoring by selecting the check box. This check box is selected by default.
File system, access protocol, and path	Entry field for the path to the local directory that you want to add to the exclusion scope. You can use **masks** to specify the path. You can use the `*` (asterisk) character to create a file or directory name mask. You can indicate a single `*` character to represent any set of characters (including an empty set) preceding the `/` character in the file or directory name. For example, `/dir/*/file` or `/dir/*/*/file`. You can indicate two consecutive `*` characters to represent any set of characters (including an empty set and the `/` character) in the file or directory name. For example, `/dir/**/file*/` or `/dir/file**/`. The `**` mask can be used only once in a directory name. For example, `/dir/**/**/file` is an incorrect mask. You can use a single `?` character to represent any one character in the file or directory name. The field must not be blank. The **/** path is specified by default. The application excludes all directories of the local file system from scan.
Masks	The list contains name masks of the objects that the application excludes from the monitoring. By default the list contains the ***** mask (all objects). You can add, edit, or delete masks. Clicking the **Add** button opens the **Object mask** window. In this window, in the **Define object mask** field, you can specify the name template for files that Kaspersky Endpoint Security excludes from scans. Examples: The `*.txt` mask refers to all text files. The `*_my_file_??.html` mask refers to html files starting with any characters, and ending with `_my_file_` followed by any two characters (for example, 2020_my_file_09.html).

Exclusions by mask window

You can configure the exclusion of objects from monitoring based on name masks. The application does not scan the files with the names containing the specified masks. By default, the list of masks is empty.

You can add, edit, or delete masks.

Clicking the **Add** button opens the **Object mask** window. In this window, in the **Define object mask** field, you can specify the name template for files that Kaspersky Endpoint Security excludes from scans.

Examples:
The `*.txt` mask refers to all text files.
The `*_my_file_??.html` mask refers to html files starting with any characters, and ending with `_my_file_` followed by any two characters (for example, 2020_my_file_09.html).

You can also import the exclusion list from a file using the **Import** button and export the exclusion list to a JSON file using the **Export** button. When importing, you will be prompted to replace the list of exclusions or add the exclusions to the existing list.

You can enable the merging of the list of exclusions when inherited by child policies. If you want to merge list items, select the **Merge inherited values** check box. If the check box is selected, items in the list of the parent policy are displayed in child policies, and items can be added to the list of the child policy. If the check box is cleared, the list items are not merged when inheriting policy settings. This check box is cleared by default.

Configuring System Integrity Check on the command line

You can run a system integrity check on a device on the command line by using user *System Integrity Check* tasks (*ODFIM* tasks).

You can manually start, stop, pause, or resume user tasks and configure the task schedule. You can configure system integrity checking by editing the settings of these tasks.

System Integrity Check task settings

Setting	Description	Values
`RebuildBaseline`	Enables baseline to rebuild after the *System Integrity Check* task finishes.	`Yes`: rebuild the baseline every time the *System Integrity Check* task finishes. `No` (default): do not rebuild the baseline every time the *System Integrity Check* task finishes.
`CheckFileHash`	Use the file hash (SHA256) as a criterion when comparing the current state of the monitored file with its original state.	`Yes`: check the hash. `No` (default value) — Disable hash check. If this check is disabled, the application compares only the file size (if the file size has not changed, then the modification time is not considered a critical parameter).
`TrackDirectoryChanges`	Enables directory monitoring.	`Yes`: monitor directories while checking system integrity. `No` (default value) — Do not monitor directories.
`TrackLastAccessTime`	Enables tracking last file access time. In the Linux operating systems it is the `noatime` setting.	`Yes` — Track last file access time. `No` (default value) — Do not track last file access time.
`UseExcludeMasks`	Enables monitoring scope exclusions for objects specified by the `ExcludeMasks.item_#` setting. This setting applies only if the `ExcludeMasks.item_#` setting is specified.	`Yes` — Exclude the objects specified by the `ExcludeMasks.item_#` setting from the monitoring scope. `No` (default value) — Do not exclude the objects specified by the `ExcludeMasks.item_#` setting from the monitoring scope.
`ExcludeMasks.item_#`	Excludes objects from monitoring by names or masks. You can use this setting to exclude an individual file from the specified scan scope by name or exclude several files at once using masks in the shell format. Before specifying a value for this setting, make sure that the `UseExcludeMasks` setting is enabled. You can specify several masks. Each mask must be specified on a new line with a new index.	The default value is not defined.
The **[ScanScope.item_#]** section contains the monitoring scopes of the *System Integrity Check*. At least one monitoring scope must be specified for the task. You can specify several [ScanScope.item_#] sections in any order. The application processes the scopes by index in ascending order. The [ScanScope.item_#] section contains the following settings:		
`AreaDesc`	Description of monitoring scope; contains additional information about the monitoring scope.	The default value is not defined.
`UseScanArea`	Enables monitoring of the specified scope.	`Yes` (default value) — Monitor the specified scope. `No` — Do not monitor the specified scope.

Setting	Description	Values
`Path`	Path to the monitoring directory.	You can use **masks** to specify the path. You can use the `*` (asterisk) character to create a file or directory name mask. You can indicate a single `*` character to represent any set of characters (including an empty set) preceding the `/` character in the file or directory name. For example, `/dir/*/file` or `/dir/*/*/file`. You can indicate two consecutive `*` characters to represent any set of characters (including an empty set and the `/` character) in the file or directory name. For example, `/dir/**/file*/` or `/dir/file**/`. The `**` mask can be used only once in a directory name. For example, `/dir/**/**/file` is an incorrect mask. You can use a single `?` character to represent any one character in the file or directory name. Default value: /opt/kaspersky/kesl/
`AreaMask.item_#`	Monitoring scope limitation. Within the monitoring scope, the application scans only the objects that are specified using the masks in the shell format. You can specify several `AreaMask.item_#` items in any order. The application processes the scopes by index in ascending order.	Default value: `*` (all objects are monitored)
The **[ExcludedFromScanScope.item_#]** section contains the objects to be excluded from all [ScanScope.item_#] sections. You can specify several [ExcludedFromScanScope.item_#] sections in any order. The application processes the scopes by index in ascending order. The [ExcludedFromScanScope.item_#] section contains the following settings:		
`AreaDesc`	Description of the monitoring exclusion scope, which contains additional information about the monitoring exclusion scope.	The default value is not defined.
`UseScanArea`	Excludes the specified scope from monitoring.	`Yes` (default value) — Exclude the specified scope from monitoring. `No` — Do not exclude the specified scope from monitoring.
`Path`	Path to the directory with objects excluded from monitoring.	You can use **masks** to specify the path. You can use the `*` (asterisk) character to create a file or directory name mask. You can indicate a single `*` character to represent any set of characters (including an empty set) preceding the `/` character in the file or directory name. For example, `/dir/*/file` or `/dir/*/*/file`. You can indicate two consecutive `*` characters to represent any set of characters (including an empty set and the `/` character) in the file or directory name. For example, `/dir/**/file*/` or `/dir/file**/`. The `**` mask can be used only once in a directory name. For example, `/dir/**/**/file` is an incorrect mask. You can use a single `?` character to represent any one character in the file or directory name. The default value is not defined.
`AreaMask.item_#`	Limitation of monitoring exclusion scope. In the monitoring exclusion scope, the application only excludes the objects that are specified using masks in the shell format. You can specify several `AreaMask.item_#` items in any order. The application processes the scopes by index in ascending order.	Default value: `*` (exclude all objects from monitoring)

Behavior Detection

The Behavior Detection component allows you to monitor for any malicious activity from applications in the operating system. When malicious activity is detected, Kaspersky Endpoint Security can terminate the process of the application that performs malicious activity.

The Behavior Detection component is enabled automatically with the default settings when Kaspersky Endpoint Security starts.

For optimal performance of the Behavior Detection component, we recommend enabling the Web Threat Protection component.

You can enable, disable, and configure Behavior Detection:

- Select an action to be performed by Kaspersky Endpoint Security upon detecting malicious activity in the operating system: inform the user or block the application that performs malicious activity.
- Exclude process activity from scans by the Behavior Detection component and the MDR and EDR Expert (on-premise) components.

  The application automatically excludes the activity of the Watchdog server process from scanning. This exclusion cannot be removed.

By default, on the SintezM-Client operating system, the auditd service configuration is protected from modification, that is, it is in `enabled 2` mode. For correct operation of the Behavior Detection component when Kaspersky Endpoint Security is integrated with Kaspersky Managed Detection and Response and Kaspersky Anti Targeted Attack Platform solutions, change the auditd mode in the configuration files to `enabled 1` (no configuration blocking) and restart the operating system.

If the root user does not have access to a remote directory mounted on the device over the NFSv4 protocol, the application blocks access to such a file for all users.

Configuring Behavior Detection in the Web Console

In the Web Console, you can manage Behavior Detection settings in the policy properties (**Application settings** → **Host Threat Protection** → **Behavior Analysis** → **Behavior Detection**).

Configuring Behavior Detection in the Administration Console

In the Administration Console, you can manage Behavior Detection settings in the policy properties (Managing policies in the Administration Console, Creating a policy using the Administration Console) (**Advanced Threat Protection** → **Behavior Detection**).

Behavior Detection component settings

Setting	Description
Enable Behavior Detection	This check box enables or disables the Behavior Detection component. This check box is selected by default.
Action on malware activity detection	The action to be performed by Kaspersky Endpoint Security upon detecting malicious activity in the operating system: • **Block** the application that performs malicious activity (default value). Kaspersky Endpoint Security terminates the process that performs malicious activity and logs information about the detected malicious activity. • **Inform** user. Kaspersky Endpoint Security does not terminate the process that performs malicious activity; it only records the detection of malicious activity in the event log.
Use exclusions by process	This check box enables or disables exclusions by process in the operation of the Behavior Detection component. This check box is cleared by default. The **Configure** button opens the **Exclusions by process** window. In this window, you can exclude the activity of processes.

Exclusions by process window

This window contains per-process exclusion scopes. The exclusion scope for exclusion by process lets you exclude the activity of an indicated process.

Exclusion scope settings for exclusion by process

Setting	Description
Merge inherited values	This check box enables or disables the merging of the list when inherited in child policies. If the check box is selected, items in the list of the parent policy are displayed in child policies, and items can be added to the list of the child policy. If the check box is cleared, the list items are not merged when inheriting policy settings. This check box is cleared by default.
Exclusion scope name	Exclusion scope name.
Path	Full path to excluded process.
Status	The status indicates whether the application uses this exclusion.

By default, the table of exclusion scopes is empty. You can add, edit, or delete items in the table.

You can also import the list of exclusions from a file by clicking **Advanced** -> **Import** and export the list of added exclusions to a file by clicking **Advanced** -> **Export selected** or **Advanced** -> **Export all**.

Trusted process window

In this window, you can add and configure exclusion scopes for exclusion by process.

Exclusion scope settings for exclusion by process

Setting	Description
Exclusion scope name	Field for entering the exclusion scope name. This name will be displayed in a table in the **Exclusions by process** window.
Path to excluded process	Full path to the process you want to exclude from scans. You can use **masks** to specify the path. You can use the * (asterisk) character to create a file or directory name mask. You can indicate a single * character to represent any set of characters (including an empty set) preceding the / character in the file or directory name. For example, `/dir/*/file` or `/dir/*/*/file`. You can indicate two consecutive * characters to represent any set of characters (including an empty set and the / character) in the file or directory name. For example, `/dir/**/file*/` or `/dir/file**/`. The ** mask can be used only once in a directory name. For example, `/dir/**/**/file` is an incorrect mask. You can use a single ? character to represent any one character in the file or directory name. The entry field must not be blank.
Apply to child processes	Exclude child processes of the excluded process indicated by the **Path to excluded process** setting. This check box is cleared by default.
Use this scope	The check box enables or disables this exclusion scope. If this check box is selected, the application excludes this scope. If this check box is cleared, the application includes this scope. You can later exclude this scope by selecting the check box. This check box is selected by default.
Exclude process from Behavior Detection scans	This check box enables or disables the exclusion of the process from scanning by Behavior Detection. This check box is cleared by default.
Exclude process from MDR and EDR Expert (on-premise) telemetry	This check box enables or disables the exclusion of the process from telemetry collected by the MDR and EDR Expert (on-premise) components. This check box is cleared by default.

Configuring Behavior Detection on the command line

You can manage application Behavior Detection in the operating system via the command line by using the *Behavior_Detection* predefined task.

The Behavior Detection task runs by default. You can start and stop the task manually.

You can configure Behavior Detection by editing the settings of the Behavior Detection predefined task.

Behavior Detection task setting

Setting	Description	Values
`UseTrustedPrograms`	Excluding processes from scans.	`Yes` – do not scan the activity of the indicated processes. `No` (default value) – scan all processes.
`TaskMode`	Action performed by the application when malicious activity is detected in the operating system.	`Block` (default value) – terminate the process of the application performing malicious activity. `Notify` – do not terminate the process performing malicious activity; only log detection of malicious activity in the event log.
The **[TrustedPrograms.item_#]** section contains processes that are excluded from Behavior Detection scans. Kaspersky Endpoint Security does not monitor the activity of the specified processes.		

Setting	Description	Values
`ProgramPath`	Path to excluded process.	`< full path to process >` – Do not scan the process in the specified local directory. You can use **masks** to specify the path. You can use the `*` (asterisk) character to create a file or directory name mask. You can indicate a single `*` character to represent any set of characters (including an empty set) preceding the `/` character in the file or directory name. For example, `/dir/*/file` or `/dir/*/*/file`. You can indicate two consecutive `*` characters to represent any set of characters (including an empty set and the `/` character) in the file or directory name. For example, `/dir/**/file*/` or `/dir/file**/`. The `**` mask can be used only once in a directory name. For example, `/dir/**/**/file` is an incorrect mask. You can use a single `?` character to represent any one character in the file or directory name.
`ApplyToDescendants`	Exclude child processes of the excluded process specified by the `ProgramPath` setting from scans.	`Yes` – exclude the specified process and all its child processes from scans. `No` (default value) – exclude only the specified process from scans, do not exclude its child processes from scans.
`ProgramDesc`	Description of the excluded process.	
`UseTrustedProgram`	Exclude the activity of the specified process from scanning.	`Yes` (default value) – Exclude the activity of the specified process from scanning. `No` – do not exclude the activity of the specified process from scanning.
`UseTrustedProgramForDetects`	Excluding the activity of a process from scanning by Behavior Detection.	If set to `Yes`, the activity of the specified process is excluded from scanning by Behavior Detection. If set to `No` (default), the activity of the specified process is not excluded from scanning by Behavior Detection.
`UseTrustedProgramForMDRAndEDR`	Exclusion of the process from telemetry collected by the MDR and EDR Expert (on-premise) components.	`Yes` – exclude the activity of this process from telemetry collected by the MDR and EDR Expert (on-premise) components. `No` (default value) – do not exclude the activity of this process from telemetry.
`TelemetrySource`	Additional settings for the collection of telemetry sent to Detection and Response solutions when integrated with such. The `UseTelemetryMonopolyMode` setting is applied only if `TelemetrySource` is set to `Default`.	`Default` (default) means the eBPF technology and auditd service are used to get telemetry. `OnlyEBPF` means that only the eBPF technology is used to get telemetry.
`UseTelemetryMonopolyMode`		`True` (default) means Kaspersky Endpoint Security uses the auditd service in exclusive mode. `False` means the auditd service is used in non-exclusive mode.

Exploit Prevention

Exploit Prevention monitors code that exploits vulnerabilities on your device to gain administrative privileges or perform malicious actions. For example, exploits can utilize a buffer overflow attack. To do so, the exploit sends a large amount of data to a vulnerable application. When processing this data, the vulnerable application executes malicious code. As a result of this attack, the exploit can start an unauthorized installation of malware. If an attempt to run an executable file from a vulnerable application was not made by the user, Kaspersky Endpoint Security blocks the execution of this file or informs the user. By default, Exploit Prevention is disabled.

Exploit Prevention requires enabling Behavior Detection and the updatable kernel module. For optimal performance of the Exploit Prevention component, we recommend also enabling the Web Threat Protection component.

You can enable or disable Exploit Prevention and manage component settings:

- Select the action that the application will perform when an exploit is detected:
- Configure exclusions of objects from scans. A scan exclusion is a set of conditions. When these conditions are met, the application does not scan the objects for viruses and other malware. You can exclude from scans:
  - Objects by the name of the threats detected in them
  - Files and directories at the specified paths
  - Files with the specified hash

Configuring Exploit Prevention in the Web Console

In the Web Console, you can manage Exploit Prevention settings in the policy properties (**Application settings** → **Host Threat Protection** → **Behavior Analysis** → **Exploit Prevention**).

Configuring Exploit Prevention in the Administration Console

In the Administration Console, you can manage Exploit Prevention settings in the policy properties (Managing policies in the Administration Console, Creating a policy using the Administration Console) (**Advanced Threat Protection** → **Behavior Detection**).

Exploit Prevention component settings

Setting	Description
Enable Exploit Prevention	This check box enables or disables Exploit Prevention. This check box is cleared by default.
Exploit Prevention section	Clicking the **Configure** button opens the **Exploit Prevention exclusions** window, in which you can configure exclusions from scanning for the Exploit Prevention component.

Setting	Description
Action on exploit detection	The action that the application will perform when an exploit is detected: • **Block** (default value). The application blocks the malicious activity of the exploit and records information about this in the event log. • **Inform**. The application does not block the activity of the exploit, but only records information about exploit detection in the event log.

Exploit Prevention exclusions window

In this window, you can configure the exclusion of objects from Exploit Prevention scans. The application will not scan the specified objects. By default, the list of objects is empty.

Exploit Prevention exclusion settings

Setting	Description
Merge inherited values	This check box enables or disables the merging of the list when inherited in child policies. If the check box is selected, items in the list of the parent policy are displayed in child policies, and items can be added to the list of the child policy. If the check box is cleared, the list items are not merged when inheriting policy settings. This check box is cleared by default.
Status	The status indicates whether the application uses this exclusion.
Threat name.	Name of the threat to be excluded from scanning.
File or directory path	Full path to the file or directory excluded from scanning.
File hash	Hash of the file excluded from scanning.
Comment	Comment for the scan exclusion.

By default, the table of exclusions is empty. You can add, edit, or delete items in the table.

Exploit Prevention exclusion window

In this window, you can add or configure an exclusion for objects from Exploit Prevention scans.

Exploit Prevention exclusion settings

Setting	Description
Use threat name	This check box enables or disables the exclusion from scanning by the name of the threat detected in the object. This check box is selected by default.
Threat name.	In this field, you can enter the name of the threat detected in the object. In order to exclude an object from scans, specify the full name of the threat detected in this object – the string containing the application's decision that the object is infected. You can find the full name of the threat detected in an object in the application log or on the website https://threats.kaspersky.com. This field is available if the **Use threat name** check box is selected.
Use file hash	This check box enables or disables the exclusion from scanning by file hash. This check box is selected by default.
File hash sum type	In this drop-down list, you can select the type of file hash that you want to use to exclude the file from scanning: • **MD5**. • **SHA256**. This drop-down list is available if the **Use file hash** check box is selected.
File hash sum	In this field, you can entering the hash of the file by which you want to exclude the file from scanning. This field is available if the **Use file hash** check box is selected.

Setting	Description
Use file or directory path	This check box enables or disables the exclusion of files in which a threat is detected by their paths. This check box is selected by default.
File or directory path	Entry field for specifying the path to the file or directory that you want to exclude from a scan. You can use the * and ? characters in the path. The field is available if the **Use file or directory path** check box is selected.
Comment	Entry field for a comment (optional).
Use this exclusion	This check box enables or disables the use of this exclusion when the application is running. This check box is selected by default.

Configuring Exploit Prevention on the command line

On the command line, you can manage Exploit Prevention using the settings of the Behavior Detection (*Behavior_Detection*) predefined task.

You can configure Exploit Prevention by editing the settings of the Behavior Detection predefined task (see the table below).

Exploit Prevention settings

Setting	Description	Values
`UseAEP`	Enable the Exploit Prevention component.	`Yes` enables Exploit Prevention. `No` (default) disables Exploit Prevention.
`AEPMode`	The action to take when an exploit is detected.	If set to `Block` (default), malicious activity of the exploit is blocked and an event is logged. If set to `Notify`, the activity of the exploit is not blocked, only information about the exploit being detected is recorded in the event log.
The **[AEPExclusions.item_#]** section contains exclusions from scanning for the Exploit Protection component.		
`Enabled`	Enabling the exclusion from scanning of the Exploit Prevention protection component.	`Yes` (default value) – use the Exploit Prevention exclusion. `No` – do not use the Exploit Prevention exclusion.
`DetectName`	Excludes an object from scans by the name of the threat detected in the object. Before specifying a value for this setting, make sure that the `UseDetectName` setting is enabled.	In order to exclude an object from scans, specify the full name of the threat detected in this object – the string containing the application's decision that the object is infected. You can find the full name of the threat detected in an object in the application log or on the website https://threats.kaspersky.com.
`Hash`	Excludes an object in which a threat was detected by its hash. Before specifying a value for this setting, make sure that the `UseHash` setting is enabled.	
`HashType`	The type of file hash that you want to use to exclude the file from scanning using the `Hash` parameter.	`Md5` – MD5 hash `Sha256` – SHA256 hash
`Path`	Excludes an object in which a threat was detected by its path. Before specifying a value for this setting, make sure that the `UsePath` setting is enabled.	`<full path to file or local directory>` – exclude the file or objects in the specified directory (including subdirectories) from scans. You can use the `*` and `?` characters in the path.
`UseDetectName`	Enables exclusion of objects containing the threats specified by the `DetectName` setting from scans.	`Yes` (default value) — exclude objects containing the threats specified by the `DetectName` setting from scans. `No` —Do not exclude from scanning the objects containing threats specified using the `DetectName` setting

Setting	Description	Values
`UseHash`	Exclude files with a detected threat by their hashes. The file hash is specified in the `Hash` parameter.	`Yes` (default value) – exclude a file with a detected threat by its hash. `No` – do not exclude a file with a detected threat by its hash.
`UsePath`	Exclude files with a detected threat by their paths. The path to the file is specified using the `Path` parameter.	`Yes` (default value) – exclude a file with a detected threat by its path. `No` – do not exclude a file with a detected threat by its path.

Using Kaspersky Security Network

The KSN functionality may not be available in the application in the territory of the USA.

To increase the protection of devices and user data, Kaspersky Endpoint Security can use Kaspersky's cloud-based knowledge base Kaspersky Security Network (KSN) to check the reputation of files, Internet resources, and software. Using Kaspersky Security Network data ensures a faster response to various threats, high protection component performance, and fewer false positives.

Use of Kaspersky Security Network is voluntary. You can start or stop using KSN at any time.

Kaspersky Security Network infrastructure solutions

Kaspersky Endpoint Security supports the following infrastructure solutions to work with Kaspersky reputation databases:

- *Kaspersky Security Network (KSN)* – A solution that receives information from Kaspersky and sends data about objects detected on user devices to Kaspersky for additional verification by Kaspersky analysts and to add to reputation and statistical databases.

- *Kaspersky Private Security Network (KPSN)* – A solution that allows users of devices with Kaspersky Endpoint Security installed to access the reputation databases of Kaspersky, as well as other statistical data, without sending data to Kaspersky from their devices. KPSN is designed for corporate clients who can't use Kaspersky Security Network, for example, for the following reasons:

  - No connection of local workplaces to the Internet

  - Legal prohibition or corporate security restrictions on sending any data outside the country or the organization's local network

To use KPSN after activating application under a new license, inform the service provider about the new license key. Otherwise, an authentication error will prevent data exchange with KPSN.

Kaspersky Security Network usage options:

There are two options for using KSN:

- **Extended KSN mode** – you can receive information from the Kaspersky knowledge base, while Kaspersky Endpoint Security automatically sends statistical information to Kaspersky Security Network that it obtained during its operation. The application can also send to Kaspersky for additional scanning certain files (or parts of files) that intruders can use to harm the device or data.

- **Basic KSN mode** – you can receive information from the Kaspersky knowledge base, but Kaspersky Endpoint Security does not send anonymous statistics and data about the types and sources of threats.

You can choose to use Kaspersky Security Network using the Web Console, the Administration Console, or the command line.

No personal data is obtained, processed, or stored. Detailed information about the storage, and destruction, and/or submission to Kaspersky of statistical information generated during participation in KSN is available in the Kaspersky Security Network Statement and on Kaspersky's website. The file with the text of the Kaspersky Security Network Statement is included in the application distribution kit.

Cloud mode for Kaspersky Endpoint Security

Cloud mode is an operating mode of Kaspersky Endpoint Security that uses a lightweight version of the malware databases. This helps reduce the load on device memory.

Kaspersky Security Network facilitates the application's use of the lightweight anti-malware databases.

You can enable cloud mode if Kaspersky Endpoint Security is running in standard mode and using KSN.

Lightweight anti-malware databases are not supported if Kaspersky Endpoint Security is running in Light Agent mode for protecting virtual environments. The application receives special databases required for Light Agent operation from Protection Server.

Kaspersky Endpoint Security switches to using a lightweight version of the malware databases after enabling cloud mode and performing the latest update of the application databases and modules. If cloud mode is disabled, Kaspersky Endpoint Security downloads the full version of the application databases from Kaspersky servers during the next update of application databases and modules.

If you are not using KSN or cloud mode is disabled, Kaspersky Endpoint Security uses the full version of the application databases.

Cloud mode is disabled automatically if use of KSN is disabled.

Using the KSN Proxy service

User devices managed by Administration Server can communicate with KSN directly or via the KSN Proxy service on the Administration Server.

If Kaspersky Endpoint Security is running in Light Agent mode to protect virtual environments, the KSN Proxy service supports communication with the KSN infrastructure. Direct communication with KSN is not supported. If the KSN proxy is not available, KSN is not used by the application.

A KSN proxy server provides the following capabilities:

- The user's device can query KSN and submit information to KSN, even without direct access to the Internet.
- A KSN proxy server caches processed data, thereby reducing the load on the external network connection and speeding up receipt of the information that is requested by the user's device.

You can configure the KSN proxy server settings in the Administration Server properties. For details about the KSN proxy server, refer to the Kaspersky Security Center Help.

If you use Kaspersky Endpoint Security in standard mode, you can configure the following KSN proxy server settings using the Kaspersky Security Center Web Console or Administration Console:

KSN proxy settings cannot be managed on the command line.

In Kaspersky Security Center, you can configure the following settings for the use of a KSN proxy server by Kaspersky Endpoint Security:

- Enable or disable the use of the Administration Server as a KSN proxy server.
- Allow or deny direct interaction with KSN servers if the KSN proxy service is unavailable.

Configuring the use of Kaspersky Security Network in the Web Console

In the Web Console, you can configure the usage of Kaspersky Security Network by the application in the policy properties (**Application settings** → **General Settings** → **Kaspersky Security Network**).

Kaspersky Security Center displays information about the availability of KSN via the client device status (*OK, Critical, Warning*) in the list of managed devices on the **Assets (Devices)** tab.

Configuring the use of Kaspersky Security Network in the Administration Console

In the Administration Console, you can configure the use of Kaspersky Security Network by Kaspersky Endpoint Security in the policy properties (Managing policies in the Administration Console, Creating a policy using the Administration Console) (**Advanced Threat Protection** → **Kaspersky Security Network**).

You can read the text of the **Kaspersky Security Network Statement** in the Kaspersky Security Network Statement window, which can be opened by clicking the **Kaspersky Security Network Statement** link.

Kaspersky Security Center displays information about the availability of KSN via the client device status (*OK, Critical, Warning*) in the list of managed devices on the **Devices** tab.

Kaspersky Security Network settings

Setting	Description
Kaspersky Security Network Statement	Clicking this link opens the **Kaspersky Security Network Statement** window. In this window, you can read the text of the Kaspersky Security Network Statement.
Kaspersky Security Network (KSN)	This block displays information about the KSN mode or indicates that KSN is not used by Kaspersky Endpoint Security. The **Edit** button opens a window where you can configure the use of Kaspersky Security Network.
Enable cloud mode	The check box enables or disables the operating mode in which Kaspersky Endpoint Security uses a lightweight version of the malware databases. The check box is available if use of KSN is enabled. The check box is selected if, when creating a policy, you accepted the terms of the Kaspersky Security Network Statement and are using KSN in extended mode. The mode is enabled or disabled after the next application database update. This setting applies only if the application is used in standard mode.
Use Administration Server as a KSN proxy server	If this check box is selected, Kaspersky Endpoint Security communicates with KSN servers using the KSN Proxy service on the Administration Server. This check box is selected by default. This setting applies only if the application is used in standard mode. In Light Agent mode for protecting virtual environments, the application can only communicate with the KSN infrastructure through a KSN proxy server.
Use KSN servers when KSN Proxy is not available	If this check box is selected, Kaspersky Endpoint Security communicates with KSN servers directly when the KSN Proxy service is unavailable. This check box is selected by default. This check box is available if the **Use Administration Server as a KSN proxy server** check box is selected. This setting applies only if the application is used in standard mode.

Kaspersky Security Network settings

In this window, you can configure Kaspersky Security Network participation settings.

Kaspersky Security Network settings

Setting	Description
More info	Clicking this link opens the Kaspersky website.
Do not use Kaspersky Security Network	By selecting this option, you decline to use Kaspersky Security Network.
Basic KSN mode	By selecting this option, you accept the terms of using Kaspersky Security Network. You will be able to receive information from Kaspersky's online knowledge base about the reputation of files, web resources, and software.
Extended KSN mode	By selecting this option, you accept the terms of using Kaspersky Security Network. You will be able to receive information from Kaspersky's online knowledge base about the reputation of files, web resources, and software. Also, anonymous statistics and information about the types and sources of various threats will be sent to Kaspersky to improve Kaspersky Security Network.
Kaspersky Security Network Statement	This link opens the **Kaspersky Security Network Statement** window, where you can read the text of the Kaspersky Security Network Statement.

Kaspersky Security Network Statement

In this window, you can read the text of the Kaspersky Security Network Statement and accept its terms and conditions.

Kaspersky Security Network settings

Setting	Description
I confirm that I have fully read, understand, and accept the terms and conditions of the Kaspersky Security Network Statement	By selecting this option, you confirm that you want to use the Kaspersky Security Network, and you have fully read, understood, and accept the terms and conditions of the Kaspersky Security Network Statement that is displayed. This option is available if you selected the **Basic KSN mode** or **Extended KSN mode** option in the **Kaspersky Security Network settings** window.
I do not accept the terms and conditions of the Kaspersky Security Network Statement	By selecting this option, you confirm that you do not want to use Kaspersky Security Network. This option is available if you selected the **Basic KSN mode** or **Extended KSN mode** option in the **Kaspersky Security Network settings** window.

Kaspersky Private Security Network Statement

In this window, you can read the text of the Kaspersky Private Security Network Statement and accept its terms and conditions.

Kaspersky Security Network settings

Setting	Description
I confirm that I have fully read, understand, and accept the terms and conditions of the Kaspersky Security Network Statement	By selecting this option, you confirm that you want to participate in the Kaspersky Security Network, and you have fully read, understood, and accept the terms and conditions of the Kaspersky Private Security Network Statement that is displayed.
I do not accept the terms and conditions of the Kaspersky Security Network Statement	By selecting this option, you confirm that you do not want to use Kaspersky Security Network.

Configuring the use of Kaspersky Security Network on the command line

You can enable or disable the use of Kaspersky Security Network in the command line by using the `UseKSN` option in the general application settings.

You can change the value of `UseKSN` with the help of command line switches or a configuration file that contains all general application settings.

To enable the use of Kaspersky Security Network with the help of command line switches, run:

```
kesl-control --set-app-settings UseKSN=<Extended/Basic> --accept-ksn
```

where:

- `<Extended/Basic>`: Kaspersky Security Network mode.
- `--accept-ksn`: an option signifying that you agree to the terms in the Kaspersky Security Network Statement. You confirm that you have fully read, understand, and accept the terms and conditions of the Kaspersky Security Network Statement.

The file ksn_license.<language ID> containing the text of the Kaspersky Security Network Statement is located in the directory /opt/kaspersky/kesl/doc/.

To disable the use of Kaspersky Security Network with the help of command line switches, run:

```
kesl-control --set-app-settings UseKSN=No
```

To enable or disable use of Kaspersky Security Network with a configuration file, execute the following command:

```
kesl-control --set-app-settings --file <path to configuration file> [--json] [--accept-ksn]
```

where:

- `--file <configuration file path>` is the full path to the configuration file with general application settings where the required `UseKSN` value is configured.
- Specify the `--json` option if you are importing settings from a JSON configuration file. If the `--json` option is not specified, the application attempts to import from an INI file. If the import fails, an error is displayed.
- `--accept-ksn`: an option signifying that you agree to the terms in the Kaspersky Security Network Statement. You must specify the option if you are enabling the use of Kaspersky Security Network.

If Kaspersky Endpoint Security installed on a client device runs under a Kaspersky Security Center policy, the value of the `UseKSN` setting can only be modified by using Kaspersky Security Center. When Kaspersky Endpoint Security installed on a client device stops running under a policy, the following value is assigned to the setting: `UseKSN=No`.

Checking the connection to Kaspersky Security Network using the command line

To check the connection to Kaspersky Security Network, run the following command:

```
kesl-control --app-info
```

The **Using Kaspersky Security Network** line displays the status of the connection to Kaspersky Security Network:

- If `Extended KSN mode` is displayed, Kaspersky Endpoint Security uses Kaspersky Security Network, information can be obtained from the knowledge base, and anonymous statistics and information about the types and sources of threats are sent.
- If `Basic KSN mode` is displayed, Kaspersky Endpoint Security uses Kaspersky Security Network and information can be obtained from the knowledge base, but anonymous statistics and information about the types and sources of threats are not sent.
- If the status is `Disabled`, Kaspersky Endpoint Security does not use Kaspersky Security Network.

The **Kaspersky Security Network Infrastructure** line displays information about the infrastructure solution that is used to work with Kaspersky reputation databases: `Kaspersky Security Network` or `Kaspersky Private Security Network`.

A connection to Kaspersky Security Network may be absent for the following reasons:

- The user device is not connected to the internet.
- The use of Kaspersky Security Network is disabled.
- The application has not been activated or the license has expired.
- Problems related to the license key are detected. For example, the key is in the denylist.

Enabling and disabling cloud mode from the command line

Cloud mode is an operating mode of Kaspersky Endpoint Security that uses a lightweight version of the malware databases.

> Lightweight anti-malware databases are not supported if Kaspersky Endpoint Security is running in Light Agent mode for protecting virtual environments. The application receives special databases required for Light Agent operation from Protection Server.

You can enable or disable cloud mode in the command line with the help of the `CloudMode=Yes/No` option in the general application settings.

You can edit the value for the setting `CloudMode` using the configuration file that contains all general application settings, or using command line options.

> Cloud mode is available if use of Kaspersky Security Network is enabled.

Advanced application settings

You can configure the following additional application settings:

- Proxy server for the application.
- Global exclusions – exclude mount points from file operation interception for the File Threat Protection, Anti-Cryptor, and Container Monitoring components and the Critical Areas Scan, Container Scan, and Removable Drives Scan tasks.
- Exclude process memory from scans.
- File operations interception mode.
- Detection of legitimate applications that threat intruders can use to compromise devices or data.
- Application stability monitoring.
- Application startup settings.
- Limit on the use of memory and processor resources for scan tasks.
- Limit on the use of resident memory by the application.
- Limit on the number of Custom Scan tasks that a non-privileged user can start simultaneously.
- Settings for the transfer of data to the Kaspersky Security Center storage.
- Task management permissions.
- Canceling scheduled tasks on a device running on battery power.
- System event interception settings.
- Telemetry additional settings.

Configuring a proxy server

You can configure proxy server settings if the users of the client devices use a proxy server to connect to the internet. The Kaspersky Endpoint Security application can use a proxy server to connect to Kaspersky activation servers, to update sources for databases and application modules, to Kaspersky Security Network, and when verifying website certificates using the Web Threat Protection component.

The proxy server is not used by default.

If you use an activation code to activate devices in an isolated network segment without internet access, you can use Kaspersky Security Center Administration Server as a proxy server for access to Kaspersky activation servers. You can enable the use of the Administration Server as a proxy server for access to activation servers in the Web Console or the Administration Console.

You can configure the following exclusions for the proxy server in the Web Console, the Administration Console, or on the command line:

- For EDR Expert (on-premise), NDR (KATA), and Sandbox components that provide integration with Detection and Response solutions. You can specify components that must bypass the proxy server.
- For web addresses. You can specify a list of addresses to be connected to bypassing the proxy server.

If Kaspersky Endpoint Security is used in Light Agent mode, the use of a proxy server for connecting to Kaspersky Security Network, the SVM, and the Integration Server is not supported. Using the Kaspersky Security Center Administration Server as a proxy server for accessing Kaspersky activation servers is also not supported.

Configuring proxy server settings in the Web Console

In the Web Console, you can configure the proxy server settings in the policy properties (**Application settings** → **General Settings** → **Network Settings**).

Configuring proxy server settings in the Administration Console

In the Administration Console, you can manage proxy settings in the policy properties (Managing policies in the Administration Console, Creating a policy using the Administration Console) (**General settings** → **Proxy server settings**).

Proxy server settings

Setting	Description
Do not use proxy server	If this option is selected, the application does not use a proxy server.
Use the specified proxy server settings	If you select this option the application uses the specified proxy server settings to connect to Kaspersky activation servers, to update sources for databases and application modules, to Kaspersky Security Network, and when verifying website certificates using the Web Threat Protection component.
Address and port	Fields for entering the proxy server's IP address or domain name as well as its port. Default port: 3128. These fields are available if the **Use the specified proxy server settings** option is selected.
Use proxy server authentication	This check box enables or disables proxy server authentication using a user name and password. This check box is available if the **Use the specified proxy server settings** option is selected. This check box is cleared by default. When connecting via an HTTP proxy, we recommend to use a separate account that is not used to sign in to other systems. An HTTP proxy uses an insecure connection, and the account may be compromised.
User name	Entry field for the user name used for proxy server authentication. The entry field is available if the **Use proxy server authentication** check box is selected.

Setting	Description
Password	Entry field for entering the user password for proxy server authentication. It is recommended to make sure that the password complexity and anti-bruteforce mechanisms ensure that the password cannot be guessed within 6 months. Clicking the **Show** button causes the user's password to be displayed in clear text in the **Password** field. By default, the user password is hidden and is displayed as asterisks. The text box and the button are available if the **Use proxy server authentication** check box is selected.
Use Kaspersky Security Center as a proxy server for application activation	Enables or disables the use of Kaspersky Security Center Administration Server as a proxy server for accessing Kaspersky activation servers. This is necessary when activating the application in an isolated network segment without internet access using an activation code. If this check box is selected, the application gains access to activation servers via the Administration Server that has internet access. This check box is cleared by default. This setting applies only if the application is used in standard mode. If the application is used in Light Agent mode to protect virtual environments, the license information is provided by the Protection Server.
Proxy server exclusions	This group of settings contains the **Configure** button, which opens the **Proxy server exclusions** window.

Proxy server exclusions window

In this window, you can configure the use of a proxy server when integrated with components of the Kaspersky Anti Targeted Attack Platform solution, as well as a list of addresses for which you want to bypass the proxy server.

Proxy server exclusions

Setting	Description
Do not use proxy server for components	Select the check boxes next to those application components that you do not want to use the proxy server: • **Endpoint Detection and Response Expert (on-premise)** – do not use a proxy server when connecting to servers that provide integration with Kaspersky Endpoint Detection and Response Expert (on-premise) or with Kaspersky Endpoint Detection and Response (KATA). • **Sandbox** – do not use a proxy server when connecting to servers that provide interaction with Sandbox. • **Network Detection and Response (KATA)** – do not use a proxy server when connecting to Kaspersky Network Detection and Response (KATA) integration servers.
Do not use proxy server for addresses	This table contains a list of addresses to be connected to bypassing the proxy server. • **IP address/DNS name** is the IP address or DNS name to which you want to connect without a proxy server. You can use masks (`*` and `?` characters) to specify addresses. • You can optionally enter a comment in the **Comment** field. You can **add**, **edit**, or **remove** addresses in the table. Clicking the **Delete** button excludes the selected scope from scans. This button is available if at least one scan scope is selected in the table. The selected element's settings are changed in a separate window. Clicking the **Add** button opens a window where you can specify the new item settings.

Configuring proxy server settings on the command line

On the command line, you can manage proxy server settings for application components using the `UseProxy`, `ProxyServer`, `ProxyBypass`, `ProxyBypassEdr`, `ProxyBypassNdr` and `ProxyBypassSandbox` general application settings.

You can change the values of the settings with the help of command line switches or a configuration file that contains all general application settings.

The `UseProxy` parameter can take the following values:

- `Yes`: enable the use of a proxy server.
- `No`: disable the proxy server.

The `ProxyServer` setting lets you specify proxy server settings in the following format: `< connection protocol >://[< user >[:< password >]@]< proxy server address <code class="programcharacter">a>: <</code>port number >`, where:

- `< user >` is a user name for authentication on the proxy server.
- `< password >` is a user password for authentication on the proxy server.
- `< proxy server address >` is the IP address or domain name of the proxy server.
- `< port number >` is the port number of the proxy server.

Connecting to a proxy server over HTTPS is not supported.

When connecting via an HTTP proxy, we recommend to use a separate account that is not used to sign in to other systems. An HTTP proxy uses an insecure connection, and the account may be compromised.

The `ProxyBypass` setting lets you specify a list of addresses that will be connected to without a proxy server. The address is specified in the `< address >[:< port number >]` format. To specify addresses, you can use masks (`*` symbols) and comments (after a \ symbol).

The following settings allow you to configure the use of a proxy server by the EDR Expert (on-premise), NDR (KATA), and Sandbox components, which provide integration with Detection and Response solutions:

- The `ProxyBypassEdr` setting enables or disables the use of a proxy server when connecting to servers that provide integration with Kaspersky Endpoint Detection and Response Expert (on-premise) or with Kaspersky Endpoint Detection and Response (KATA).
- The `ProxyBypassNdr` setting enables or disables the use of a proxy server when connecting to servers that provide integration with Kaspersky Network Detection and Response (KATA).
- The `ProxyBypassSandbox` setting enables or disables the use of a proxy server when connecting to servers that provide interaction with Sandbox.

These settings can take the following values:

- `Yes`: enable the use of a proxy server.
- `No`: disable the proxy server.

Configuring global exclusions

You can configure exclusion of mount points from file operation interception for the File Threat Protection and Anti-Cryptor components, as well as from scanning by the Malware Scan, Critical Areas Scan, and Container Scan tasks. Exclusion of mount points allows you to exclude local or remote directories mounted on a device from interception of file operations. In addition, global exclusions affect the operation of the Container Monitoring component (Container Scan, Container Monitoring) and the Removable Drives Scan task.

Configuring global exclusions in the Web Console

In the Web Console, you can configure global exclusions in the policy properties (**Application settings** → **Trusted zone** → **Mount points**).

Configuring global exclusions in the Administration Console

In the Administration Console, you can manage global exclusions in the policy properties (Managing policies in the Administration Console, Creating a policy using the Administration Console) (**General settings** → **Global exclusions**).

The **Excluded mount points** group of settings contains a **Configure** button. Clicking this button opens the **Excluded mount points** window.

The list in the window contains the paths to the excluded mount points. By default, the list is empty. You can add, edit, and delete items in the list.

Mount point path window

Mount point settings

Setting	Description
File system, access protocol, and path	The settings block lets you set the location of the mount point. In the drop-down list of file systems, you can select the type of file system where the directories that you want to add to scan exclusions are located: • **Local**: local mount points. • **Mounted**: remote directories mounted on the device using the Samba or NFS protocol. • **All remote mounted** – all remote directories mounted on the device using the Samba and NFS protocols.
	If **Mounted** is selected in the drop-down list of file systems, you can select the remote access protocol in the drop-down list on the right: • **NFS**: remote directories mounted on a device using the NFS protocol. • **Samba**: remote directories mounted on a device using the Samba protocol. • **Custom**: all the resources of the device file system specified in the field below.
	If **Local** is selected in the drop-down list of file systems, then in the input field you can enter a path to a mount point that you want to exclude from file operation interception. You can use **masks** to specify the path. You can use the `*` (asterisk) character to create a file or directory name mask. You can indicate a single `*` character to represent any set of characters (including an empty set) preceding the `/` character in the file or directory name. For example, `/dir/*/file` or `/dir/*/*/file`. You can indicate two consecutive `*` characters to represent any set of characters (including an empty set and the `/` character) in the file or directory name. For example, `/dir/**/file*/` or `/dir/file**/`. The `**` mask can be used only once in a directory name. For example, `/dir/**/**/file` is an incorrect mask. To exclude the mount point `/dir`, you need to specifically indicate `/dir` (no asterisk). The mask `/dir/*` excludes all mount points at the level below `/dir` but not `/dir` itself. The `/dir/**` mask excludes all mount points below the level of `/dir` but not `/dir` itself. You can use a single `?` character to represent any one character in the file or directory name. Mount points must be specified in the same way as they are displayed in the `mount` command output.
Filesystem name	The field for entering the name of the file system where the directories that you to exclude from file operation interception are located. The field is available if the **Mounted** type is selected in the drop-down list of file systems and the **Custom** item is selected in the drop-down list on the right.

Configuring global exclusions on the command line

You can define mount point exclusions in the command line via the `ExcludedMountPoint.item_#` option in the general application settings.

You can edit the option via command line switches or a configuration file that contains all general application settings.

The `ExcludedMountPoint.item_#` parameter can take the following values:

- `AllRemoteMounted` — Exclude all remote directories mounted on the device using SMB and NFS protocols from file operation interception.
- `Mounted:NFS` — Exclude all remote directories mounted on the device using the NFS protocol from file operation interception.

- `Mounted:SMB` — Exclude all remote directories mounted on the device using the SMB protocol from file operation interception.
- `Mounted:<file system type>` — Exclude all mounted directories with the specified file system type from file operation interception.
- `/mnt` — Exclude objects in the /mnt mount point (including subdirectories) from file operation interception. This directory is used as the temporary mount point for removable drives.
- `<path that contains the /mnt/user* or /mnt/**/user_share>` mask — Exclude objects in mount points whose names contain the specified **mask** from file operation interception.

  You can use the `*` (asterisk) character to create a file or directory name mask.

  You can indicate a single `*` character to represent any set of characters (including an empty set) preceding the `/` character in the file or directory name. For example, `/dir/*/file` or `/dir/*/*/file`.

  You can indicate two consecutive `*` characters to represent any set of characters (including an empty set and the `/` character) in the file or directory name. For example, `/dir/**/file*/` or `/dir/file**/`.

  The `**` mask can be used only once in a directory name. For example, `/dir/**/**/file` is an incorrect mask.

  To exclude the mount point `/dir`, you need to specifically indicate `/dir` (no asterisk).

  The mask `/dir/*` excludes all mount points at the level below `/dir` but not `/dir` itself. The `/dir/**` mask excludes all mount points below the level of `/dir` but not `/dir` itself.

  You can use a single `?` character to represent any one character in the file or directory name.

Mount points must be specified in the same way as they are displayed in the `mount` command output.

You can specify several mount points to exclude from scanning.

Excluding process memory from scans

You can configure scan exclusions for process memory. The application does not scan the memory of the specified processes.

Configuring exclusions in the Web Console

In the Web Console, you can configure excluding process memory from scans in the policy properties (**Application settings** → **General Settings** → **Performance**).

Configuring exclusions in the Administration Console

In the Administration Console, you can manage process memory exclusions in the policy properties (Managing policies in the Administration Console, Creating a policy using the Administration Console) (**General settings** → **Excluding process memory**).

Clicking **Configure** under **Exclude process memory from scans** opens a window where you can create a list of exclusions.

The list in the **Exclude process memory from scans** window contains the paths to processes that the application excludes from process memory scanning. You can use **masks** to specify the path. By default, the list is empty.

You can use the `*` (asterisk) character to create a file or directory name mask.

You can indicate a single `*` character to represent any set of characters (including an empty set) preceding the `/` character in the file or directory name. For example, `/dir/*/file` or `/dir/*/*/file`.

You can indicate two consecutive `*` characters to represent any set of characters (including an empty set and the `/` character) in the file or directory name. For example, `/dir/**/file*/` or `/dir/file**/`.

The `**` mask can be used only once in a directory name. For example, `/dir/**/**/file` is an incorrect mask.

To exclude the mount point `/dir`, you need to specifically indicate `/dir` (no asterisk).

The mask `/dir/*` excludes all mount points at the level below `/dir` but not `/dir` itself. The `/dir/**` mask excludes all mount points below the level of `/dir` but not `/dir` itself.

You can use a single `?` character to represent any one character in the file or directory name.

You can enable the merging of the list of exclusions when inherited by child policies. To merge the list items, select the **Merge inherited values** check box in the **Exclude process memory from scans** window. If the check box is selected, items in the list of the parent policy are displayed in child policies, and items can be added to the list of the child policy. If the check box is cleared, the list items are not merged when inheriting policy settings. This check box is cleared by default.

Configuring exclusions on the command line

You can configure excluding process memory from scans in the command line using the `MemScanExcludedProgramPath.item_#` option in the general application settings.

You can edit the option via command line switches or a configuration file that contains all general application settings.

`MemScanExcludedProgramPath.item_#` contains the full path to the process in the local directory. You can use **masks** to specify the path.

You can use the `*` (asterisk) character to create a file or directory name mask.

You can indicate a single `*` character to represent any set of characters (including an empty set) preceding the `/` character in the file or directory name. For example, `/dir/*/file` or `/dir/*/*/file`.

You can indicate two consecutive `*` characters to represent any set of characters (including an empty set and the `/` character) in the file or directory name. For example, `/dir/**/file*/` or `/dir/file**/`.

The `**` mask can be used only once in a directory name. For example, `/dir/**/**/file` is an incorrect mask.

You can use a single `?` character to represent any one character in the file or directory name.

You can specify several processes to exclude from scanning.

Selecting the interception mode for file operations

The file operation interception mode affects the File Threat Protection and Device Control components.

- For the duration of the scan, the application can block access to files that are being scanned by the File Threat Protection component. By default, access is blocked: any access to the scanned file must wait until the scan results are in. If the scan detects no threats in the file, the application allows access to the file. When detecting infected objects, the application performs the actions specified in the **Action on threat detection** (`ActionOnThreat`) setting of the File Threat Protection component.

  You can choose not to block access to files that are being scanned by the File Threat Protection component. In that case, the scan is performed asynchronously.

- The application can block access to files on the device while the Device Control component is deciding if access to the device can be granted. By default, access is blocked: any access to files on the managed device must wait until the scan results are in. The application allows access to files if after the scan, Device Control allows access to the device that contains the files.

  You can disable file access blocking on the device monitored by the Device Control component. In that case, Device Control determines if access to the device can be allowed in asynchronous mode.

If the blocking mode of file operation interception is not enabled, the File Threat Protection, Device Control, and Execution prevention protection components run in notify mode, regardless of the mode that is configured.

Configuring in the Web Console

In the Web Console, you can configure the file operation interception mode in the policy properties (**Application settings** → **General Settings** → **Detection Settings**).

Configuring in the Administration Console

In the Administration Console, you can manage application trace settings in the policy properties (Managing policies in the Administration Console, Creating a policy using the Administration Console) (**General settings** → **Application settings** → **File operation interception mode** section).

The **Block access to files during scans** check box enables or disables the blocking of access to files while they are being scanned by the File Threat Protection and Device Control components.

This check box is selected by default.

If the check box is cleared, access to any file is allowed for the duration of the scan, and the scan runs in asynchronous mode.

Configuring on the command line

You can configure the file operation interception mode in the command line using the `FileBlockDuringScan` setting in the general application settings.

You can edit the option via command line switches or a configuration file that contains all general application settings.

The `FileBlockDuringScan` parameter can take the following values:

- `Yes` (default value) to block access to files for the duration of the scan by the File Threat Protection and Device Control components.
- `No` to allow access to files during the scan. Requests to any file is allowed, scanning is done asynchronously.

  This file operation interception mode has less impact on the system performance, but there is a risk that a threat in a file will not be disinfected or deleted if the file can, for example, change its name during a scan before the application makes a decision on the status of the file.

Configuring detection of applications that hackers can use to harm

You can enable or disable detection of legitimate applications that intruders can use to compromise devices or data. Such applications do not necessarily have a malicious purpose, but such applications can be exploited by hackers. For detailed information about legitimate applications that intruders can use to compromise the devices or user data, please visit the Kaspersky Encyclopedia website.

Configuring in the Web Console

In the Web Console, you can manage detection settings of legitimate applications that intruders can use to compromise devices or data in the policy properties (**Application settings** → **General Settings** → **Detection Settings**).

Configuring in the Administration Console

In the Administration Console, you can enable or disable detection of legitimate applications that intruders can use to compromise devices or data in the policy properties (Managing policies in the Administration Console, Creating a policy using the Administration Console) (**General settings** → **Application settings**, **Scan settings** section).

The **Detect legitimate applications that intruders can use to compromise devices or data** check box enables or disables detection of legitimate applications that intruders can use to compromise the device or data of the user.

This check box is cleared by default.

Configuring on the command line

On the command line, you can enable or disable detection of legitimate applications that intruders can use to compromise devices or data by using the `DetectOtherObjects` setting in the general application settings.

You can edit the option via command line switches or a configuration file that contains all general application settings.

The `DetectOtherObjects` parameter can take the following values:

- `Yes`: enable detection of legitimate applications that intruders can use to compromise devices or data.
- `No`: do not enable detection of legitimate applications that intruders can use to compromise devices or data.

Enabling application stability monitoring

You can enable or disable the Kaspersky Endpoint Security stability monitoring that lets you track the number of times the application terminates abnormally and notify the administrator about the unstable operation of the application, as well as manage monitoring settings.

Configuring in the Web Console

In the Web Console, you can enable or disable application stability monitoring in the policy properties (**Application settings** → General Settings → **Performance**).

Configuring in the Administration Console

In the Administration Console, you can enable or disable application stability monitoring in the policy properties (Managing policies in the Administration Console, Creating a policy using the Administration Console) (**General settings** → **Application settings**, **Advanced application settings**).

The **Enable application stability monitoring** check box enables or disables monitoring of the state of the Kaspersky Endpoint Security application.

This check box is cleared by default.

To apply this setting, the application and the Network Agent must be restarted.

If the application is unstable, the following message is displayed in the properties of the device with the installed application: *<Number> abnormal halts of the application since <date and time>*.

Configuring on the command line

On the command line, you can configure Kaspersky Endpoint Security stability monitoring using the `TrackProductCrashes`, `ProductHealthLogFile`, `WarnThreshold`, `WarnAfter_#_crash`, and `WarnRemovingThreshold` settings in the kesl.ini configuration file.

The `TrackProductCrashes` allows enabling the sending of device status information from Kaspersky Endpoint Security to Kaspersky Security Center when the application is unstable. This setting can take the following values:

- `Yes/true` enables the sending of device status information from Kaspersky Endpoint Security to Kaspersky Security Center.
- `No/false` disables the sending of device status information from Kaspersky Endpoint Security to Kaspersky Security Center.

The `ProductHealthLogFile` setting lets you specify the path to a file used for application stability monitoring. Default value: /var/opt/kaspersky/kesl/private/kesl_health.log.

The `WarnThreshold` setting lets you set the time interval (in seconds) in which the application must experience the specified number of abnormal halts before displaying a notification about unstable operation. Default value: 3600 seconds.

The `WarnRemovingThreshold` setting lets you set the time interval (in seconds) after which the application's unstable status will be cleared. Default value: 86400 seconds.

The `WarnAfter_#_crash` setting lets you set the number of abnormal halts of the application after which a notification is displayed about application instability. The setting can take values from 0 to 10. Default value: 10. If the value is 0, an unstable application notification is not displayed.

Configuring application startup settings

You can configure the application startup settings.

Setting a limit in the Web Console

In the Web Console, you can manage application startup settings in the policy properties (**Application settings** → **General Settings** → **User Interaction**).

Setting a limit in the Administration Console

In the Administration Console, you can manage application startup settings in the policy properties (Managing policies in the Administration Console, Creating a policy using the Administration Console) (**General settings** → **Application settings**, **Application startup settings**).

Under **Application startup settings**, clicking the **Configure** button opens the **Application startup settings** window, in which you can edit the application startup settings (see the table below).

Application startup settings

Setting	Description
Maximum consecutive unsuccessful attempts to start the application	The input field for the maximum number of consecutive unsuccessful attempts to start the application. Default value: 5.
Maximum time to wait for application start (min)	The input field for the maximum time to wait for the application to start (in minutes), after which the kesl process will be restarted. Default value: 3.

Setting a limit on the command line

In the command line, you can configure application startup settings using the `MaxRestartCount` and `StartupTimeout` settings in the kesl.ini configuration file.

The `MaxRestartCount` setting lets you set the maximum number of unsuccessful consecutive attempts to start the application. The setting can take values from 1 to 10. Default value: 5.

The `StartupTimeout` setting lets you set the maximum time to wait for the application to start (in minutes), after which the kesl process will be restarted. The setting can take values from 1 to 60. Default value: 3.

Limiting the use of resident memory by the application

You can configure the resident memory usage limit for the application. By default, the limit is set automatically.

Setting a limit in the Web Console

In the Web Console, you can manage the resident memory usage limit in the policy properties (**Application settings** → **General Settings** → **Performance**).

Setting a limit in the Administration Console

In the Administration Console, you can set a resident memory usage limit in the policy properties (Managing policies in the Administration Console, Creating a policy using the Administration Console) (**General settings** → **Application settings**).

In the **Advanced application settings** section, clicking the **Configure** button opens the **Additional settings** window, in which you can configure the resident memory usage limit (see the table below).

Settings

Setting	Description
Application memory usage	In the drop-down list, you can select how to limit resident memory usage: • **Unlimited**. If this option is selected, resident memory usage is not limited. • **Limited automatically (recommended)**. When this item is selected, resident memory usage is limited automatically (default value). • **Limited to a percentage of total**. When this item is selected, the **Memory usage limit (%)** field becomes available, in which you can specify the necessary value as a percentage. • **Limited to a value in MB**. When this item is selected, the **Memory usage limit (MB)** field becomes available, in which you can specify the desired value in megabytes. • **Limited to whichever is lowest (%, MB)**. When this item is selected, the **Memory usage limit (%)** and **Memory usage limit (MB)** fields become available, in which you can specify the necessary values. • **Limited to whichever is highest (%, MB)**. When this item is selected, the **Memory usage limit (%)** and **Memory usage limit (MB)** fields become available, in which you can specify the necessary values.
Memory usage limit (%)	Input field for the memory usage limit (as a percentage). Default value: 50.
Memory usage limit (MB)	Input field for the memory usage limit (in megabytes). Default value: 2000.

Setting a limit on the command line

On the command line, you can configure the resident memory usage limit using the `MaxMemory` setting in the kesl.ini configuration file.

The `MaxMemory` parameter can take the following values:

- `off` – the resident set size is not limited.
- < `value` >% – a value between 1 and 100 percent of RAM.
- < `value` >`MB` – a value in megabytes.
- `lowest/`< `value` >%/< `value` >`MB` – the smaller of the percentage value and the absolute value in megabytes.
- `highest/`< `value` >%/< `value` >`MB` – the larger of the percentage value and the absolute value in megabytes.
- `auto` – up to 50% of available memory, but not less than 2GB and not more than 16GB.

Default value: `auto`.

Limiting the use of memory and processor resources

You can configure the memory usage limit for scan tasks. The default limit is 8192 megabytes.

> We recommend specifying a memory usage limit for scan tasks below the resident memory usage limit to avoid using up all available memory for scan tasks and causing the application to restart.

You can set a limit on CPU usage for scan tasks. No limit is set by default. When configuring the limit, we recommended keeping in mind that resource of all CPU cores combined is taken as 100%. In the output of the `top` utility, 100% corresponds to the full utilization of a single core. Thus, for a 10-core CPU (reported by the `top` utility as 1000% total), a value of 400% means that the usage of the entire CPU (all cores taken together) is 40%. If you want the value reported by the `top` utility to be kept below 150% on the same 10-core CPU, you need to specify `15` as the CPU usage limit. The CPU usage limit must be an integer from 10 to 100. Moreover, the CPU usage limit is not applied to all application tasks, but only to the *Malware Scan*, *Critical Areas Scan*, *Inventory*, and *Container Scan* tasks, which means that the CPU usage may exceed the configured value.

Setting a limit in the Web Console

In the Web Console, you can manage the settings for limiting CPU and memory usage for scan tasks in the policy properties (**Application settings** → **General Settings** → **Performance**).

Setting a limit in the Administration Console

In the Administration Console, you can enable or disable the CPU usage limit and configure a RAM limit for scan tasks in the policy properties (Managing policies in the Administration Console, Creating a policy using the Administration Console) (**General settings** → **Application settings**, **Performance** section).

Clicking **Configure** under **Performance** opens the **Performance settings for scan tasks** window, in which you can configure limits in the **CPU and memory usage** section (see table below).

Settings

Setting	Description
Limit CPU usage by scan tasks (%)	This check box enables or disables the CPU utilization limit for the *Malware Scan*, *Critical Areas Scan*, *Inventory*, and *Container Scan* tasks. If the check box is selected, the maximum load on all CPU cores for these tasks is kept below the percentage value specified in the field to the right (the maximum total load on all CPU cores is taken as 100%). The value in the field must be an integer from 10 to 100. This check box is cleared by default.
Memory usage limit for scan tasks (MB)	Input field for the memory usage limit for scan tasks (in megabytes). Default value: 8192.

Setting a limit on the command line

On the command line, you can configure CPU utilization limits for *ODS*, *ContainerScan*, and *InventoryScan* tasks using the `UseOnDemandCPULimit` and `OnDemandCPULimit` settings in the general application settings.

You can change the values of the settings with the help of command line switches or a configuration file that contains all general application settings.

The `UseOnDemandCPULimit` parameter can take the following values:

- `Yes`: enable the CPU usage limit for tasks of the *ODS*, *ContainerScan*, and *InventoryScan* types.
- `No`: disable the CPU usage limit for tasks.

The `OnDemandCPULimit` option sets the maximum utilization level for all processor cores (as a percentage) when running *ODS*, *ContainerScan*, and *InventoryScan* tasks. The value of the setting must be an integer from 10 to 100. Default value: 100.

On the command line, you can configure memory usage limits for *ODS*, *ContainerScan*, and *InventoryScan* tasks using the `ScanMemoryLimit` setting in the kesl.ini configuration file. Default value: 8192.

Limiting the number of Custom Scan tasks

You can set a limit on the number of custom scan tasks that a non-privileged user can simultaneously run on a device. There is no limit on the number of tasks that a user with root privileges can run.

Setting a limit in the Administration Console

In the Administration Console, you can configure the limit for the number of concurrent custom scan tasks that a non-privileged user can run on the device in the policy properties (Managing policies in the Administration Console, Creating a policy using the Administration Console) (**General settings** → **Application settings**, **Performance** section).

Clicking the **Configure** button in the **Performance** section opens the **Performance settings for scan tasks** window, in which you can specify a value from 0 to 100,000 in the **Number of custom scan tasks** section, **Maximum number of custom scan tasks** field. Default value: 0. If 0 is specified, a non-privileged user cannot start custom scan tasks.

Setting a limit on the command line

You can configure the limit on the number of concurrent custom scan tasks on the command line using the `LimitNumberOfScanFileTasks` setting in the general application settings.

You can edit the option via command line switches or a configuration file that contains all general application settings.

`LimitNumberOfScanFileTasks` accepts values from 0 to 100000. If 0 is specified, a non-privileged user cannot start custom scan tasks. Default value: 5.

Configuring the transfer of data to Kaspersky Security Center storage

In Kaspersky Security Center, you can enable or disable the transfer of data about files in Backup, quarantined files, unprocessed files, and connected devices to the Kaspersky Security Center storage.

The general list of files quarantined by Kaspersky applications on client devices is kept in Kaspersky Security Center and is available in the Web Console (**Operations** → **Repositories** → **Quarantine**) and the Administration Console (**Advanced** → **Repositories** → **Quarantine**).

A general list of files placed in Backup by Kaspersky applications on client devices is kept in Kaspersky Security Center and is available in the Web Console (**Advanced** → **Repositories** → **Backup**) and in the Web Console (**Operations** → **Repositories** → **Backup**).

Information about unprocessed files is displayed in the list of active threats in the Web Console (**Operations** → **Repositories** → **Active threats**) and in the Administration Console (**Advanced** → **Repositories** → **Active threats**).

Information about devices installed on or connected to a client device is displayed in the list of hardware in the Web Console (**Operations** → **Repositories** → **Hardware**) and in the Administration Console (**Advanced** → **Repositories** → **Hardware**). Data is transferred if Device Control is enabled.

Information about applications discovered on the client device is displayed in the list of applications in the Web Console (**Operations** → **Third-party applications** → **Applications registry**) and in the Administration Console (**Advanced** → **Application management** → **Applications registry**). Data is transferred if Application Control is enabled.

Enabling or disabling the transfer of data in the Web Console

In the Web Console, you can manage Administration Server integration settings in the policy properties (**Application settings** → **General Settings** → **KSC Integration**, **Data transfer to Administration Server** section, **Advanced settings** link) and in the properties of the managed device (**Assets (Devices)** → **Managed devices** → <device name> link → **Applications** tab → <Kaspersky Endpoint Security application name> link → **Application settings** tab → **Storage settings** section, **Settings for transferring data to the Administration Server** section).

The settings for transferring data to the Administration Server in the policy properties in the Web Console are described in Appendix 5.

The settings of data transfer to the Administration Server in the properties of the managed device are described in the table below.

Settings of data transfer to the Administration Server in the device properties

Setting	Description
Notify about files in Backup	This check box enables or disables the transfer of data about files in Backup to the Administration Server. This check box is cleared by default.
Notify about files in Quarantine	This check box enables or disables the transfer of data about quarantined files to the Administration Server. This check box is cleared by default.
Notify about unprocessed files	This check box enables or disables sending notifications about the files, which were not processed during the scan, to the Administration Server. This check box is cleared by default.
Notify about installed devices	This check box enables or disables the transfer of data about devices installed on a client device or connected to it, to the Administration Server. This check box is cleared by default.
Notify about applications found on the device	This check box enables or disables the sending of the list of applications that the Inventory task discovers on the client device to the Administration Server. This check box is cleared by default.

Enabling and disabling the transfer of data in the Administration Console

In the Administration Console, you can enable or disable data transfer to the Administration Server in policy properties (Managing policies in the Administration Console, Creating a policy using the Administration Console) (**General settings** → **Storage settings**, **Transfer data to the Administration Server**) or in the properties of the managed device (**Managed devices** → **Devices** tab → device properties window → **Applications** section → application properties window → **Storage settings**, **Transfer data to the Administration Server** section).

Clicking **Configure** in the **Transfer data to the Administration Server** section opens the **Data transfer settings**, in which you can enable or disable the transfer of data to the Administration Server.

Settings for transferring data to the Administration Server

Setting	Description
About files in Quarantine	This check box enables or disables the transfer of data about quarantined files to the Administration Server. This check box is selected by default.
About files in Backup	This check box enables or disables the transfer of data about files in Backup to the Administration Server. This check box is selected by default.
About unprocessed files	This check box enables or disables sending notifications about the files, which were not processed during the scan, to the Administration Server. This check box is selected by default.
About installed devices	This check box enables or disables the transfer of data about devices installed on a client device or connected to it, to the Administration Server. This check box is selected by default.
About applications found on the device	This check box enables or disables the sending of the list of applications that the Inventory task discovers on the client device to the Administration Server. This check box is selected by default.

Configuring permissions for task management

You can define the following user permissions in Kaspersky Security Center:

- Using local tasks created in Kaspersky Endpoint Security. If the Kaspersky Security Center policy prohibits users from viewing and editing local tasks, information about the Scan_My_Computer, Critical_Areas_Scan, Container_Scan, Inventory_Scan, Update (in Standard mode) and Rollback (in Standard mode) tasks is not available.

- Viewing and managing tasks created in Kaspersky Security Center on client devices.

Configuring in the Web Console

In the Web Console, you can manage the settings of permissions to view and manage tasks in the policy properties (**Application settings** → **General Settings** → **User Interaction**).

Configuring in the Administration Console

In the Administration Console, you can manage permissions to view and manage tasks in the policy properties (Managing policies in the Administration Console, Creating a policy using the Administration Console) (**Local Tasks** → **Task management**).

Task management settings

Setting	Description
Allow local tasks	This check box allows or blocks the users from viewing local tasks created in Kaspersky Endpoint Security and control of these tasks on the managed client devices. If this check box is selected, users can configure and run tasks in the graphical interface of the application and on the command line. If this check box is cleared, local tasks are not used. Scheduled local tasks do not run. Tasks cannot be run or configured in the graphical interface of the application or on the command line. This check box is cleared by default.
Allow viewing and managing tasks created through KSC	This check box allows or prohibits the users from viewing the tasks created in Kaspersky Security Center and managing these tasks on client devices. If this check box is selected, tasks created in Kaspersky Security Center are displayed in the graphical interface of the application. Users can start and stop these tasks from the graphical interface of the application and from the command line. If this check box is cleared, tasks created in Kaspersky Security Center cannot be viewed or managed in the graphical interface of the application or on the command line. This check box is cleared by default.

Canceling tasks when running on battery power

You can enable or disable the canceling of scheduled tasks when running on battery power. Canceling scheduled tasks can reduce resource consumption and extend battery life.

If cancellation of scheduled tasks is enabled and the device is running on battery power, Kaspersky Endpoint Security cancels the following scheduled tasks:

- All scan tasks (custom scan, Container Scan, Custom Container Scan, critical areas scan, malware scan)
- Inventory
- Databases and application modules update
- IOC Scan
- System Integrity Check

You can run tasks manually as needed.

Configuring in the Web Console

In the Web Console, you can configure the cancellation of scheduled tasks in the policy properties (**Application settings** → **General Settings** → **Performance**).

Configuring in the Administration Console

In the Administration Console, you can manage the cancellation of scheduled tasks in the policy properties (Managing policies in the Administration Console, Creating a policy using the Administration Console) (**General settings** → **Application settings**, **Performance**).

The **Skip scheduled tasks when running on battery power** check box enables or disables the cancellation of scheduled tasks.

This check box is selected by default.

If this check box is cleared, all tasks run as scheduled, regardless of whether the device is running on battery power.

Configuring on the command line

You can configure the cancellation of scheduled tasks on the command line using the `PowerSaveMode` setting in the general application settings.

You can edit the option via command line switches or a configuration file that contains all general application settings.

The `PowerSaveMode` parameter can take the following values:

- `Yes` (default value) skips scheduled tasks when the device is running on battery power.
- `No` runs scheduled tasks regardless of whether the device is running on battery power or not.

Configuring system event interception

To function properly, the application must intercept system events, that is, file operations and the starting of processes. If the application does not use system event interception, real-time file scanning is not performed, and the protection level of the device is reduced.

If the operating system of your device supports fanotify, you can select the mechanism that the application uses to intercept system events:

- System interception mechanism based on fanotify. This mechanism is used by default.
- Interception mechanism based on an *updatable kernel module*. Using an updatable kernel module allows optimizing the interception of file operations and the interception of starting processes by Kaspersky Endpoint Security. The updatable kernel module intercepts file operations when files are opened, renamed, or modified. Application performance is improved by using a cache of files and processes that do not need to be scanned.

  By using the updatable kernel module, you can configure global exclusions in a more granular way. If you are using the interception mechanism based on the fanotify technology, the specified mount points are entirely excluded from the interception of file operations. Using the updatable kernel module allows you to exclude specific local or remote directories mounted on the device.

  The updatable kernel module is included in the distribution kit of the application.

For operating systems that do not support fanotify, selection of interception mechanism is not available. The application uses a special kernel module to intercept system events to provide File Threat Protection. This module is automatically compiled when File Threat Protection is started, provided that all the dependencies and build tools are available.

The application can use the interception mechanism based on the updatable kernel module if the operating system satisfies the requirements for installing the updatable kernel module.

Updatable kernel module installation requirements

To install and use the updatable kernel module, the device must have one of the following 64-bit operating systems installed:

- Astra Linux Special Edition RUSB.10015-01 (operational update 1.6).
- Astra Linux Special Edition RUSB.10015-01 (operational update 1.7).
- Astra Linux Special Edition RUSB.10015-01 (operational update 1.8).

  If the Kaspersky Endpoint Security application is used in Basic mode, the updatable kernel module can be used on devices with Astra Linux operating systems in the closed software environment mode.

- CentOS 7.x.
- CentOS Stream 8.
- Debian GNU/Linux 12.0.
- Red Hat Enterprise Linux 7.4.

- Red Hat Enterprise Linux 8.10.
- SberLinux 8.10.
- SberLinux 9.1.
- SberLinux 9.6.
- SberLinux 9.7.
- SberOS 3.4.
- SberOS 3.5.
- Ubuntu 22.04 LTS.
- Ubuntu 24.04 LTS.
- ALT SP Workstation release 10.
- ALT SP Server release 10.
- ALT Education 10.
- ALT Workstation release 11.
- ALT Server release 11.
- ALT Education 11.
- RED OS 7.3.
- RED OS 8.
- ROSA "Cobalt" 7.9 Workstation.
- ROSA "Cobalt" 7.9 Server.
- ROSA "Chrome" 12 Workstation.
- ROSA "Chrome" 12 Server.

32-bit operating systems and operating systems for the Arm architecture are not supported.

The updatable kernel module may conflict with some versions of the Linux kernel and some third-party applications.

You can use the Kaspersky ULKM tool to check whether your device satisfies the requirements for installing the updatable kernel module.

If you operating system satisfies the requirements, you can select the interception method based on the updatable kernel module while installing the application. This installs the updatable kernel module. You can also install the updatable kernel module later if your operating system becomes supported. To do so:

1. Update application databases and modules. The updatable kernel module is installed as part of the regular update procedure.

2. Select the interception mechanism based on the updatable kernel module. You can select a system event interception mechanism in the **Web Console**, the Administration Console, or on the **command line**.

   On the command line, you can configure system event interception using the `InterceptorMode`, `InterceptorFallbackStrategy`, and `InterceptorApplyStrategy` general application settings.

   > The settings are displayed and can be edited only on devices whose operating system supports the fanotify technology.

   You can change the values of the settings with the help of command line switches or a configuration file that contains all general application settings.

   The `InterceptorMode` lets you select the system event interception mechanism used by the application. This setting can take the following values:

   - `UseFanotify` to use the fanotify technology to intercept system events.
   - `UseUpdatableKernelModule` – use an updatable kernel module to intercept system events.

   The `InterceptorFallbackStrategy` setting is applied if the updatable kernel module is selected. This setting lets you specify what the application does if the updatable kernel module fails to start. This setting can take the following values:

   - `FallbackToFanotify` switches the system event intercept mechanism to fanotify in case the updatable kernel module fails to start.
   - `FallbackToLimitedMode` turns off system event interception in case the updatable kernel module fails to start. If the application does not use system event interception, real-time file scanning is not performed, and the protection level of the device is reduced.

   The `InterceptorApplyStrategy` setting is applied if the updatable kernel module is selected. If the application switches to using the updatable kernel module, the application must be restarted to start the module. This setting lets you specify if you want the application to be restarted automatically or if you prefer to restart the application manually:

   - `RestartServiceAutomatically` automatically restarts the application to start the updatable kernel module.
   - `RestartServiceManually` starts the updatable kernel module after the application is restarted manually by the user.

   > We recommend automatically restarting the application to switch to using the updatable kernel module. Starting the updatable kernel module manually after restarting the application can lead to application errors.

In the Web Console, you can configure system event interception in the policy properties (**Application settings → General Settings → OS interaction settings**).

> The settings are applied only on devices running an operating system that supports the fanotify technology.

The application can switch to using an updatable kernel module in the following situations:

- In the application settings, you have changed the mechanism for intercepting system events to the updatable kernel module.
- On a device where the updatable kernel module was not started, a database and module update introduced updates that support for the updatable kernel module.

For the application to work correctly, the switch to using the updatable kernel module must be performed after the application is automatically restarted.

If you have selected an interception mechanism based on the updatable kernel module, you can configure the application's behavior if an error occurs when the updatable kernel module is started and the module does not start. In this case, the application can fall back to fanotify or disable system event interception.

You can view information about the status and availability of the updatable kernel module on your device:

- In the Web Console or the Administration Console, by looking at the status of the **Updatable kernel module** functional component.
- On the command line, in the output of the `kesl-control --app-info` command.

Information about the state of the updatable kernel module is displayed in the form of statuses:

- **Running** means the module is installed and running.
- **Stopped** means the module is installed but not running.
- **Unavailable** means the module is not supported on the device.
- **Malfunction** means an error occurred while starting the module, and the module is not running.

Checking if the updatable kernel module can be installed

You can use the Kaspersky ULKM tool to check whether your device satisfies the requirements for installing the updatable kernel module.

To run this tool using Kaspersky Security Center Web Console or Administration Console:

1. Download the ulkmtool.zip archive from the application download page in the **Kaspersky Endpoint Security for Linux** section.
2. Create an installation package for the utility.

How to create an installation package in the Web Console

1. Place the downloaded ulkmtool.zip archive in a folder accessible to the Kaspersky Security Center Administration Server.

2. In the main Web Console window, select one of the following sections:

   - **Device discovery and deployment → Deployment and assignment → Installation packages**.

   - **Operations → Repositories → Installation packages**.

   A list of installation packages available on the Administration Server opens.

3. Click the **Add** button.

   The wizard for creating an installation package will start.

4. Select **Create an installation package from a file** as the installation package creation method.

5. Enter the name of the new installation package, click the **Browse** button and specify the path to the ulkmtool.zip archive that you downloaded.

6. Finish the wizard.

The installation package will be created and added to the list of installation packages.

How to create an installation package in the Administration Console

1. Unpack the ulkmtool.zip archive to a folder accessible to the Kaspersky Security Center Administration Server.

2. In the console tree, select **Additional → Remote installation → Installation packages**.

   A list of installation packages available on the Administration Server opens.

3. Click the **Create installation package** button.

   The wizard for creating an installation package will start.

4. Click the **Create an installation package for a Kaspersky application** button.

5. Enter the name of the new installation package and proceed to the next step of the wizard.

6. Click the **Browse** button and specify the path to the ulkmtool.kud file. The file is located in the folder where you unpacked the ulkmtool.zip archive.

   Proceed to the next step of the wizard.

7. Wait until the file is downloaded and finish the wizard.

The installation package will be created and added to the list of installation packages.

3. Install Kaspersky Security Center Network Agent on devices for which you want to check if they satisfy the requirements of the updatable kernel module.

How to install Network Agent

1. Prepare your Linux devices for Network Agent installation. The procedure depends on the operating system.
2. Perform the installation and initial configuration of Network Agent. See Kaspersky Security Center Help for instructions.

4. In the Kaspersky Security Center Web Console or Administration Console, create and run a remote installation task on the devices for which you want to check if they satisfy the requirements of the updatable kernel module. In the task settings, select the installation package you created.

   For a description of the remote installation procedure, see the Kaspersky Security Center Help.

   The task results for each device indicate whether the device supports the installation and operation of the updatable kernel module.

Based on task results of the task, each device gets a tag:

- *UpdatableKernelModule=No* means the device does not support updatable kernel module installation.
- *UpdatableKernelModule=Yes* means the device satisfies the requirements for installing and running the updatable kernel module.
- *UpdatableKernelModule=Use* means the updatable kernel module is installed and running on the device.
- *UpdatableKernelModule=Error* means the updatable kernel module is installed on the device, but an error occurred when starting the module, and the module is not running.

You can use these tags to create device selections. For example, you can select devices that satisfy the updatable kernel module requirements and install Kaspersky Endpoint Security with the updatable kernel module on these devices.

"Safe" mode when using the updatable kernel module

If the application is unstable when using the updatable kernel module, after reaching the specified maximum number of abnormal halts, the application automatically switches to the "safe" mode (`SafeMode=yes` is set in the kesl.ini configuration file). By default, the application enters the "safe" mode after three abnormal halts. The maximum number of abnormal halts is configured in the `PanicThreshold` setting in the kesl.ini configuration file.

If the application is running in "safe" mode, the updatable kernel module does not start, and the application switches to fanotify for intercepting system events. The application sends the `UpdatableKernelModule=Error` tag to Kaspersky Security Center.

To continue using the updatable kernel module after resolving the problems with the application, you need to disable the "safe" mode.

To disable the "safe" mode of the application:

1. Open the /var/opt/kaspersky/kesl/common/kesl.ini file for editing.
2. In the `[General]` section, set `SafeMode=no`.
3. Restart Kaspersky Endpoint Security:

   ```
   systemctl restart kesl
   ```

Managing interception settings in the Web Console

In the Web Console, you can configure system event interception in the policy properties (**Application settings** → **General Settings** → **OS interaction settings**).

The settings are applied only on devices running an operating system that supports the fanotify technology.

Managing interception settings in the Administration Console

In the Administration Console, you can manage system event interception settings in the policy properties (Managing policies in the Administration Console, Creating a policy using the Administration Console) (**General settings** →**OS interaction settings**, **System event interception settings**).

The settings are applied only on devices running an operating system that supports the fanotify technology.

System event interception settings

Setting	Description
Interception mechanism	The system event interception mechanism used by the application: • **Fanotify technology** (default). If this option is selected, the application uses the fanotify technology for system event interception. • **Updatable kernel module**. If this option is selected, the application uses the updatable kernel module for system event interception.
If the updatable kernel module fails to start	Action that the application performs if the updatable kernel module fails to start: • **Use fanotify** (default). If this option is selected, the application switches to the fanotify technology for system event interception. • **Disable system event interception** If the application does not use system event interception, real-time file scanning is not performed, and the protection level of the device is reduced. This option is available if the **Updatable kernel module** interception mechanism is selected.

Managing interception settings on the command line

On the command line, you can configure system event interception using the `InterceptorMode`, `InterceptorFallbackStrategy`, and `InterceptorApplyStrategy` general application settings.

The settings are displayed and can be edited only on devices whose operating system supports the fanotify technology.

You can change the values of the settings with the help of command line switches or a configuration file that contains all general application settings.

The `InterceptorMode` lets you select the system event interception mechanism used by the application. This setting can take the following values:

- `UseFanotify` to use the fanotify technology to intercept system events.
- `UseUpdatableKernelModule` – use an updatable kernel module to intercept system events.

The `InterceptorFallbackStrategy` setting is applied if the updatable kernel module is selected. This setting lets you specify what the application does if the updatable kernel module fails to start. This setting can take the following values:

- `FallbackToFanotify` switches the system event intercept mechanism to fanotify in case the updatable kernel module fails to start.
- `FallbackToLimitedMode` turns off system event interception in case the updatable kernel module fails to start. If the application does not use system event interception, real-time file scanning is not performed, and the protection level of the device is reduced.

The `InterceptorApplyStrategy` setting is applied if the updatable kernel module is selected. If the application switches to using the updatable kernel module, the application must be restarted to start the module. This setting lets you specify if you want the application to be restarted automatically or if you prefer to restart the application manually:

- `RestartServiceAutomatically` automatically restarts the application to start the updatable kernel module.
- `RestartServiceManually` starts the updatable kernel module after the application is restarted manually by the user.

We recommend automatically restarting the application to switch to using the updatable kernel module. Starting the updatable kernel module manually after restarting the application can lead to application errors.

Managing additional telemetry settings

You can manage the following advanced settings for the collection of telemetry sent to Detection and Response solutions when integrated with such:

- Telemetry source. You can use the eBPF technology and the auditd service to get telemetry, or the eBPF technology alone.
- The mode of the auditd service. Kaspersky Endpoint Security can use the auditd service in exclusive mode or in multicast mode.

Configuring in the Web Console

In the Web Console, you can manage advanced telemetry settings in the policy properties (**Application settings → General Settings → OS interaction settings**).

Configuring in the Administration Console

In the Administration Console, you can manage additional telemetry settings in the policy properties (Managing policies in the Administration Console, Creating a policy using the Administration Console) (**General settings** →**OS interaction settings**, **Telemetry additional settings**).

Additional telemetry settings

Setting	Description
Telemetry source	The source that Kaspersky Endpoint Security uses to collect telemetry: • **Use only eBPF** means only the eBPF technology is used for obtaining telemetry. • **Use eBPF and auditd** (default) means the eBPF technology and auditd service are used to get telemetry.
Using auditd	The mode of the auditd service: • **Use AuditD in exclusive mode** (default) means Kaspersky Endpoint Security uses the auditd service in exclusive mode. • **Non-exclusive mode** means the auditd service is used in non-exclusive mode. This setting is applied only if **Telemetry source** is set to **Use eBPF and auditd**.

Configuring on the command line

On the command line, you can manage additional telemetry settings using the `TelemetrySource` and `UseTelemetryMonopolyMode` settings of the Behavior_Detection predefined task.

You can change the settings using the `kesl-control --set-settings 20` command, by editing the configuration file that contains all the settings of the task, or using the command line options in the `< setting name >=< setting value >` format.

The `TelemetrySource` setting lets you specify the telemetry source. This setting can take the following values:

- `Default` (default) means the eBPF technology and auditd service are used to get telemetry.
- `OnlyEBPF` means that only the eBPF technology is used to get telemetry.

The `UseTelemetryMonopolyMode` setting lets you specify the usage mode of the auditd service if it is used for getting telemetry. This setting can take the following values:

- `True` (default) means Kaspersky Endpoint Security uses the auditd service in exclusive mode.
- `False` means the auditd service is used in non-exclusive mode.

The `UseTelemetryMonopolyMode` setting is applied only if `TelemetrySource` is set to `Default`.

Backup

If Kaspersky Endpoint Security detects malicious code in a file while scanning a protected device, the application can block the file, assign to it a status of *Infected*, place a copy in Backup, and attempt to disinfect the file.

Backup keeps copies of files that have been deleted or modified during disinfection. A *backup copy* is created before disinfecting or deleting the file. Backup copies of files are stored in a special format and do not pose a threat.

By default, the /var/opt/kaspersky/kesl/common/objects-backup/ directory is used to store backup copies of files. This directory also stores quarantined files. You can change the directory for storing Backup and Quarantine objects using the command line.

Sometimes it is not possible to maintain the integrity of files during disinfection. If after disinfection, you partially or completely lose access to important information in a disinfected file, you can try restoring the file from the backup copy.

Restoring infected objects may lead to a device infection.

Backup file copies may contain personal data. Root privileges are required to access Backup objects.

You can manage Backup settings on a device using a policy in the Web Console, in the Administration Console or using the command line. You can configure the following Backup settings:

- Storage time for objects in Backup. Objects are kept for 30 days by default.
- Maximum Backup size. Backup has an unlimited size by default.

Path to the directory where Backup and Quarantine objects are stored (can only be configured on the command line).

When the specified retention period expires, or when the maximum Backup size is reached, the application automatically deletes the oldest backup copies regardless of their status.

You can delete the backup copy of a restored or unrestored file manually.

A general list of files placed in Backup by Kaspersky applications on client devices is generated in Kaspersky Security Center and is available in the Administration Console (**Advanced** → **Repositories** → **Backup**) and in the Web Console (**Operations** → **Repositories** → **Backup**). You can view the properties of files in backup storage on protected devices and delete files from it. Kaspersky Security Center does not copy files from Backup to the Administration Server; all files are stored in the Backups on protected devices. File restore takes place on the protected device.

The file is restored from Backup to its original location in accordance with to the specified settings. Restoration preserves the MAC label (only on Astra Linux devices) and attributes of the original file (other than the immutable and append-only attributes).

On Astra Linux devices, restoring a file from Backup ends with an error in the following cases:

- The MAC label of the file is higher than the MAC label of the directory to which the file is being restored.
- The MAC label of the file is lower than the MAC label of the directory to which the file is being restored, and the ccnr flag is not set for the directory.

To manage files in Backup in Kaspersky Security Center, you need to enable the transfer of data about files in Backup to the Administration Server.

Configuring Backup settings in the Web Console

In the Web Console, you can manage Backup settings in the policy properties (**Application settings** → **General Settings** → **Reports and Storage**) and in managed device properties (**Assets (Devices)** → **Managed Devices** → <device name> link → **Applications** tab → <Kaspersky Endpoint Security application name> link → **Application settings** tab → **Storage settings** section).

The Backup settings in the policy properties in the Web Console are described in Appendix 5.

The Backup settings in the managed device properties are described in the table below.

Backup settings in the device properties

Setting	Description
Store objects no longer than (days)	The entry field to specify the period for storing objects in the Backup storage. Possible values: 1–10000. If the check box is cleared, the period for storing objects in Backup is unlimited. Default value: 30.
Limit the size of Backup to (MB)	The entry field to specify the maximum size of the Backup storage (MB). If the check box is cleared, the size of Backup is unlimited. Default value: 1024.

Configuring Backup settings in the Administration Console

In the Administration Console, you can manage Backup settings in the policy properties (Managing policies in the Administration Console, Creating a policy using the Administration Console) (**General settings** → **Storage settings**) and in managed device properties (**Managed devices** → **Devices** tab → device properties window → **Applications** section → application properties window → **Storage settings**).

Backup settings

Setting	Description
Store objects no longer than (days)	This check box enables or disables the storage period limit (in days) for the objects in the Backup storage. Possible values: 0–10000. If 0 is specified, the period for storing objects in the Backup storage is unlimited. Default value: 30.
Limit the size of Backup to (MB)	This check box enables or disables the maximum Backup storage size (in megabytes). Possible values: 1–999999. If the check box is cleared, the size of Backup is unlimited. This check box is cleared by default.

Configuring Backup settings on the command line

On the command line, you can configure Backup settings using the `BackupDaysToLive, BackupSizeLimit` and `QuarantineBackupFolder` settings in the general application settings.

You can change the values of the settings with the help of command line switches or a configuration file that contains all general application settings.

Backup settings

Setting	Description	Value
`BackupDaysToLive`	Time period for storing objects in the Backup storage (in days). After the specified time has elapsed, the application deletes the oldest backup copies of files. To remove the object retention limit, set 0.	0 to 10000 0–unlimited retention. Default value: 30.
`BackupSizeLimit`	Maximum Backup size in MB. When the maximum Backup storage size is reached, the application deletes the oldest backup copies of files. To remove the Backup size limit, set 0.	0 to 999999 0–unlimited size. Default value: 0.
`QuarantineBackupFolder`	Path to the directory in which the Backup and Quarantine objects are stored. You can specify a directory that is different from the default directory. You can use a directory on any device as the directory for storing Backup and Quarantine objects. It is not recommended to assign directories that are located on remote devices, such as those mounted via the Samba and NFS protocols. If the specified directory does not exist or is unavailable, the application uses the default directory.	Default value: /var/opt/kaspersky/kesl/common/objects-backup/ Root privileges are required for access to the default directory.

Working with Backup objects on the command line

You can use the Backup management commands in the command line for the following actions on Backup objects:

- View Backup object details.
- Delete some or all objects from Backup.
- Restore objects from Backup.

Restoring infected objects may lead to a device infection.

Viewing Backup object details

To view the details of the objects in Backup, run:

```
kesl-control -B --query ["<filter conditions>"] [-n <number>] [--json]
```

where:

- `<filter conditions>` specifies one or more logical expressions in the `<field> <comparison operation> '<value>'` format combined using the `and` logical operator to restrict query results. If you do not specify any filter conditions, the application will display the details of all objects in Backup.
- `<number>` specifies how many of the latest objects in storage you want to display. If you do not specify the `-n` option, the application displays information about the last 30 objects. If you want to display information about all objects, specify `0`.
- `--json`: output data in JSON format.

The `ObjectId` line displays the numeric identifier that the application assigned to the object when placing it in Backup. This ID is used to perform actions on the object, such as restoring or removing the object from the Backup storage.

Restoring objects from Backup

To restore an object under its original name to its original location, execute the following command:

```
kesl-control -B --restore <object ID>
```

where `<object ID>` is the numeric identifier that the application assigned to the object when placing it in Backup.

To restore an object under a new name to a specified directory, execute the following command:

```
kesl-control -B --restore <object ID> --file <file path>
```

where `--file <file path>` is the new name of the file and the path to the directory you want to save it to. If the specified directory does not exist, the application creates it.

On Astra Linux devices in the closed software environment mode, you can restore a file only under the same account under which it was placed in Backup.

Deleting objects from Backup

To remove selected objects from Backup, run:

```
kesl-control -B --mass-remove --query "<filter conditions>"
```

where `<filter conditions>` is one or several logical expressions in the format `<field> <comparison operator> '<value>'`, combined with the help of the logical operator `and` to limit the results.

Examples:

To remove an object with ID=15:

```
kesl-control -B --mass-remove --query "ObjectId == '15'"
```

To remove objects that contain "test" in their names or paths:

```
kesl-control -B --mass-remove --query "FileName like '%test%'"
```

To remove all objects from Backup, run:

```
kesl-control -B --mass-remove
```

Integration with Detection and Response solutions

Kaspersky Detection and Response solutions are security systems for detecting advanced threats and indicators of attack on different levels of an organization's infrastructure. Detection and Response solutions provide information about the detected threat and let you manage your response to detections.

Kaspersky Endpoint Security interoperates with the following Kaspersky Detection and Response solutions:

- Kaspersky Endpoint Detection and Response Expert (on-premise) on the Open Single Management Platform (OSMP). Integration is provided by the Kaspersky Endpoint Security application component, Endpoint Detection and Response Expert (on-premise) (hereinafter also referred to as *EDR Expert (on-premise)*).
- Kaspersky Endpoint Detection and Response and Kaspersky Network Detection and Response components on the Kaspersky Anti Targeted Attack Platform. Integration is provided by the following components of the Kaspersky Endpoint Security application:
  - Endpoint Detection and Response Expert (on-premise) (hereinafter also referred to as *EDR Expert (on-premise)*).
  - Network Detection and Response (KATA) (hereinafter also *NDR (KATA)*).
- Sandbox on the Open Single Management Platform (OSMP) or on the Kaspersky Anti Targeted Attack Platform. Integration is provided by the following Kaspersky Endpoint Security component: *Sandbox*.
- Kaspersky Unified Monitoring and Analysis Platform.
- Kaspersky Endpoint Detection and Response Optimum. Integration is facilitated by a Kaspersky Endpoint Security component: Endpoint Detection and Response Optimum (*EDR Optimum*).
- Kaspersky Managed Detection and Response. Integration is facilitated by a Kaspersky Endpoint Security component: Managed Detection and Response (*MDR*).

If you are using Kaspersky Endpoint Security in the Endpoint Detection and Response Agent mode, integration is supported only with Kaspersky Endpoint Detection and Response Expert (on-premise) on the Open Single Management Platform (OSMP) and with Kaspersky Endpoint Detection and Response and Kaspersky Network Detection and Response components on the Kaspersky Anti Targeted Attack Platform.

If Kaspersky Endpoint Security is integrated with Kaspersky Managed Detection and Response and Kaspersky Anti Targeted Attack Platform, a large number of events can be written to the systemd log. If you want to disable the logging of audit events to the systemd log, disable the systemd-journald-audit socket and restart the operating system.

To disable the systemd-journald-audit socket, run the following commands:

```
systemctl stop systemd-journald-audit.socket

systemctl disable systemd-journald-audit.socket

systemctl mask systemd-journald-audit.socket
```

In the SintezM-Client operating system, the auditd service configuration is protected from modification by default, that is, it is in `enabled 2` mode. For correct operation of the Behavior Detection component when Kaspersky Endpoint Security is integrated with Kaspersky Managed Detection and Response and Kaspersky Anti Targeted Attack Platform solutions, change the auditd mode in the configuration files to `enabled 1` (no configuration blocking) and restart the operating system.

Detection and Response solutions may not work correctly on virtual machines created from an image with Kaspersky Endpoint Security for Linux installed. When integrating with Detection and Response solutions, a unique ID (Sensor ID) of the computer is used. The application generates this ID as part of the initial installation, and it is retained even after the application is uninstalled. When cloning an image, the virtual machine inherits the Sensor ID, which may cause Detection and Response solutions to identify multiple virtual machines as the same device.

Recommendations for creating a reference image for correct integration with MDR

How to prepare a reference image for correct integration with EDR Expert (on-premise)

About threat response actions based on commands from Detection and Response solutions

When integrated with Detection and Response solutions, Kaspersky Endpoint Security can perform threat response actions to maintain security functionality. Threat response actions can be generated on the side of the Detection and Response solution and automatically performed on Kaspersky Endpoint Security devices if this functionality is enabled in the settings of the Detection and Response solution. You can also configure and perform threat response actions manually.

The settings of threat response actions vary depending on the Detection and Response solution with which Kaspersky Endpoint Security is integrated.

Kaspersky Endpoint Security can perform the following threat response actions:

- Isolate the device from the network.

  When integrated with Endpoint Detection and Response Expert (on-premise), with Kaspersky Endpoint Detection and Response (KATA), or with Kaspersky Managed Detection and Response, network isolation is enabled or disabled on the side of the Detection and Response solution. You can manually disable network isolation of a device.

  When integrated with Kaspersky Endpoint Detection and Response Optimum, the device can be isolated from the network automatically or manually. You can configure network isolation or manually disable network isolation for a device.

- Quarantine file.

  The action is performed using the *Quarantine file* task.

  When integrated with Endpoint Detection and Response Expert (on-premise), with Kaspersky Endpoint Detection and Response (KATA), or with Kaspersky Managed Detection and Response, the task is created and run on the side of the Detection and Response solution.

  When integrated with Kaspersky Endpoint Detection and Response Optimum, a file can be quarantined automatically as a result of detection of indicators of compromise.

When integrated with Kaspersky Endpoint Detection and Response Optimum or with Kaspersky Managed Detection and Response, you can also manually quarantine files.

- Restore files from Quarantine.

  When integrated with Endpoint Detection and Response Expert (on-premise), with Kaspersky Endpoint Detection and Response (KATA), or with Kaspersky Managed Detection and Response, the threat response action is generated on the side of the Detection and Response solution. You can also perform the action manually using Kaspersky Security Center or the command line.

  When integrated with Kaspersky Endpoint Detection and Response Optimum, you can perform the action manually using Kaspersky Security Center or the command line.

- Delete a file from Quarantine.

  When integrated with Kaspersky Endpoint Detection and Response (on-premise) or Kaspersky Endpoint Detection and Response (KATA), the threat response action is generated on the side of the relevant Detection and Response solution. You can also perform the action manually using Kaspersky Security Center or the command line.

  When integrated with Kaspersky Endpoint Detection and Response Optimum, you can perform the action manually using Kaspersky Security Center or the command line.

- Get a file from Quarantine.

  When integrated with Kaspersky Endpoint Detection and Response (on-premise) or Kaspersky Endpoint Detection and Response (KATA), the threat response action is generated on the side of the relevant Detection and Response solution.

  When integrated with Kaspersky Endpoint Detection and Response Optimum, you can perform the action manually using Kaspersky Security Center.

- Receive file from device.

  This action is performed using the *Get file* task. For example, you can configure the application to get an event log file generated by a third-party application.

  When integrated with Endpoint Detection and Response Expert (on-premise), with Kaspersky Endpoint Detection and Response (KATA), or with Kaspersky Managed Detection and Response, the task is created and run on the side of the Detection and Response solution.

  When integrating with the Kaspersky Endpoint Detection and Response Optimum solution, you can create Get file tasks in the Web Console.

- Delete file from device.

  This action is performed using the *Delete file* task.

  When integrated with Kaspersky Endpoint Detection and Response (on-premise) or Kaspersky Endpoint Detection and Response (KATA), the task is created and run on the side of the Detection and Response solution.

  When integrating with the Kaspersky Endpoint Detection and Response Optimum solution, you can create Delete file tasks in the Web Console.

- Remotely run a process on a device.

  This action is performed using the *Run application* task. For example, you can remotely run a utility that creates a device configuration file, and then retrieve the created file using the *Get file* task.

  When integrated with Endpoint Detection and Response Expert (on-premise), with Kaspersky Endpoint Detection and Response (KATA), or with Kaspersky Managed Detection and Response, the task is created and run on the side of the Detection and Response solution.

  When integrating with the Kaspersky Endpoint Detection and Response Optimum solution, you can create and run Run process tasks in the Web Console.

- Remotely terminate a process on a device.

  The action is performed using the *Kill process* task. For example, you can remotely terminate an Internet speed test utility that was launched using the "Run process" task.

  When integrated with Endpoint Detection and Response Expert (on-premise), with Kaspersky Endpoint Detection and Response (KATA), or with Kaspersky Managed Detection and Response, the task is created and run on the side of the Detection and Response solution.

  When integrating with the Kaspersky Endpoint Detection and Response Optimum solution, you can create and run Kill process tasks in the Web Console.

- Detecting *indicators of compromise (IOC)* on devices. An *Indicator of Compromise (IOC)* is a set of data about an object or activity that indicates unauthorized access to a device (compromised data). For example, an indicator of compromise could be a high number of failed login attempts.

  When integrated with Kaspersky Endpoint Detection and Response (on-premise) or Kaspersky Endpoint Detection and Response (KATA), the IOC Scan task on a Kaspersky Endpoint Security device is created and run on the side of the relevant Detection and Response solution.

  When integrated with Kaspersky Endpoint Detection and Response Optimum, an IOC Scan is performed using the *IOC Scan* task. You can create IOC Scan tasks manually.

- Starting a *YARA scan*. During a *YARA scan*, Kaspersky Endpoint Security uses YARA files to search for signatures of malicious activity on a device. *YARA files* are files with the .YARA or .YAR extension that contain YARA rules. *YARA rules* describe signatures of targeted attacks and intrusions into corporate IT infrastructure. Kaspersky Endpoint Security uses these rules to scan objects. If the conditions of a rule is satisfied, the analyzer concludes that an infection is ongoing, and records the detail in the log. The scan is performed recursively on local drives. Scanning of network, removable, and cloud resources is not supported.

  The command for a YARA scan on a Kaspersky Endpoint Security device is created and run on the side of the Kaspersky Endpoint Detection and Response Expert (on-premise) solution.

- Execution prevention

  When integrated with Endpoint Detection and Response Expert (on-premise), with Kaspersky Endpoint Detection and Response (KATA), or with Kaspersky Endpoint Detection and Response Optimum, you can enable Execution prevention rules. Kaspersky Endpoint Security prevents the execution of objects or opening of documents that match the criteria of the prevention rules.

  When integrated with Kaspersky Endpoint Detection and Response Expert (on-premise) or with Kaspersky Endpoint Detection and Response (KATA), the application receives execution prevention rules from Kaspersky Endpoint Detection and Response Expert (on-premise) or from Kaspersky Endpoint Detection and Response (KATA).

  When integrated with Kaspersky Endpoint Detection and Response Optimum, you can configure execution prevention rules in the Web Console.

- Getting forensics.

  When integrated with Kaspersky Endpoint Detection and Response Expert (on-premise), you can collect digital data that may be useful when investigating incidents related to cybercrimes and data leaks.

  This action can be performed using the following tasks:

  - The *Get forensics* task, which collects the following types of information:
    - List of files
    - List of processes
    - List of autorun points
  - *Get memory dump* tasks

- *Get process memory dump* tasks
- *Get disk image* tasks

Tasks are created and run on the side of the Kaspersky Endpoint Detection and Response Expert (on-premise) solution.

Kaspersky Endpoint Detection and Response Expert (on-premise) Integration

Kaspersky Endpoint Detection and Response Expert (on-premise) is an enterprise cyber security solution that allows defending against most cybersecurity risks and cover the main scenarios of threat spread. Components of Kaspersky Endpoint Detection and Response Expert (on-premise) are deployed on the Open Single Management Platform (OSMP). For more information about the solution and the platform, see the Kaspersky Endpoint Detection and Response Expert (on-premise) Help.

When integrated with Kaspersky Endpoint Detection and Response Expert (on-premise), Kaspersky Endpoint Security can:

- Send data about events on devices (telemetry) to the telemetry server on the OSMP platform (hereinafter also referred to as the *OSMP telemetry server*). Kaspersky Endpoint Security sends monitoring data on processes, open network connections, and modified files to the telemetry server, as well as data on threats detected by the application and data on the results of processing these threats.
- Perform threat response actions aimed at maintaining security functions based on commands received from the OSMP threat response server (hereinafter also referred to as the *OSMP threat response server*).

Integration with the Kaspersky Endpoint Detection and Response Expert (on-premise) solution is provided by the Kaspersky Endpoint Security application component, Endpoint Detection and Response Expert (on-premise) (hereinafter also referred to as *EDR Expert (on-premise)*).

When integrating with Kaspersky Endpoint Detection and Response Expert (on-premise), devices running Kaspersky Endpoint Security establish encrypted HTTPS connections with the OSMP threat response server and the OSMP telemetry server. To ensure a secure connection, the following certificates issued by OSMP servers are used:

- Server certificate. The connection is encrypted using the server's TLS certificate. You can elevate the security of the connection by verifying the server certificate on the Kaspersky Endpoint Security side. To do this, add the server certificate before enabling the integration with the Kaspersky Endpoint Detection and Response Expert (on-premise) solution.
- Client certificate. This certificate is used for additional connection protection using two-way authentication (the OSMP server authenticates devices with the Kaspersky Endpoint Security application). The same client certificate can be used by multiple devices. By default, the server does not validate client certificates, but two-way authentication can be enabled on the Kaspersky Endpoint Detection and Response Expert (on-premise) side. In this case, you need to enable two-way authentication in the settings of the EDR Expert (on-premise) component and add the client certificate (cryptocontainer with certificate and private key).

Certificates for securing the connection with OSMP servers must be provided by the administrator of the OSMP platform.

If the use of a proxy server is configured in the general settings of the Kaspersky Endpoint Security application, a proxy server is used for the connection to OSMP servers.

To use Endpoint Detection and Response Expert (on-premise) functionality, you need to activate the EDR Expert (on-premise) component. If the main license under which you are using Kaspersky Endpoint Security does not include the Kaspersky Endpoint Detection and Response Expert (on-premise) functionality, you need to purchase a separate license for this functionality and add the EDR Expert (on-premise) license key to the application.

If Kaspersky Endpoint Security is used in Light Agent mode to protect virtual environments, activation is performed on the Protection Server (a component of Kaspersky Hybrid Cloud Security for Virtualization Light Agent) by adding license keys to SVMs.

Integration with Endpoint Detection and Response Expert (on-premise) involves the following steps:

1. **Enabling required components of Kaspersky Endpoint Security**

   The EDR Expert (on-premise) component can use data from the following components:

   - File Threat Protection.
   - Network Threat Protection.
   - Web Threat Protection.
   - Anti-Cryptor.
   - Application Control.
   - Device Control.
   - System Integrity Monitoring.

   To fully integrate the Kaspersky Endpoint Security application with Kaspersky Endpoint Detection and Response Expert (on-premise), you need to enable the Behavior Detection component. If Behavior Detection is disabled, necessary telemetry is not transmitted (except for synchronization requests and threat detection data from other protection components).

   If Behavior Detection uses the eBPF mechanism to get system telemetry (available on 64-bit operating systems with kernel version 4.18 or later with eBPF support), the telemetry data is more comprehensive.

2. **Activating the EDR Expert (on-premise) component**

   Make sure one of the following conditions is satisfied:

   - You are using Kaspersky Endpoint Security under a license that includes the Kaspersky Endpoint Detection and Response Expert (on-premise) functionality.
   - You have purchased a separate license for using the Kaspersky Endpoint Detection and Response Expert (on-premise) functionality and added the EDR Expert (on-premise) license key to the application.

     If you are using Kaspersky Endpoint Security in Light Agent mode to protect virtual environments, you need to add the license key for activating the additional functionality to SVMs.

3. **Enabling the EDR Expert (on-premise) component**

The Kaspersky Endpoint Detection and Response Expert (on-premise) Integration is disabled by default. To enable the integration, you need to enable and configure the EDR Expert (on-premise) component:

- Using Kaspersky Security Center Web Console.
- Using the command line.

Configuring integration with Kaspersky Endpoint Detection and Response Expert (on-premise) in the Administration Console of Kaspersky Security Center is not supported.

For integration with Kaspersky Endpoint Detection and Response Expert (on-premise), you need to select the *EDR Expert (OSMP)* integration mode in the settings of the EDR Expert (on-premise) component. If you are using the Web Console, select **Endpoint Detection and Response Expert (version 8.0 or later)** in the policy settings. If you are using the command line, set `Mode=EDRExpertOnPrem` in the task settings. To configure integration with Kaspersky Endpoint Detection and Response Expert (on-premise) on a device, in the Web Console, you need to manage the "padlocks" for either version (version 8.0 and later and version 7.1 and earlier).

If you want to use Execution prevention for objects, you can enable the rules for execution prevention of objects of the EDR Expert (on-premise) component.
You can check the status of the EDR Expert (on-premise) component:

- Using the *Application component status report* in the Web Console.

  For detailed information about reports, please refer to the Kaspersky Security Center Help.
- In the device properties in the Web Console (**Assets (Devices)** → **Managed devices** → <device name> link → **Applications** → <name of the Kaspersky Endpoint Security application> link → **General** → **Components**).
- On the command line by running the following command: `kesl-control --app-info`.

How to prepare a reference image for correct integration with EDR Expert (on-premise)

Before preparing the image, make sure that the `/var/opt/kaspersky/.ids_generated` file does not exist on the reference device.

To prepare a reference image for correct integration with Kaspersky Endpoint Detection and Response Expert (on-premise):

Do not reboot the reference device or restart the Kaspersky Endpoint Security application while following these instructions.

1. Run the following commands as root:

```
systemctl stop kesl
systemctl edit kesl
```

2. In the editor, add one of the following configurations between the lines `### Anything between here and the comment below will become the contents of the drop-in file` and `### Edits below this comment will be discarded`:

   - Update the SensorID every time the application is started on temporary virtual machines

     ```
     [Service]
     ExecStartPre=-/usr/bin/uuid-regen.sh -a
     ```

   - Update the SensorID only once on persistent virtual machines

     ```
     [Service]
     ExecStartPre=-/usr/bin/uuid-regen.sh -b
     ```

3. Save your changes and close the editor.

   The `/etc/systemd/system/kesl.d/override.conf` file is created. Review its contents to make sure it matches the added configuration.

4. Reload the systemd service by running the following command:

   ```
   systemctl daemon-reload
   ```

5. Create the `/usr/bin/uuid-regen.sh` file with the following content:

```
#!/usr/bin/env bash
# ------------------------------------------------------------
#  Kaspersky IDs updater
#  Modes:
#    -a   Always regenerate the IDs (default)
#    -b   Generate them only once – subsequent runs do nothing
#  Exit code: always 0
# ------------------------------------------------------------
set -euo pipefail
# ----- configuration ------------------------------------------------
PCID_FILE="/var/opt/kaspersky/kesl/common/pcid"
INSTALL_ID_FILE="/var/opt/kaspersky/epagent/install_id"
KESL_INI="/var/opt/kaspersky/kesl/common/kesl.ini"
# Marker that shows the script has already been executed in mode b
MARKER="/var/opt/kaspersky/.ids_generated"
# ----- default mode -------------------------------------------------
MODE="a"
# ----- parse command-line arguments ---------------------------------
while getopts ":ab" opt; do
   case $opt in
       a) MODE="a" ;;
       b) MODE="b" ;;
       \?) echo "Invalid option: -$OPTARG" >&2; exit 0 ;;
   esac
done
shift $((OPTIND-1))
# ----- helper: generate a new UUID and write to a file --------------
write_uuid() {
   local target=$1
   /usr/bin/uuidgen > "$target"
}
# ----- helper: replace MachineId in kesl.ini ------------------------
replace_machine_id() {
   local new_id
   new_id=$(/usr/bin/uuidgen)
   /usr/bin/sed -i "s/^MachineId=.*/MachineId=${new_id}/" "$KESL_INI"
}
# ----- main logic ---------------------------------------------------
if [[ "$MODE" == "b" && -f "$MARKER" ]]; then
   # Mode b – already ran once → do nothing
   :
else
   # (re)generate all required values
   write_uuid "$PCID_FILE"
   write_uuid "$INSTALL_ID_FILE"
   replace_machine_id
   # In mode b remember that we have already executed
   if [[ "$MODE" == "b" ]]; then
       /usr/bin/touch "$MARKER"
   fi
fi
exit 0
```

6. Change the permissions of the `/usr/bin/uuid-regen.sh` file using the following command:

```
chmod 700 /usr/bin/uuid-regen.sh
```

The reference device is now ready for the creation of the operating system image.

Configuring the Kaspersky Endpoint Detection and Response Expert (on-premise) integration in the Web Console

In the Web Console, you can enable or disable the EDR Expert (on-premise) component and manage the settings for the integration of the Kaspersky Endpoint Security application with Kaspersky Endpoint Detection and Response Expert (on-premise) in the policy properties (**Application settings** → **Built-in Agents Configuration** → **Endpoint Detection and Response Expert (on-premises)**).

To integrate with Kaspersky Endpoint Detection and Response Expert (on-premise), you need to enable the EDR Expert (on-premise) component and select the **Endpoint Detection and Response Expert (version 8.0 or later)** option, that is, the *EDR Expert (OSMP)* integration mode.

For the settings of Kaspersky Endpoint Detection and Response Expert (on-premise) Integration, nested policies in the hierarchy allow specifying independent values, even if all other policy settings are inherited. If Kaspersky Endpoint Detection and Response Expert (on-premise) Integration is enabled in the parent policy, and inheritance of settings is enabled in the child policy, then by default, the integration settings of the child policy are also inherited and cannot be changed. If you want to configure independent integration settings, select **Use custom connection settings** from the drop-down list. This makes Kaspersky Endpoint Detection and Response Expert (on-premise) Integration settings available for editing.

Configuring the Kaspersky Endpoint Detection and Response Expert (on-premise) integration on the command line

You can manage the integration between Kaspersky Endpoint Security and the Kaspersky Endpoint Detection and Response Expert (on-premise) solution via the *Kaspersky Endpoint Detection and Response Expert (on-premise) (KATAEDR)* predefined task on the command line.

This task also allows you to manage the Kaspersky Endpoint Detection and Response (KATA) Integration settings. For the Kaspersky Endpoint Detection and Response Expert (on-premise) integration, you need to select the *EDR Expert (OSMP)* integration mode and manage the integration settings as necessary.

You can manage Kaspersky Endpoint Detection and Response Expert (on-premise) Integration settings by editing the settings of the predefined task.

The *Kaspersky Endpoint Detection and Response Expert (on-premise) Integration* task does not run by default. You can start and stop the task manually.

You can manage the certificates used for connecting to OSMP servers using the EDR Expert (on-premise) component management commands.

Kaspersky Endpoint Detection and Response Expert (on-premise) Integration settings

The table below describes the settings of the *Kaspersky Endpoint Detection and Response Expert (on-premise) (KATAEDR) Integration* predefined task, which you can manage when integrating with Kaspersky Endpoint Detection and Response Expert (on-premise).

This task also allows you to manage the Kaspersky Endpoint Detection and Response (KATA) Integration settings. For the Kaspersky Endpoint Detection and Response Expert (on-premise) integration, you need to select the *EDR Expert (OSMP)* integration mode (`Mode=EDRExpertOnPrem`) in the task settings.

Kaspersky Endpoint Detection and Response Expert (on-premise) Integration settings

Setting	Description	Value
`Mode`	Integration mode. For the Kaspersky Endpoint Detection and Response Expert (on-premise) integration, the Kaspersky Endpoint Security application interacts with servers on the OSMP platform. For the Kaspersky Endpoint Detection and Response (KATA) integration, the Kaspersky Endpoint Security application interacts with servers on the Kaspersky Anti Targeted Attack Platform.	`EDRKATA` (default) is the EDR (KATA) integration mode. Allows enabling integration with Kaspersky Endpoint Detection and Response (KATA), a component of Kaspersky Anti Targeted Attack Platform. `EDRExpertOnPrem` is the EDR Expert (OSMP) integration mode. Enables the Kaspersky Endpoint Detection and Response Expert (on-premise) integration
`UseClientPinnedCertificate`	Enable or disable two-way authentication for additional security of the connection to the OSMP threat response action server. If two-way authentication is enabled on the OSMP threat response server side, you need to enable two-way authentication in the settings of *Kaspersky Endpoint Detection and Response Expert (on-premise) Integration* task and add the client certificate before starting the task.	`Yes` enables two-way authentication for additional security of the connection to the OSMP threat response action server. `No` (default value) — do not use two-way authentication.
`SynchronizationPeriod`	Periodicity of synchronization requests to the OSMP threat response action server, in minutes.	Default value: `5`.
`ConnectionTimeout`	The maximum time to wait for a connection to the OSMP threat response action server, in seconds.	Default value: `10`.
`RequestTimeout`	The maximum time to wait for a response from the OSMP threat response action server, in seconds.	Default value: `10`.
`EnableTelemetry`	Enable and disable sending event data (telemetry) to the OSMP telemetry server.	`Yes` (default value) enables the sending of telemetry to the OSMP telemetry server. `No` disables the sending of telemetry.
The **[Endpoints.item_#]** section contains the address and port of the OSMP threat response action server. You can add multiple servers.		
`Address`	OSMP threat response action server address. IP address (IPv4 or IPv6) or fully qualified domain name (FQDN) of the integration server can be specified. To ensure that communication with the server is not interrupted in the event of an application failure while network isolation is enabled on the device, we recommend specifying the server's IP address.	Default value: `127.0.0.1`.
`Port`	Port for connecting to the OSMP threat response server.	Default value: `443`.
The **[TelemetrySettings]** section contains general settings for connecting to OSMP telemetry servers.		

Setting	Description	Value
`UseClientPinnedCertificate`	Enable or disable two-way authentication for additional security of the connection to the OSMP telemetry server. If two-way authentication is enabled on the OSMP telemetry server side, you need to enable two-way authentication in the settings of *Kaspersky Endpoint Detection and Response Expert (on-premise) Integration* task and add the client certificate before starting the task.	`Yes` enables two-way authentication for additional security of the connection to the OSMP telemetry server. `No` (default value) — do not use two-way authentication.
`ConnectionTimeout`	The maximum time to wait for a connection to the OSMP telemetry server, in seconds.	Default value: `10`.
`RequestTimeout`	The maximum time to wait for a response from the OSMP telemetry server, in seconds.	Default value: `10`.
`OnlyTaggedEvents`	Enables or disables the sending of telemetry only with an Indicator of Attack (IOA). An *Indicator of Attack* is a description of suspicious behavior of objects in an organization's IT infrastructure, which may be a sign of a targeted attack on the organization.	`Yes` – send only telemetry with an Indicator of Attack (IOA). `No` (default) – send all telemetry.
The **[TelemetrySettings.Endpoints.item_#]** section contains the address and port of the OSMP telemetry server. You can add multiple servers.		
`Address`	OSMP telemetry server certificate address IP address (IPv4 or IPv6) or fully qualified domain name (FQDN) of the integration server can be specified. To ensure that communication with the server is not interrupted in the event of an application failure while network isolation is enabled on the device, we recommend specifying the server's IP address.	Default value: `127.0.0.1`.
`Port`	Port for connecting to the OSMP telemetry server.	Default value: `443`.
The **[TelemetrySettings.EventTransferSettings]** section contains settings for data transfer to the OSMP telemetry server.		
`MaximumDataTransferTime`	The maximum delay in sending events to the OSMP telemetry server in seconds.	Default value: `30`.
`UseRequestCountLimits`	Enable or disable the regulation of the number of events sent to the OSMP telemetry server.	`Yes` (default value) – regulate the number of events sent. `No` – do not regulate the number of events.
`MaximumNumberOfEventsInHour`	Maximum number of events per hour	Default value: `3000`.
`MaximumNumberOfEventsInPackage`	Maximum number of events in one package.	Default value: `1024`.
`EventLimitExceededPercentage`	Number of events above the limit (percentage). Sending events is limited if the ratio of events of a certain type to the total number of events exceeds the configured threshold (as a percentage).	Default value: `15`.

Managing certificates for connecting to OSMP servers

Managing certificates requires the rights of a user with the Administrator (admin) role.

You can use commands to manage the certificates used for the connection to OSMP servers. You can do the following with certificates:

- Add or replace certificates of OSMP servers: the threat response server and the telemetry server
- Display information about server certificates
- Delete server certificates

- Add or replace client certificates used to protect the connection to OSMP servers: the threat response server and the telemetry server
- Display information about the client certificates
- Delete client certificates

Managing certificates for the connection to the OSMP threat response server

To add or replace the threat response action server certificate, run the following command:

```
kesl-control [-R] --add-kataedr-server-certificate <file> --server-type response
```

where <file> is the path to the file containing the server certificate.

To add or replace the client certificate for the threat response server connection:

1. Run the following command:

   ```
   kesl-control [-R] --add-kataedr-client-certificate <file> --server-type response
   ```

   where <file> is the path to the crypto container (PFX archive) containing the client certificate and private key.

2. If the cryptocontainer is password-protected, enter the password when prompted.

The client certificate is used for additional protection of the connection to the OSMP server if client certificate verification is enabled in OSMP server settings and in the *Kaspersky Endpoint Detection and Response Expert (on-premise) Integration* task settings, the `UseClientPinnedCertificate` setting in the `[KATAEDR]` section has the value `yes`.

To display information about the threat response action server certificate, run the following command:

```
kesl-control [-R] --query-kataedr-server-certificate --server-type response
```

To display information about the client certificate used to secure the connection to the threat response action server, run the following command:

```
kesl-control [-R] --query-kataedr-client-certificate --server-type response
```

Running the command displays the following certificate information:

- Certificate serial number
- Certificate subject
- Certificate issuer
- Certificate start date

- Certificate expiration date
- SHA1 and SHA256 certificate fingerprints

To delete the threat response action server certificate, run the following command:

```
kesl-control [-R] --remove-kataedr-server-certificate --server-type response
```

To delete the client certificate used to secure the connection to the threat response action server, run the following command:

```
kesl-control [-R] --remove-kataedr-client-certificate --server-type response
```

Managing certificates for connecting to the OSMP telemetry server

To add or replace the certificate of the telemetry server, run the following command:

```
kesl-control [-R] --add-kataedr-server-certificate <file> --server-type telemetry
```

where `<file>` is the path to the file containing the server certificate.

To add or replace the client certificate for the telemetry server connection:

1. Run the following command:

   ```
   kesl-control [-R] --add-kataedr-client-certificate <file> --server-type telemetry
   ```

   where `<file>` is the path to the crypto container (PFX archive) containing the client certificate and private key.

2. If the cryptocontainer is password-protected, enter the password when prompted.

The client certificate is used for additional protection of the connection to the OSMP server if client certificate verification is enabled in OSMP server settings and in the *Kaspersky Endpoint Detection and Response Expert (on-premise) Integration* task settings, the `UseClientPinnedCertificate` setting in the `[TelemetrySettings]` section has the value `yes`.

To display information about the telemetry server certificate, run the following command:

```
kesl-control [-R] --query-kataedr-server-certificate --server-type telemetry
```

To display information about the client certificate used to secure the connection to the telemetry server, run the following command:

```
kesl-control [-R] --query-kataedr-client-certificate --server-type telemetry
```

Running the command displays the following certificate information:

- Certificate serial number
- Certificate subject
- Certificate issuer
- Certificate start date
- Certificate expiration date
- SHA1 and SHA256 certificate fingerprints

To delete the telemetry server certificate, run the following command:

```
kesl-control [-R] --remove-kataedr-server-certificate --server-type telemetry
```

To delete the client certificate used to secure the connection to the telemetry server, run the following command:

```
kesl-control [-R] --remove-kataedr-client-certificate --server-type telemetry
```

Integration with Kaspersky Anti Targeted Attack Platform

Kaspersky Endpoint Security is compatible with the Kaspersky Anti Targeted Attack Platform solution, which is designed to protect the IT infrastructure of organizations and promptly detect threats, such as zero-day attacks, targeted attacks, and advanced persistent threats (APT). For details about the solution, please refer to the Kaspersky Anti Targeted Attack Platform Help.

The Kaspersky Endpoint Security application can integrate with the following components on the Kaspersky Anti Targeted Attack Platform:

- Kaspersky Endpoint Detection and Response (KATA). The component protects devices in the local network of an organization. When integrated with Kaspersky Endpoint Detection and Response (KATA), Kaspersky Endpoint Security can:
  - Send information about events on devices (telemetry) to the Central Node server that provides interaction with Kaspersky Endpoint Detection and Response (KATA) (hereinafter also referred to as the *KATA server*). Kaspersky Endpoint Security sends monitoring data on processes, open network connections, and modified files to the Central Node server on the Kaspersky Anti Targeted Attack Platform, as well as data on threats detected by the application and data on the results of processing these threats.
  - Execute threat response actions to ensure security when receiving commands from Kaspersky Anti Targeted Attack Platform.

Integration with Kaspersky Endpoint Detection and Response (KATA) 7.1 and earlier is supported.

- Kaspersky Network Detection and Response (KATA). The component protects the internal network of an organization. When integrated with Kaspersky Network Detection and Response (KATA), Kaspersky Endpoint Security can send information about events on devices (telemetry) to the Central Node server that provides interaction with Kaspersky Network Detection and Response (KATA) (hereinafter also referred to as the *NDR server*).

- Sandbox. The Sandbox technology makes it possible to analyze and scan objects on special servers with deployed virtual images of operating systems to detect malicious activity and indicators of targeted attacks on the corporate IT infrastructure. When integrating the Kaspersky Endpoint Security application with Sandbox on the Kaspersky Anti Targeted Attack Platform, the application sends files for scanning to a Central Node server, which handles the interaction with Sandbox.

Integration with components on the Kaspersky Anti Targeted Attack Platform is provided by the following components of the Kaspersky Endpoint Security application:

- The Endpoint Detection and Response Expert (on-premise) component (hereinafter also referred to as *EDR Expert (on-premise)*).

  Starting with Kaspersky Endpoint Security 12.4 for Linux, the Endpoint Detection and Response (KATA) component has been renamed to Endpoint Detection and Response Expert (on-premise). Now this component provides integration not only with Kaspersky Endpoint Detection and Response (KATA), a component of the Kaspersky Anti Targeted Attack Platform, but also with the Kaspersky Endpoint Detection and Response Expert (on-premise) solution.

- The Network Detection and Response (KATA) component (hereinafter also *NDR (KATA)*).

- The *Sandbox* component.

You can configure the integration of the Kaspersky Endpoint Security application with all components of the Kaspersky Anti Targeted Attack Platform solution, as well as with each component individually.

While integrated with Kaspersky Anti Targeted Attack Platform, devices running Kaspersky Endpoint Security establish encrypted HTTPS connections with Central Node servers that provide the integration. To ensure a secure connection, the following certificates issued by Central Node servers are used:

- Server certificate. The connection is encrypted using the server's TLS certificate. You can elevate the security of the connection by verifying the server certificate on the Kaspersky Endpoint Security side. To do this, you need to add the server certificate before enabling integration with the Kaspersky Anti Targeted Attack Platform solution.

- Client certificate. This certificate is used for additional connection protection using two-way authentication (the Central Node server authenticates devices with the Kaspersky Endpoint Security application). The same client certificate can be used by multiple devices. By default, the server does not check client certificates, but two-way authentication can be enabled on the Kaspersky Anti Targeted Attack Platform side. In this case, you need to enable two-way authentication in the settings of the EDR Expert (on-premise), NDR (KATA), or Sandbox component and add the client certificate (cryptocontainer with certificate and private key).

The certificates for securing the connections to servers that handle the interaction with components of the Kaspersky Anti Targeted Attack Platform solution must be provided by the Kaspersky Anti Targeted Attack Platform administrator.

If the general settings of Kaspersky Endpoint Security stipulate that a proxy server must be used, the connection to servers that handle the interaction with Kaspersky Anti Targeted Attack Platform components is made through a proxy server.

To use Kaspersky Endpoint Detection and Response (KATA) functionality, you need to activate the EDR Expert (on-premise) component. If the main license under which you are using Kaspersky Endpoint Security does not include the Kaspersky Endpoint Detection and Response Expert (on-premise) functionality, you need to purchase a separate license for this functionality and add the EDR Expert (on-premise) license key to the application.

If Kaspersky Endpoint Security is used in Light Agent mode to protect virtual environments, activation is performed on the Protection Server (a component of Kaspersky Hybrid Cloud Security for Virtualization Light Agent) by adding license keys to SVMs.

Setting up the integration with Kaspersky Endpoint Detection and Response (KATA) and Kaspersky Network Detection and Response (KATA) components involves the following steps:

1. **Enabling required components of Kaspersky Endpoint Security**

   The EDR Expert (on-premise) and NDR (KATA) components can use data from the following components:

   - File Threat Protection.
   - Network Threat Protection.
   - Web Threat Protection.
   - Anti-Cryptor.
   - Application Control.
   - Device Control.
   - System Integrity Monitoring.

   For proper Integration of the Kaspersky Endpoint Security application with Kaspersky Anti Targeted Attack Platform, the Behavior Detection component must be enabled. If Behavior Detection is disabled, necessary telemetry is not transmitted (except for synchronization requests and threat detection data from other protection components).

   If Behavior Detection uses the eBPF mechanism to get system telemetry (available on 64-bit operating systems with kernel version 4.18 or later with eBPF support), the telemetry data is more comprehensive.

2. **Activating the EDR Expert (on-premise) component**

   To integrate with Kaspersky Endpoint Detection and Response (KATA), you need to activate the EDR Expert (on-premise) component. Make sure one of the following conditions is satisfied:

   - You are using Kaspersky Endpoint Security under a license that includes the Kaspersky Endpoint Detection and Response Expert (on-premise) functionality.
   - You have purchased a separate license for using the Kaspersky Endpoint Detection and Response Expert (on-premise) functionality and added the EDR Expert (on-premise) license key to the application.

     If you are using Kaspersky Endpoint Security in Light Agent mode to protect virtual environments, you need to add the license key for activating the additional functionality to SVMs.

You do not need to activate the NDR (KATA) component because the main licenses of Kaspersky Endpoint Security already cover the Kaspersky Network Detection and Response (KATA) integration functionality.

3. **Enabling the EDR Expert (on-premise) component**

   By default, the Kaspersky Endpoint Detection and Response (KATA) Integration is disabled. To enable the integration, you need to enable and configure the EDR Expert (on-premise) component:

   - Using Kaspersky Security Center Web Console.
   - Using Kaspersky Security Center Administration Console.
   - Using the command line.

   > If you are using the Web Console or the command line, to integrate with Kaspersky Endpoint Detection and Response (KATA), you need to select the *EDR (KATA)* integration mode in the settings of the EDR Expert (on-premise) component. If you are using the Web Console, select **Endpoint Detection and Response Expert (version 7.1 or earlier)** in the policy settings. If you are using the command line, set `Mode=EDRKATA` in the task settings. To configure integration with Kaspersky Endpoint Detection and Response (KATA) on a device, in the Web Console, you need to manage the "padlocks" for either version (version 8.0 and later and version 7.1 and earlier).

   If you want to use Execution prevention for objects, you can enable the rules for execution prevention of objects of the EDR Expert (on-premise) component.

4. **Enabling the NDR (KATA) component**

   By default, the Kaspersky Network Detection and Response (KATA) Integration is disabled. To enable the integration, you need to enable and configure the NDR (KATA) component:

   - Using Kaspersky Security Center Web Console.
   - Using Kaspersky Security Center Administration Console.
   - Using the command line.

You can check the status of the EDR Expert (on-premise) and NDR (KATA) components:

- Using the *Application component status report* in the Web Console.

  For detailed information about reports, please refer to the Kaspersky Security Center Help.

- In the device properties in the Web Console (**Assets (Devices)** → **Managed devices** → <device name> link → **Applications** → <name of the Kaspersky Endpoint Security application> link → **General** → **Components**).

- On the command line by running the following command: `kesl-control --app-info`.

Configuring the Kaspersky Endpoint Detection and Response (KATA) integration in the Web Console

In the Web Console, you can manage the settings for the integration of the Kaspersky Endpoint Detection and Response (KATA) in the policy properties (**Application settings** → **Built-in Agents Configuration** → **Endpoint Detection and Response Expert (on-premises)**).

To integrate with Kaspersky Endpoint Detection and Response (KATA), you need to enable the EDR Expert (on-premise) component and select the **Endpoint Detection and Response Expert (version 7.1 or earlier)** option, that is, the *EDR (KATA)* integration mode.

To apply the value of the **Maximum delay when sending events (sec)** setting specified under **Data transfer settings** for the Endpoint Detection and Response Expert (KATA) component in the policy in the Web Console, you need to close the "padlocks" for the **Data transfer settings** and **Request throttling** groups of settings in policy properties. To allow modifying the `MaximumDataTransferTime` setting locally on the device, in the `[EventTransferSettings]` section for the KATAEDR task in EDR (KATA) mode, you need to unlock the "padlocks" for the **Data transfer settings** and **Request throttling** groups of settings in policy properties.

Configuring the Kaspersky Endpoint Detection and Response (KATA) integration in the Administration Console

In the Administration Console, you can enable or disable the EDR Expert (on-premise) component and manage the settings of the integration of Kaspersky Endpoint Security with the Kaspersky Endpoint Detection and Response (KATA) component in the policy properties (Managing policies in the Administration Console, Creating a policy using the Administration Console) (**Detection and Response** → **EDR Expert (on-premise)**).

If **Endpoint Detection and Response Expert (version 8.0 and higher)** is selected in the Web Console for the EDR Expert (on-premise) component, that is, the EDR Expert (OSMP) integration mode is selected, the Administration Console displays a warning, and the settings for the Kaspersky Endpoint Detection and Response (KATA) integration are not available. You can change the integration mode in the Web Console.

Kaspersky Endpoint Detection and Response (KATA) integration settings

Setting	Description
Enable Endpoint Detection and Response Expert (on-premise)	This check box enables or disables the EDR Expert (on-premise) component that provides integration with Kaspersky Endpoint Detection and Response (KATA). The component is disabled by default.
Enable execution prevention for objects	This check box enables or disables EDR Expert (on-premise) rules for execution prevention for objects.
KATA servers	The **Configure** button opens a window where you can configure a connection to KATA servers, as well as view a list of servers to which a connection has been configured.

Setting	Description
Server connection settings	Clicking the **Configure** button opens a window where you can configure general settings for connecting to KATA servers, add a server certificate, and configure two-way authentication when connecting to KATA servers.
Data transfer settings	Clicking the **Configure** button opens a window where you can configure settings for transfer of data to KATA servers.

Configuring the KATA server connection

The table lists connection settings for KATA servers. For each server for which a connection is configured, the table indicates an IP address (IPv4 or IPv6) or the server's fully qualified domain name (FQDN) and port.

You can use the buttons and the menu above the table to perform the following actions:

- Add KATA server connection settings
- Edit or remove previously configured connection settings
- Export or import the list of configured connection settings

Server connection settings

Setting	Description
Address	KATA server address IP address (IPv4 or IPv6) or fully qualified domain name (FQDN) of the integration server can be specified. To ensure that communication with the server is not interrupted in the event of an application failure while network isolation is enabled on the device, we recommend specifying the server's IP address. Default value: `127.0.0.1`.
Port	Port to connect to the KATA server. Default value: `443`.

Managing general KATA server connection settings

In this window, you can configure general settings for connecting to KATA servers.

KATA server connection settings

Setting	Description
Send a synchronization request to the KATA server every (min)	Frequency of sending synchronization requests to the KATA server in minutes. Default value: `5`.
Maximum time to wait for the server connection (sec)	Maximum time to wait for a connection to the KATA server in seconds. Default value: `10`.
Maximum time to wait for a response from the server (sec)	Maximum time to wait for a response from the KATA server in seconds. Default value: `10`.
Allow sending telemetry	This check box enables or disables sending data about events on devices (telemetry) to the KATA server. Sending telemetry is enabled by default.

Setting	Description

Server certificate	The section contains buttons for adding or removing a server certificate:
	• **Add** opens the window in which you can add a server certificate. The button is displayed if the server certificate has not been added yet.
	In the window for adding a certificate, you can add a KATA server certificate in one of the following ways:
	  • In the **Add from file** field, specify the path to the certificate file containing the certificate in DER or PEM format. The **Browse** button opens the standard file selection window.
	  • Copy the contents of the certificate file into the **Enter certificate details** field.
	If a server certificate has been added, the server certificate is verified on the Kaspersky Endpoint Security side. This elevates the security of the connection.
	• **Delete** deletes the server certificate added previously. The button is displayed only if a server certificate has been added.

Additional connection protection	This section contains controls for configuring additional security of the connection using two-way authentication: • **Use two-way authentication** enables or disables two-way authentication to further secure the connection to the KATA server. To use two-way authentication, you need to add a client certificate. Two-way authentication must be enabled on the KATA server side. • **Add** opens the window for adding a client certificate for additional security of the connection with the KATA server. The button is displayed if the **Use two-way authentication** check box is selected and the client certificate has not yet been added. To add a client certificate, in the window for adding a certificate, specify the path to the cryptocontainer (PFX archive) containing the client certificate and private key. The **Browse** button opens the standard file selection window. If the archive is password-protected, enter the password in the **Crypto container password** field. • **Delete** deletes the previously added client certificate. This button is displayed only if a client certificate has been added.

Configuring data transmission to KATA servers

In this window, you can configure settings for sending data to KATA servers.

Settings for sending data to KATA servers

Setting	Description
Maximum delay when sending events (sec)	The maximum delay in sending events to the KATA server in seconds. Default value: `30`.
Enable event throttling	Enables or disables the regulation of the number of events sent to the KATA server.
Maximum number of events per hour	Maximum number of events per hour Default value: `3000`.
Number of events above the limit (percentage)	Number of events above the limit (percentage). Sending events is limited if ratio of events of one type (for example, events about registry changes) to the total number of events exceeds the set threshold (as a percentage). Default value: `15`.

Configuring the Kaspersky Endpoint Detection and Response (KATA) integration on the command line

You can manage the integration between Kaspersky Endpoint Security and the Kaspersky Endpoint Detection and Response (KATA) component via the *Kaspersky Endpoint Detection and Response (KATA) Integration (KATAEDR)* predefined task on the command line.

This task also allows you to manage the Kaspersky Endpoint Detection and Response Expert (on-premise) integration settings. For the integration with Kaspersky Endpoint Detection and Response (KATA), you need to select the *EDR (KATA)* integration mode in the task settings and manage the integration settings as necessary.

You can configure Kaspersky Endpoint Detection and Response (KATA) Integration settings by editing the settings of the predefined task.

The *Kaspersky Endpoint Detection and Response Expert (on-premise) Integration* task does not run by default. You can start and stop the task manually.

You can manage the certificates used for connecting to KATA servers using the EDR Expert (on-premise) component management commands.

Kaspersky Endpoint Detection and Response (KATA) integration settings

The table below describes the settings of the Kaspersky Endpoint Detection and Response Expert (on-premise) (KATAEDR) Integration *predefined task*, which you can manage when integrating with Kaspersky Endpoint Detection and Response (KATA).

This task also allows you to manage the Kaspersky Endpoint Detection and Response Expert (on-premise) integration settings. For the integration with Kaspersky Endpoint Detection and Response (KATA), you need to select the *EDR (KATA)* integration mode in the task settings (`Mode=EDRKATA`).

Kaspersky Endpoint Detection and Response (KATA) integration settings

Setting	Description	Value
`Mode`	Integration mode. For the Kaspersky Endpoint Detection and Response Expert (on-premise) integration, the Kaspersky Endpoint Security application interacts with servers on the OSMP platform. For the Kaspersky Endpoint Detection and Response (KATA) integration, the Kaspersky Endpoint Security application interacts with servers on the Kaspersky Anti Targeted Attack Platform.	`EDRKATA` (default) is the EDR (KATA) integration mode. Allows enabling integration with Kaspersky Endpoint Detection and Response (KATA), a component of Kaspersky Anti Targeted Attack Platform. `EDRExpertOnPrem` is the EDR Expert (OSMP) integration mode. Enables the Kaspersky Endpoint Detection and Response Expert (on-premise) integration
`UseClientPinnedCertificate`	Enable and disable two-way authentication to further secure the connection to the KATA server. If two-way authentication is enabled on the KATA server side, you need to enable two-way authentication in the settings of *Kaspersky Endpoint Detection and Response Expert (on-premise) Integration* task and add the client certificate before starting the task.	`Yes` – use two-way authentication to further secure the connection to the KATA server. `No` (default value) — do not use two-way authentication.

Setting	Description	Value
`SynchronizationPeriod`	Frequency of sending synchronization requests to the KATA server in minutes.	Default value: `5`.
`ConnectionTimeout`	Maximum time to wait for a connection to the KATA server in seconds.	Default value: `10`.
`RequestTimeout`	Maximum time to wait for a response from the KATA server in seconds.	Default value: `10`.
`EnableTelemetry`	Enable and disable sending event data (telemetry) to KATA.	`Yes` (default value) – send telemetry to the KATA server. `No` disables the sending of telemetry.
The **[Endpoints.item_#]** section contains the address and port of the KATA server. You can add multiple servers.		
`Address`	KATA server address IP address (IPv4 or IPv6) or fully qualified domain name (FQDN) of the integration server can be specified. To ensure that communication with the server is not interrupted in the event of an application failure while network isolation is enabled on the device, we recommend specifying the server's IP address.	Default value: `127.0.0.1`.
`Port`	Port to connect to the KATA server.	Default value: `443`.
The **[EventTransferSettings]** section contains settings for sending data to the KATA server.		
`MaximumDataTransferTime`	The maximum delay in sending events to the KATA server in seconds.	Default value: `30`.
`UseRequestCountLimits`	Enable and disable regulating the number of events sent to the KATA server.	`Yes` (default value) – regulate the number of events sent. `No` – do not regulate the number of events.
`MaximumNumberOfEventsInHour`	Maximum number of events per hour	Default value: `3000`.
`MaximumNumberOfEventsInPackage`	Maximum number of events in one package.	Default value: `1024`.
`EventLimitExceededPercentage`	Number of events above the limit (percentage). Sending events is limited if the ratio of events of a certain type to the total number of events exceeds the configured threshold (as a percentage).	Default value: `15`.

Managing certificates for connecting to the KATA server

Managing certificates requires the rights of a user with the Administrator (admin) role.

You can use commands to manage the certificates used for the connection to the KATA server. You can do the following with certificates:

- Add or replace the KATA server certificate
- Display information about the server certificate
- Remove the server certificate
- Delete or replace the client certificate used to secure the connection to a KATA server
- Display information about the client certificate
- Remove the client certificate

To add or replace the server certificate, run the following command:

```
kesl-control [-R] --add-kataedr-server-certificate <file>
```

where <file> is the path to the file containing the server certificate.

To add or change a client certificate:

1. Run the following command:

   ```
   kesl-control [-R] --add-kataedr-client-certificate <file>
   ```

   where <file> is the path to the crypto container (PFX archive) containing the client certificate and private key.

2. If the cryptocontainer is password-protected, enter the password when prompted.

The client certificate is used for additional protection of the connection to the KATA server if client certificate verification is enabled in KATA server settings and in the *Kaspersky Endpoint Detection and Response Expert (on-premise) Integration* task settings, `UseClientPinnedCertificate` is set to `yes`.

To display the server certificate information, run the following command:

```
kesl-control [-R] --query-kataedr-server-certificate
```

To display the client certificate information, run the following command:

```
kesl-control [-R] --query-kataedr-client-certificate
```

Running the command displays the following certificate information:

- Certificate serial number
- Certificate subject
- Certificate issuer
- Certificate start date
- Certificate expiration date
- SHA1 and SHA256 certificate fingerprints

To delete the server certificate information, run the following command:

```
kesl-control [-R] --remove-kataedr-server-certificate
```

To delete the client certificate information, run the following command:

```
kesl-control [-R] --remove-kataedr-client-certificate
```

Configuring the Kaspersky Network Detection and Response (KATA) integration in the Web Console

In the Web Console, you can manage Kaspersky Network Detection and Response (KATA) integration settings in the policy properties (**Application settings** → **Built-in Agents Configuration** → **Network Detection and Response (KATA)**).

To apply the value of the **Maximum delay when sending events (sec)** setting specified under **Data transfer settings** for the Network Detection and Response (KATA) component in the policy in the Web Console, you need to close the "padlocks" for the **Data transfer settings** and **Request throttling** groups of settings in policy properties. To allow modifying the `MaximumDataTransferTime` setting locally on the device, in the `[EventTransferSettings]` section for the KATANDR task, you need to unlock the "padlocks" for the **Data transfer settings** and **Request throttling** groups of settings in policy properties.

Configuring the Kaspersky Network Detection and Response (KATA) integration in the Administration Console

In the Administration Console, you can enable or disable the NDR (KATA) component and manage the settings for integrating the Kaspersky Endpoint Security application with the Kaspersky Network Detection and Response (KATA) component in the policy properties (Managing policies in the Administration Console, Creating a policy using the Administration Console) (**Detection and Response** → **Network Detection and Response (KATA)**).

Kaspersky Network Detection and Response (KATA) integration settings

Setting	Description
Enable Network Detection and Response (KATA)	This check box enables or disables the NDR (KATA) component. The component is disabled by default.
NDR servers	The **Configure** button opens a window where you can configure a connection to NDR servers, as well as view a list of servers to which a connection has been configured.
Server connection settings	Clicking the **Configure** button opens a window where you can configure general settings for connecting to NDR servers, add a server certificate, and configure two-way authentication when connecting to NDR servers.
Data transfer settings	Clicking the **Configure** button opens a window where you can configure settings for transfer of data to NDR servers.

Configuring the NDR server connection

The table lists connection settings for NDR servers. For each server for which a connection is configured, the table indicates an IP address (IPv4 or IPv6) or the server's fully qualified domain name (FQDN) and port.

You can use the buttons and the menu above the table to perform the following actions:

- Add NDR server connection settings
- Edit or remove previously configured connection settings
- Export or import the list of configured connection settings

Server connection settings

Setting	Description
Address	NDR server address IP address (IPv4 or IPv6) or fully qualified domain name (FQDN) of the integration server can be specified. Default value: `127.0.0.1`.
Port	Port to connect to the NDR server. Default value: `443`.

Managing general NDR server connection settings

In this window, you can configure general settings for connecting to NDR servers.

NDR server connection settings

Setting	Description
Send a synchronization request to the NDR server every (min)	Frequency of sending synchronization requests to the NDR server in minutes. Default value: `5`.
Maximum time to wait for the server connection (sec)	Maximum time to wait for a connection to the NDR server in seconds. Default value: `10`.
Maximum time to wait for a response from the server (sec)	Maximum time to wait for a response from the NDR server in seconds. Default value: `10`.

Server certificate	The section contains buttons for adding or removing a server certificate:
	• **Add** opens the window in which you can add a server certificate. The button is displayed if the server certificate has not been added yet.
	In the window for adding a certificate, you can add an NDR server certificate in one of the following ways:
	  • In the **Add from file** field, specify the path to the certificate file containing the certificate in DER or PEM format. The **Browse** button opens the standard file selection window.
	  • Copy the contents of the certificate file into the **Enter certificate details** field.
	If a server certificate has been added, the server certificate is verified on the Kaspersky Endpoint Security side. This elevates the security of the connection.
	• **Delete** deletes the server certificate added previously. The button is displayed only if a server certificate has been added.

Additional connection protection	This section contains controls for configuring additional security of the connection using two-way authentication: • **Use two-way authentication** enables or disables two-way authentication to further secure the connection to the NDR server. To use two-way authentication, you need to add a client certificate. Two-way authentication must be enabled on the NDR server side. • **Add** opens the window for adding a client certificate for additional security of the connection with the NDR server. The button is displayed if the **Use two-way authentication** check box is selected and the client certificate has not yet been added. To add a client certificate, in the window for adding a certificate, specify the path to the cryptocontainer (PFX archive) containing the client certificate and private key. The **Browse** button opens the standard file selection window. If the archive is password-protected, enter the password in the **Crypto container password** field. • **Delete** deletes the previously added client certificate. This button is displayed only if a client certificate has been added.

Configuring data transmission to NDR servers

In this window, you can configure settings for sending data to NDR servers.

Settings for sending data to NDR servers

Setting	Description
Maximum delay when sending events (sec)	The maximum delay in sending events to the NDR server in seconds. Default value: `30`.
Maximum number of events in package	Maximum number of events in one package. Default value: `1024`.
Server poll frequency	Frequency of sending synchronization requests to the NDR server in seconds. Default value: `450`.
Enable event throttling	Enables or disables the regulation of the number of events sent to the NDR server.
Maximum number of events per hour	Maximum number of events per hour Default value: `3000`.
Number of events above the limit (percentage)	Number of events above the limit (percentage). Sending events is limited if ratio of events of one type (for example, events about registry changes) to the total number of events exceeds the set threshold (as a percentage). Default value: `15`.

Configuring the Kaspersky Network Detection and Response (KATA) integration on the command line

You can manage the integration between Kaspersky Network Security and Kaspersky Endpoint Detection and Response (KATA) via the *Kaspersky Network Detection and Response (KATA) Integration (KATANDR)* predefined task on the command line:

The *Kaspersky Network Detection and Response (KATA) Integration* does not run by default. You can start and stop the task manually.

You can configure Kaspersky Network Detection and Response (KATA) Integration settings by editing the settings of the predefined task.

You can manage the certificates used for connecting to NDR servers using the NDR (KATA) component management commands.

Kaspersky Network Detection and Response (KATA) integration settings

The table describes all available settings and the default values of all the settings that you can specify for the *Kaspersky Network Detection and Response (KATA) Integration* task.

Kaspersky Network Detection and Response (KATA) Integration task settings

Setting	Description	Value
`UseClientPinnedCertificate`	Enable and disable two-way authentication to further secure the connection to the NDR server. If client certificate validation is enabled on the NDR server side, enable the use of a client certificate and add a client certificate before starting the *Kaspersky Network Detection and Response (KATA) Integration* task.	`Yes` – use two-way authentication to further secure the connection to the NDR server. `No` (default value) — do not use two-way authentication.
`SynchronizationPeriod`	Frequency of sending synchronization requests to the NDR server in minutes.	Default value: `5`.
`ConnectionTimeout`	Maximum time to wait for a connection to the NDR server in seconds.	Default value: `10`.

Setting	Description	Value
`RequestTimeout`	Maximum time to wait for a response from the NDR server in seconds.	Default value: `10`.
The **[Endpoints.item_#]** section contains the address and port of the NDR server.		
`Address`	NDR server address IP address (IPv4 or IPv6) or fully qualified domain name (FQDN) of the integration server can be specified.	Default value: `127.0.0.1`.
`Port`	Port to connect to the NDR server.	Default value: `8081`.
The **[EventTransferSettings]** section contains settings for sending events to the NDR server.		
`MaximumDataTransferTime`	The maximum delay in sending events to the NDR server in seconds.	Default value: `30`.
`MaximumNumberOfEventsInPackage`	Maximum number of events in one package.	Default value: `1024`.
`UseRequestCountLimits`	Enable and disable regulating the number of events sent to the NDR server.	`Yes` (default value) – regulate the number of events sent. `No` – do not regulate the number of events.
`MaximumNumberOfEventsInHour`	Maximum number of events per hour	Default value: `3000`.
`EventLimitExceededPercentage`	Event throttle threshold (percentage). Sending events is limited if the ratio of events of a certain type to the total number of events exceeds the configured threshold (as a percentage).	Default value: `15`.
`PingPeriod`	NDR server polling period in seconds.	Default value: `450`.

Managing certificates for connecting to the NDR server

Managing certificates requires the rights of a user with the Administrator (admin) role.

You can use commands to manage the certificates used for the connection to the NDR server. You can do the following with certificates:

- Add or replace the NDR server certificate
- Display information about the server certificate
- Remove the server certificate
- Delete or replace the client certificate used to secure the connection to an NDR server
- Display information about the client certificate
- Remove the client certificate

To add or replace the server certificate, run the following command:

```
kesl-control [-R] --add-katandr-server-certificate <file>
```

where `<file>` is the path to the file containing the server certificate.

To add or change a client certificate:

1. Run the following command:

```
kesl-control [-R] --add-katandr-client-certificate <file>
```

where <file> is the path to the crypto container (PFX archive) containing the client certificate and private key.

2. If the cryptocontainer is password-protected, enter the password when prompted.

The client certificate is used for additional protection of the connection to the NDR server if client certificate verification is enabled in the NDR server settings and in the *Kaspersky Network Detection and Response (KATA) Integration* task settings, the `UseClientPinnedCertificate` setting is set to `yes`.

To display the server certificate information, run the following command:

```
kesl-control [-R] --query-katandr-server-certificate
```

To display the client certificate information, run the following command:

```
kesl-control [-R] --query-katandr-client-certificate
```

Running the command displays the following certificate information:

- Certificate serial number
- Certificate subject
- Certificate issuer
- Certificate start date
- Certificate expiration date
- SHA1 and SHA256 certificate fingerprints

To delete the server certificate information, run the following command:

```
kesl-control [-R] --remove-katandr-server-certificate
```

To delete the client certificate information, run the following command:

```
kesl-control [-R] --remove-katandr-client-certificate
```

Sandbox Integration

The Sandbox technology makes it possible to analyze and scan objects on special servers with deployed virtual images of operating systems to detect malicious activity and indicators of targeted attacks on the corporate IT infrastructure.

The Kaspersky Endpoint Security application can interact with Sandbox on the Open Single Management Platform (OSMP) or on the Kaspersky Anti Targeted Attack Platform. Depending on the platform, the interaction of the Kaspersky Endpoint Security application with the Sandbox is handled by the *Sandbox server*: an OSMP server or a Central Node server.

Integration with Sandbox is provided by the *Sandbox* component of Kaspersky Endpoint Security.

When integrating with Sandbox, devices running Kaspersky Endpoint Security establish encrypted HTTPS connections with the integration servers. To ensure a secure connection, the following certificates issued by the OSMP server or Central Node server are used:

- Server certificate. The connection is encrypted using the server's TLS certificate. You can elevate the security of the connection by verifying the server certificate on the Kaspersky Endpoint Security side. To do so, you need to add the server certificate before enabling integration with Sandbox.

- Client certificate. This certificate is used for additional connection protection using two-way authentication (the OSMP server or the Central Node server authenticates devices with the Kaspersky Endpoint Security application). The same client certificate can be used by multiple devices. By default, the server does not check client certificates, but two-way authentication can be enabled on the side of OSMP or Kaspersky Anti Targeted Attack Platform. In this case, you need to enable two-way authentication in the settings of the Sandbox component and add the client certificate (cryptocontainer with certificate and private key).

Certificates for securing the connection with the servers that handle the interaction with Sandbox must be provided by the administrator of the OSMP platform or Kaspersky Anti Targeted Attack Platform.

If the use of a proxy server is configured in the general settings of the Kaspersky Endpoint Security application, a proxy server is used for the connection to servers that handle the interaction with Sandbox.

Files and directories can be sent to Sandbox for scanning in one of the following modes:

- *Manually*. In this mode, you can send objects for scanning to Sandbox manually using a command or from the graphical interface.

- *Automatic only*. The application automatically sends objects for scanning, and it is impossible to manually send objects to be scanned by Sandbox.

- *Automatic and manual*. The application automatically sends objects for scanning, but you can also send an object to Sandbox manually using a command or from the graphical interface.

Sandbox Integration is disabled by default. You can enable or disable the Sandbox component as well as manage the following integration settings using the Web Console or the command line.

- Select the mode of sending objects for scanning (manual, automatic only, automatic and manual).

- Select actions that the application performs when a threat is detected (if the asynchronous mode of sending objects to the Sandbox is active):

  - Delete the file with the detected object and quarantine a copy of the file.

  - Start the critical areas scan task. By default, the application scans process memory, kernel memory, boot sectors, startup objects, and the path to the detected object.

  - Create an IOC Scan task. The application automatically creates an IOC Scan task; you can configure the task starting mode, the scan scope, and the action to be performed on IOC detection (delete the detected object, start the critical areas scan task).

- Configure general Sandbox server connection settings.

- Add or remove Sandbox server certificates.

- Configure two-way authentication when connecting to Sandbox servers and add client certificates.

Configuring the Sandbox integration in the Web Console

In the Web Console, you can manage Sandbox Integration settings in the policy properties (**Application Settings** → **Built-in Agents Configuration** → **Sandbox**).

Configuring the Sandbox integration on the command line

On the command line, you can manage the integration of the Kaspersky Endpoint Security application with Sandbox using the *Sandbox Integration* predefined task.

By default, the *Sandbox Integration* task is not running. You can start and stop this task manually.

> The *Integration with Sandbox* task cannot be started if the server certificate has not been added.

If the *Sandbox Integration* task is running, you can use the command line to send files to Sandbox for scanning.

To send files to Sandbox for scanning, run the following command:

```
kesl-control [-X] --sandbox <path>
```

where `<path>` is the path to the file or directory that you want to scan. You can specify multiple paths by separating them with a space.

You can manage the Sandbox integration settings by editing the settings for the predefined task.

Using the commands for managing the Sandbox integration settings, you can manage certificates that are used for connecting to servers responsible for interaction with Sandbox servers.

Sandbox integration settings

The table below describes all available settings and the default values of all the settings that you can specify for the *Sandbox Integration* task.

Sandbox Integration task settings

Setting	Description	Value
`UseClientCertificate`	Enable and disable two-way authentication to further secure the connection to the Sandbox server. If client certificate validation is enabled on the Sandbox server side, enable the use of a client certificate and add a client certificate before starting the *Sandbox Integration* task.	`Yes` — use two-way authentication to further secure the connection to the Sandbox server. `No` (default value) — do not use two-way authentication.
`ConnectionTimeout`	Maximum time to wait for a connection to the server in seconds.	Default value: `10`.
`RequestTimeout`	Maximum time to wait for a response from the server in seconds.	Default value: `10`.

Setting	Description	Value
SendingMode	Mode of sending an object to Sandbox to be scanned	AutoOnly (default value) – automatically send files for scanning when an attempt is made to gain access to a file. Manual – send files for scanning manually. AutoAndManual – send files for scanning automatically as well as manually.
QuarantineFile	Quarantine file when a threat is detected.	Yes (default value) – if a threat is detected, delete the original file, place a copy of the file in Quarantine. No – do not quarantine the file when a threat is detected.
ScanCriticalAreas	Perform a critical areas scan when a threat is detected.	Yes (default value) – start a critical areas scan when a threat is detected. No – do not start a critical areas scan when a threat is detected.
CreateIocScanTask	Create an IOC Scan task when a threat is detected.	Yes (default) – create an IOC Scan task when a threat is detected. No – do not create an IOC Scan task when a threat is detected.
QuarantineFileOnIocDetected	Quarantine the object when an indicator of compromise is detected.	Yes (default value) – if an indicator of compromise is detected, delete the original object, place a copy of the object in Quarantine. No – do not quarantine the object when an indicator of compromise is detected.
ScanCriticalAreasOnIocDetected	Perform a critical areas scan when an indicator of compromise is detected.	Yes (default value) – start a critical areas scan when an indicator of compromise is detected. No – do not start a critical areas scan when an indicator of compromise is detected.
Drives	Scopes for the IoC scan.	Critical (default) – scan files in user and system directories. System – scan all files within the root file system.
ScheduleMode	IOC Scan task start mode.	Manually (default) – start the IOC Scan task manually. AfterTreatDetected – start the IOC Scan task after a threat is detected.
The **[Servers.item_#]** section contains the settings of the Sandbox server.		
Address	Address of the server. IP address (IPv4 or IPv6) or fully qualified domain name (FQDN) of the integration server can be specified.	Default value: 127.0.0.1.
Port	Port for connecting to the server.	Default value: 443.
The **[SandboxTransferSettings]** section contains settings for sending files for scanning in Sandbox.		
SandboxQueue	The maximum size of the scan request queue in megabytes.	Default value: 1024.

Managing certificates for connecting to the Sandbox server

Managing certificates requires the rights of a user with the Administrator (admin) role.

You can manage the certificates used for the connections to OSMP servers or Central Node servers responsible for interaction with Sandbox (hereinafter also referred to as Sandbox servers) using commands. You can do the following with certificates:

- Add or replace the server certificate
- Display information about the server certificate
- Remove the server certificate
- Add or replace the client certificate
- Display information about the client certificate
- Remove the client certificate

To add or replace the server certificate, run the following command:

```
kesl-control [-X] --add-sandbox-server-certificate <file>
```

where `<file>` is the path to the file containing the server certificate.

To add or change a client certificate:

1. Execute the command:

   ```
   kesl-control [-X] --add-sandbox-client-certificate <file>
   ```

   where `<file>` is the path to the crypto container (PFX archive) containing the client certificate and private key.

2. If the cryptocontainer is password-protected, enter the password when prompted.

The client certificate is used for additional protection of the connection to the Sandbox server if client certificate verification is enabled in the Sandbox server settings and if in the settings of the *Sandbox Integration* task, `UseClientCertificate` is set to `yes`.

To display certificate information, run the following command:

- for the server certificate:

  ```
  kesl-control [-X] --query-sandbox-server-certificate
  ```

- for the client certificate:

  ```
  kesl-control [-X] --query-sandbox-client-certificate
  ```

Running the command displays the following certificate information:

- Certificate serial number
- Certificate subject
- Certificate issuer

- Certificate start date
- Certificate expiration date
- SHA1 and SHA256 certificate fingerprints

To delete the server certificate information, run the following command:

```
kesl-control [-X] --remove-sandbox-server-certificate
```

To delete the client certificate information, run the following command:

```
kesl-control [-X] --remove-sandbox-client-certificate
```

Kaspersky Endpoint Detection and Response Optimum Integration

Kaspersky Endpoint Detection and Response Optimum is a solution for protecting an organization's IT infrastructure from threats such as exploits, ransomware, fileless attacks, and legitimate system tools used by attackers to compromise devices or data.

Kaspersky Endpoint Detection and Response Optimum monitors and analyzes the evolution of threats, and provides information about a potential attack to a security officer or administrator, helping them perform threat response actions in a timely manner.

Kaspersky Endpoint Detection and Response Optimum uses the following Threat Intelligence tools:

- The Kaspersky Security Network (hereinafter also referred to as KSN) cloud service infrastructure that provides access to Kaspersky file, website, and software reputation online knowledge base.
- Integration with the Kaspersky Threat Intelligence Portal, which contains and displays information about the reputation of files and websites.
- The Kaspersky Threats database.

Kaspersky Endpoint Security 12.4 for Linux is compatible with Kaspersky Endpoint Detection and Response Optimum version 3.1.

When interacting with Kaspersky Endpoint Detection and Response Optimum, Kaspersky Endpoint Security can:

- Send data about events on devices to Kaspersky Security Center. Kaspersky Endpoint Security sends monitoring data on processes, open network connections, and modified files to Kaspersky Security Center, as well as data on threats detected by the application and data on the processing results for these threats.
- Perform threat response actions to maintain security when receiving commands from Kaspersky Security Center.

Integration of Kaspersky Endpoint Security with the Kaspersky Endpoint Detection and Response Optimum solution is facilitated by a Kaspersky Endpoint Security component: Endpoint Detection and Response Optimum (*EDR Optimum*).

To use Kaspersky Endpoint Detection and Response Optimum functionality, you need to activate the EDR Optimum component. If the main license under which you are using Kaspersky Endpoint Security does not include the Kaspersky Endpoint Detection and Response Optimum functionality, you need to purchase a separate license for this functionality and add the EDR Optimum license key to the application.

If Kaspersky Endpoint Security is used in Light Agent mode to protect virtual environments, activation is performed on the Protection Server (a component of Kaspersky Hybrid Cloud Security for Virtualization Light Agent) by adding license keys to SVMs.

Integration with Kaspersky Endpoint Detection and Response Optimum involves the following steps:

1. **Enabling required components of Kaspersky Endpoint Security**

   Make sure that the following components of Kaspersky Endpoint Security are enabled and working:

   - File Threat Protection.
   - Web Threat Protection.
   - Behavior Detection.

   You can also enable execution prevention for objects.

2. **Enabling threat analysis tools**

   Make sure that Kaspersky Security Network is enabled in standard or extended mode.

   For the most effective operation of Kaspersky Endpoint Detection and Response Optimum, we recommend the extended Kaspersky Security Network mode.

3. **Activating the EDR Optimum component**

   Make sure one of the following conditions is satisfied:

   - You are using Kaspersky Endpoint Security under a license that includes the Kaspersky Endpoint Detection and Response Optimum functionality.
   - You have purchased a separate license for using the Kaspersky Endpoint Detection and Response Optimum functionality and added the EDR Optimum license key to the application.

     If you are using Kaspersky Endpoint Security in Light Agent mode to protect virtual environments, you need to add the license key for activating the additional functionality to SVMs.

4. **Installing the Kaspersky Endpoint Detection and Response Optimum management plug-in**

   The Kaspersky Endpoint Detection and Response Optimum management plug-in is a unified plug-in for managing agents on Windows, Mac, and Linux operating systems; the plug-in is necessary to display and view alert details.

5. **Enabling the EDR Optimum component**

By default, EDR Optimum is disabled. You can enable or disable the component and manage integration settings:

- Using the Web Console.
- Using the command line.

> Managing the EDR Optimum component using Kaspersky Security Center Administration Console is not supported.

You can check the status of the EDR Optimum component:

- Using the *Application component status report* in the Web Console.

  The **Endpoint Detection and Response Optimum** component has been added to the list of Kaspersky Endpoint Security components. For detailed information about reports, please refer to the Kaspersky Security Center Help.
- In the device properties in the Web Console.
- Using the command line.

6. **Enabling data transfer to the Administration Server**

   To use all functionality of Kaspersky Endpoint Detection and Response Optimum, you must configure the following:

   - Enable sending information about files in Backup and Quarantine to the Kaspersky Security Center storage. To do this, you need to select the following check boxes in the policy properties:
     - **About files in Backup**
     - **About files in Quarantine**
   - Allow display of alert list To do this, you can enable the **Show EDR alerts** toggle switch in the main window of Kaspersky Security Center Web Console under **Settings** → **Interface settings**.

     > The **Show EDR alerts** setting not available in a Web Console version earlier than 15.1.

Enabling or disabling Kaspersky Endpoint Detection and Response Optimum integration

You can enable or disable the EDR Optimum component.

- Using the Web Console.
- Using the command line.

> The Administration Console does not support managing the settings for integrating Kaspersky Endpoint Detection and Response Optimum.

Enabling or disabling Kaspersky Endpoint Detection and Response Optimum integration in the Web Console

In the Web Console, you can enable or disable the EDR Optimum component and configure the integration with Kaspersky Endpoint Detection and Response Optimum:

- In the policy properties (**Application settings** → **Built-in Agents Configuration** → **Endpoint Detection and Response**)
- In the managed device properties (**Assets (Devices)** → **Managed devices** → <device name> link → **Applications** tab → <Kaspersky Endpoint Security application name> link → **Application settings** tab → **Detection and Response** section → **Endpoint Detection and Response Optimum**).

> The EDR Optimum component cannot be enabled or disabled in the device properties if a policy is applied to the device.

Kaspersky Endpoint Detection and Response Optimum integration settings in device properties

Setting	Description
Endpoint Detection and Response Optimum is enabled/disabled	Enables or disables the EDR Optimum component, which is necessary for integrating Kaspersky Endpoint Security with the Kaspersky Endpoint Detection and Response Optimum solution. The toggle button is switched off by default.
Network isolation	The **Configure device unblocking** link opens the **Configure device unblocking** window, where you can configure the duration of device blocking.
Exclusions	The **Configure exclusions** link opens the **Exclusions** window, where you can configure network isolation exceptions.

Enabling or disabling Kaspersky Endpoint Detection and Response Optimum integration on the command line

You can enable or disable the EDR Optimum component by using the `UseEdrOptimum` setting in the general application settings.

You can edit the option via command line switches or a configuration file that contains all general application settings.

To enable the EDR Optimum component using command line options:

```
kesl-control --set-app-settings UseEdrOptimum=Yes
```

To disable the EDR Optimum component using command line options:

```
kesl-control --set-app-settings UseEdrOptimum=No
```

Viewing the Kaspersky Endpoint Detection and Response Optimum integration status

Viewing the integration status in the Web Console

You can view the status of the Kaspersky Endpoint Detection and Response Optimum integration in Web Console by selecting the **Assets (Devices) section** → **Managed devices** → <device name> link → **Applications** tab → < Kaspersky Endpoint Security application name> link → **General** tab → **Components**.

Viewing the integration status on the command line

You can view the status of integration with Kaspersky Endpoint Detection and Response Optimum using the command line by running the command `kesl-control --app-info`.

Integration statuses

One of the following statuses is displayed for the EDR Optimum component:

- *Running*.
  This status is displayed when the following conditions are simultaneously satisfied:
  - A license key required by EDR Optimum is added.
  - The current date is earlier than the license expiration date.
  - One or more Kaspersky Endpoint Security components that EDR Optimum requires are enabled.
  - Kaspersky Endpoint Detection and Response Optimum Integration is enabled on the device.
- *Stopped*.
  This status is displayed in the following cases:
  - Kaspersky Endpoint Detection and Response Optimum Integration is disabled.
  - The Kaspersky Endpoint Security application is not stopped.
- *Not supported by license*.
  This status is displayed in the following cases:
  - The current date is later than the license expiration date.
  - The current license does not include the EDR Optimum functionality.

- *Malfunction*.

  This status is displayed when the following conditions are simultaneously satisfied:

  - The current date is earlier than the license expiration date.
  - One or more Kaspersky Endpoint Security components that EDR Optimum requires has run into an error.

Viewing information about a detected threat and response actions

To view all information about a detected threat and perform appropriate threat response actions, you can use the alert details window, which contains:

- Threat development chain graph
- Recommendations for responding to the threat with the UI for performing the chosen action
- General information about the threat detection (for example, the detection mode)
- Information about the protected device
- Information about the detected object
- History of files appearing on the device
- Information about the threat response actions performed by the application

In the alert details window, you can perform the following threat response actions:

- Isolate the device on which the threat was detected
- Quarantine file
- Create an *IOC Scan* task

The storage period for the alert details is 30 days. After this time expires, old entries are automatically deleted.

For more details about managing alert details, refer to the Kaspersky Endpoint Detection and Response Optimum Help.

Integration with Kaspersky Managed Detection and Response

Kaspersky Managed Detection and Response is a solution for automatically detecting and analyzing security incidents in your infrastructure using telemetry and advanced machine learning technologies. Information about the incident is sent to Kaspersky experts, who can then either process the incident themselves or provide recommendations on how to resolve it.

When interacting with Kaspersky Managed Detection and Response, Kaspersky Endpoint Security can carry out the following functions:

- Send telemetry data to Kaspersky Managed Detection and Response for threat detection.
- Perform threat response actions to maintain security when receiving commands from Kaspersky Managed Detection and Response.

Integration of Kaspersky Endpoint Security with the Kaspersky Managed Detection and Response solution is facilitated by the Managed Detection and Response (MDR) component of the application.

To use the Kaspersky Managed Detection and Response functionality, you need to activate the MDR component in one of the following ways:

- By adding a license key using a key file or an activation code. You can activate the Kaspersky Endpoint Security application under a license that includes the Kaspersky Managed Detection and Response functionality (for details, see the Kaspersky Managed Detection and Response Help). If the main license under which you are using the application does not include the Kaspersky Managed Detection and Response functionality, you need to purchase a separate license for this functionality and add the MDR license key to the application.

  If Kaspersky Endpoint Security is used in Light Agent mode to protect virtual environments, activation is performed on the Protection Server (a component of Kaspersky Hybrid Cloud Security for Virtualization Light Agent) by adding license keys to SVMs.

  The license that allows to activate the Kaspersky Managed Detection and Response functionality must first be registered on the MDR portal.

- By uploading the *MDR BLOB file*, which contains Kaspersky Managed Detection and Response license information, to the device. You can find the BLOB file in the ZIP archive of the MDR configuration file. You can upload the BLOB file in the Web Console, the Administration Console, or on the command line.

If your configuration does not satisfy the requirements for operation without KPSN configuration files, then to integrate with Kaspersky Managed Detection and Response, you need to upload a KPSN configuration file to the Kaspersky Security Center Administration Server. This file contains the necessary telemetry settings. The KPSN configuration file with the .pkcs7 extension is located in the ZIP archive of the MDR configuration file. For details, refer to Kaspersky Managed Detection and Response Help.

Integration with Kaspersky Managed Detection and Response involves the following steps:

1. **Enabling required components of Kaspersky Endpoint Security**

   Make sure that the following components of Kaspersky Endpoint Security are enabled and working:

   - File Threat Protection.
   - Behavior Detection.

   If these components are disabled, the device will have a red status in Kaspersky Managed Detection and Response.

   We also recommend enabling Web Threat Protection and Network Threat Protection. If these components are disabled, the device will have a yellow status in Kaspersky Managed Detection and Response.

   See the Kaspersky Managed Detection and Response Help for more information about device statuses.

2. **Enabling the use of Kaspersky Security Network in extended mode.**

   The Kaspersky Managed Detection and Response functionality is not available if Kaspersky Security Network is disabled or being used in standard mode. You can configure the use of Kaspersky Security Network in the Web Console, the Administration Console, or on the command line.

3. **Activating the MDR component**

   If you are using the MDR component under a license, make sure that one of the following conditions is satisfied:

   - You are using Kaspersky Endpoint Security under a license that includes the Kaspersky Managed Detection and Response functionality.
   - You have purchased a separate license for using the Kaspersky Managed Detection and Response functionality and also added the MDR license key to the application.

     If you are using Kaspersky Endpoint Security in Light Agent mode to protect virtual environments, you need to add the license key for activating the additional functionality to SVMs.

   If you are activating the MDR component using an MDR BLOB file, you need to upload the BLOB file in the Web Console, the Administration Console, or on the command line.

4. **Uploading the KPSN configuration file**

   If your configuration does not satisfy the requirements for operation without KPSN configuration files, you need to upload a KPSN configuration file to the Kaspersky Security Center Administration Server.

5. **Enabling the MDR component**

   The MDR component is disabled by default. You can enable or disable the component:

   - Using the Web Console.
   - Using the Administration Console.
   - Using the command line.

   You can check the status of the MDR component:

   - In the device properties in the Web Console or the Administration Console.
   - Using the command line.

Recommendations for creating a reference image for correct integration with MDR

We do not recommend including the Kaspersky Endpoint Security for Linux application in the reference image.

If Kaspersky Endpoint Security for Linux was included in the reference image, follow these steps on each device based on this image:

1. To create a new UUID, run the following commands:

```
uuidgen > /var/opt/kaspersky/kesl/common/pcid
uuidgen > /var/opt/kaspersky/epagent/install_id
```

2. Uninstall Kaspersky Endpoint Security for Linux, then reinstall it.

If you do not follow these steps, the devices may not be identified correctly.

Uploading the KPSN configuration file for integration with Kaspersky Managed Detection and Response

If your configuration does not satisfy the requirements for operation without KPSN configuration files, then to integrate with Kaspersky Managed Detection and Response, you need to upload a *KPSN configuration file* to the Kaspersky Security Center Administration Server. This file contains the necessary telemetry settings. The KPSN configuration file with the .pkcs7 extension is located in the ZIP archive of the MDR configuration file. For details, refer to Kaspersky Managed Detection and Response Help.

You can upload the KPSN configuration file in the Web Console or the Administration Console.

By uploading the KPSN configuration file, you agree that data from the device where Kaspersky Endpoint Security is installed will be automatically sent to Kaspersky for processing. Do not load the configuration file if you do not agree that the transmitted data will be processed. For detailed description of the transmitted data, refer to Kaspersky Managed Detection and Response documentation.

To upload the KPSN configuration file using the Web Console:

1. In the main Web Console window, open the Administration Server properties window.
2. In the list on the left, select the **KSN proxy server settings** section.
3. Turn on the **Enable KSN proxy server on the Administration Server as a proxy server** toggle switch to enable the KSN proxy server service.
4. Turn on the **Use Kaspersky Private Security Network** toggle switch.
5. In the window that opens and displays a warning about the specific aspects of using the KSN proxy server on the distribution points with the previous version of the Network Agent installed, click **OK**.
6. Click the **File with KSN proxy server settings** button.
7. Select the KSN configuration file (with the pkcs7 extension) and click **Open**.
8. Accept the terms and conditions of the KPSN Statement and click the **Save** button.

To upload the KPSN configuration file using the Administration Console:

1. In the Administration Console tree, open the Administration Server properties window.
2. Select **KSN proxy server** → **KSN proxy server settings**.
3. Select the **Use Administration Server as a proxy server** check box to enable the KSN proxy server service.
4. Select the **Configure KPSN** check box.
5. In the window that opens and displays a warning about the specific aspects of using the KSN proxy server on the distribution points with the previous version of the Network Agent installed, click **OK**.
6. Click the **File with KSN proxy server settings** button.
7. Select the KSN configuration file (with the pkcs7 extension) and click **Open**.
8. Accept the terms and conditions of the KPSN Statement and click the **Apply** button.

Configuring the Kaspersky Managed Detection and Response integration in the Web Console

In the Web Console, you can manage Kaspersky Managed Detection and Response integration settings in the policy properties (**Application settings** → **Built-in Agents Configuration** → **Managed Detection and Response**).

Configuring the Kaspersky Managed Detection and Response integration in the Administration Console

In the Administration Console, you can enable or disable the MDR component and load an MDR BLOB file in policy properties (Managing policies in the Administration Console, Creating a policy using the Administration Console) (**Detection and Response** → **Managed Detection and Response**).

If the MDR component is activated with a license key, you do not need to upload the MDR BLOB file.

MDR integration settings

Setting	Description
Enable Managed Detection and Response	This check box enables or disables the MDR component, which is necessary for integrating Kaspersky Endpoint Security with the Kaspersky Managed Detection and Response solution. The component is disabled by default. If you enable the MDR component and Kaspersky Security Network is disabled or used in standard mode, you are prompted to accept the Kaspersky Security Network Statement to enable Kaspersky Security Network in Extended mode. If changing KSN settings is prohibited by parent policy, an error message is displayed and the MDR component is not enabled.
Upload	Clicking this button opens a standard Microsoft Windows window in which you can select an MDR BLOB file to upload.

The BLOB file can be found inside the ZIP archive of the MDR configuration file included in the Kaspersky Managed Detection and Response distribution kit.

By uploading the BLOB file, you agree that data from the device where Kaspersky Endpoint Security is installed will be automatically sent to Kaspersky for processing. Do not upload the file if you do not agree to the processing of transmitted data. For detailed description of the transmitted data, refer to Kaspersky Managed Detection and Response help section.

Configuring the Kaspersky Managed Detection and Response integration on the command line

In the command line, you can do the following:

- Enable or disable the MDR component.
- Upload or delete the MDR BLOB file, which contains Kaspersky Managed Detection and Response license information.

  If the MDR component is activated with a license key, you do not need to upload the MDR BLOB file.

- Edit the start time of the *Mdr_Autostart_Scan* service task created automatically after Kaspersky Endpoint Security successfully integrates with Managed Detection and Response.

We recommend configuring the integration between Kaspersky Endpoint Security and Kaspersky Managed Detection and Response in the Administration Console or in the Web Console.

You can enable or disable the MDR component by editing the `UseMDR` option in the general application settings. You can edit the option via command line switches or a configuration file that contains all general application settings.

The `UseMDR` parameter can take the following values:

- `Yes` enables the MDR component.
- `No` disables the MDR component.

If you enable the MDR component, and Kaspersky Security Network is disabled or used in Basic mode, an error message is displayed and the MDR component is not enabled. To enable the MDR component, you must enable KSN in Extended mode.

You can upload or delete the MDR BLOB file using the license key management commands. You can find the BLOB file in the ZIP archive of the MDR configuration file.

To upload the BLOB file, execute the following command:

```
kesl-control --load-mdr-blob <file path MDR BLOB>
```

To remove the BLOB file, execute the following command:

```
kesl-control --remove-mdr-blob
```

Enabling the integration creates a *Mdr_Autostart_Scan* service task that runs once per day. You can set the start time if needed. No other task settings or schedule options can be edited.

Network isolation

When integrated with Detection and Response solutions, a device can be isolated from the network as part of a threat response action.

Special considerations involved with network isolation

After enabling network isolation, the application severs all active network connections on the device and blocks all new TCP/IP network connections, except for the connections listed below:

- Connections specified in exclusions from network isolation
- Connections initiated by Kaspersky Endpoint Security services
- Connections initiated by the Kaspersky Security Center Network Agent
- Connections with the SVM and the Integration Server if the application is being used in Light Agent mode
- KSN connections (when integrated with Kaspersky Managed Detection and Response)

Network isolation can be applied when one of the following conditions is satisfied:

- Integration of Kaspersky Endpoint Security with the Kaspersky Endpoint Detection and Response Optimum solution is enabled and the EDR Optimum component is activated.
- Integration of the Kaspersky Endpoint Security application with the Kaspersky Endpoint Detection and Response Expert (on-premise) or Kaspersky Endpoint Detection and Response (KATA) component is enabled, and the EDR Expert (on-premise) component is activated.
- Integration of Kaspersky Endpoint Security with the Kaspersky Managed Detection and Response solution is enabled and the MDR component is activated.

When integrated with Kaspersky Endpoint Detection and Response Expert (on-premise), Kaspersky Endpoint Detection and Response (KATA), and Kaspersky Managed Detection and Response, network isolation of a device is enabled or disabled, and network isolation exclusions are configured on the side of the Detection and Response solution. For details, see the Kaspersky Endpoint Detection and Response Expert (on-premise) Help, the Kaspersky Anti Targeted Attack Platform Help, or the Kaspersky Managed Detection and Response Help. If necessary, you can manually disable network isolation of a device:

- In the device properties in the Web Console (only when integrated with Kaspersky Endpoint Detection and Response Expert (on-premise) or with Kaspersky Endpoint Detection and Response (KATA))
- On the command line

Manually disabling network isolation is possible regardless of whether integration with Detection and Response solutions is enabled, and regardless of whether a policy is applied to the device.

When integrated with Kaspersky Endpoint Detection and Response Optimum, network isolation can be applied in one of the following modes:

- Automatic network isolation mode. A device can be isolated from the network automatically as a result of detection of indicators of compromise. When creating and configuring *IOC Scan* task settings in the **Actions on IOC detection** section, if you select the **Apply response actions when an IOC is detected** and **Isolate device from the network** check boxes, then network isolation is enabled automatically when the application detects indicators of compromise.

  You can manage the following automatic network isolation settings:

  - Change the period of time after which network isolation is automatically disabled.
  - Configure network isolation exclusions for automatically isolated devices.

  > If a device that is being isolated automatically is subject to a policy, the settings specified in the policy are applied. If a policy is not applied, the settings specified in the device properties are applied.

- Manual network isolation mode. You can isolate a device from the network while the detected threat is being investigated. You can manually enable network isolation for a device in the alert details window and in the device properties in the Web Console.

  You can manage the following manual network isolation settings:

  - Change the period of time after which network isolation is automatically disabled.
  - Configure network isolation exclusions for manually isolated devices.

When integrated with Kaspersky Endpoint Detection and Response Optimum, you can manually disable network isolation of a device in the device properties in the Web Console and on the command line.

You can check the network isolation status of a device on the command line.

An isolated device is automatically assigned the **ISOLATED FROM NETWORK** tag. This tag is automatically removed when network isolation is disabled.

For general information on getting a list of isolated devices by tag, see the Kaspersky Endpoint Detection and Response Optimum Help.

Network isolation limitations

When you use network isolation, we strongly recommended that you familiarize yourself with the relevant limitations.

For network isolation to work, Kaspersky Endpoint Security must be running. If Kaspersky Endpoint Security malfunctions (and the application is not running), traffic may not be blocked when network isolation is enabled by Kaspersky Managed Detection and Response.

DHCP and DNS are not automatically added to network isolation exclusions, so if the network address of a resource changes during network isolation, Kaspersky Endpoint Security cannot gain access to it. The same applies to the nodes of the fault-tolerant KATA server. We recommend to not change their addresses so that Kaspersky Endpoint Security does not lose contact with them.

The proxy server is not added automatically to the network isolation exclusions, so you need to add it to the exclusions manually so that Kaspersky Endpoint Security does not lose contact with the server providing the integration.

Excluding a process from network isolation by name is supported on devices with kernel version 4.18 or later with eBPF and BTF support and with tracepoints and kprobes functions enabled for kernel tracing.

If Kaspersky Endpoint Security is being used in standard mode or in Endpoint Detection and Response Agent mode, when using network isolation, we recommend the following:

- Use a KSN proxy server to interact with Kaspersky Security Network.
- Use Kaspersky Security Center as a proxy server for application activation.

  If it is impossible to use Kaspersky Security Center as a proxy server, you must configure the proxy server that you want to use and add it to exclusions.
- Specify Kaspersky Security Center as the database update source.

These recommendations do not apply if Kaspersky Endpoint Security is being used in Light Agent mode.

Manually enabling or disabling the network isolation of the device in the Web Console

You can enable network isolation for a device using Web Console only when integrated with Kaspersky Endpoint Detection and Response Optimum.

Enabling and disabling network isolation of a device manually when integrating with Kaspersky Endpoint Detection and Response Optimum

To manually enable or disable network isolation for a device:

1. In the main window of the Web Console, select **Assets (Devices)** → **Managed devices**.

   The list of managed devices opens.

2. Select the administration group containing the necessary device. To do so, click the link in the **Current path** field above the list of managed devices and select an administration group in the window that opens.

   The list displays only the managed devices for the selected administration group.

3. Find your device in the list and click on its name.

4. This opens a managed device properties window; in that window, go to the **Applications** tab.

5. In the list of applications installed on the device, click Kaspersky Endpoint Security.

6. In the application properties window that opens, on the **Application settings** tab, select **Detection and Response** and click the **Endpoint Detection and Response Optimum** link.

7. This opens a window; in that window, under **Network isolation**, do one of the following:

   - Click the **Isolate device from the network** button, to enable network isolation of a device.

     When you click this button, the application isolates the device for the period you specified in the properties of the *Enabling network isolation (NetworkIsolationStart)* task.

   - Click the **Unblock an isolated device** button to disable network isolation of the device.

8. Click **OK**.

If you enabled network isolation of the device, Kaspersky Endpoint Security assigns the **ISOLATED FROM NETWORK** tag to the device. If you disabled network isolation of a device, Kaspersky Endpoint Security removes this tag from the device.

Manually disabling network isolation of a device when integrating with Kaspersky Endpoint Detection and Response Expert (on-premise) or Kaspersky Endpoint Detection and Response (KATA)

To manually disable network isolation for a device:

1. In the main window of the Web Console, select **Assets (Devices)** → **Managed devices**.

   The list of managed devices opens.

2. Select the administration group containing the necessary device. To do so, click the link in the **Current path** field above the list of managed devices and select an administration group in the window that opens.

   The list displays only the managed devices for the selected administration group.

3. Find your device in the list and click its name.

4. This opens a managed device properties window; in that window, go to the **Applications** tab.

5. In the list of applications installed on the device, click Kaspersky Endpoint Security.

6. In the application properties window that opens, on the **Application settings** tab, select the **Detection and Response** section.

7. Under **Network isolation (EDR Expert (on-premise))**, click the **Unblock an isolated device** button to disable network isolation of the device.

After disabling network isolation of a device, Kaspersky Endpoint Security removes the **ISOLATED FROM NETWORK** tag from the device.

Configuring the duration of automatic network isolation

You can configure the duration of automatic network isolation only if integrated with Kaspersky Endpoint Detection and Response Optimum:

Network isolation of devices isolated by the *IOC Scan* task is automatically disabled after a certain length of time. You can configure this timeout in the Web Console in the device properties and in policy properties. The network isolation settings in the policy properties in the Web Console are described in Appendix 5. The network isolation settings in the managed device properties are described in the table below.

If a policy is applied to the device, the settings specified in the policy are applied; the automatic network isolation timeout cannot be configured in the device properties. If a policy is not applied to the device, the settings specified in the device properties are applied.

By default, the application disables network isolation 5 hours after it is enabled. With network isolation disabled, the device can operate on the network without restrictions.

Configuring the automatic disabling of network isolation in the device properties

To configure the automatic disabling of device network isolation:

1. In the main window of the Web Console, select **Assets (Devices)** → **Managed devices**.

   The list of managed devices opens.

2. Select the administration group containing the necessary device. To do so, click the link in the **Current path** field above the list of managed devices and select an administration group in the window that opens.

   The list displays only the managed devices for the selected administration group.

3. Find your device in the list and click on its name.

4. This opens a managed device properties window; in that window, go to the **Applications** tab.

5. In the list of applications installed on the device, click Kaspersky Endpoint Security.

6. In the application properties window that opens, on the **Application settings** tab, select **Detection and Response** and click the **Endpoint Detection and Response Optimum** link.

7. Under **Network isolation**, click **Configure device unblocking**.

8. This opens the **Configure device unblocking** window; in that window, select the **Unblock an automatically isolated device after** check box and in the input field under it, specify the period in hours after which the device must be automatically unblocked.

9. Save your changes.

Manually configuring network isolation

To manually isolate a device from the network, you need integration with Kaspersky Endpoint Detection and Response Optimum.

If you manually enable network isolation for a device, you can pre-configure network isolation using the *Enabling network isolation* (*NetworkIsolationStart*) local task. You can configure network isolation exclusions and the duration of network isolation for a device.

Enabling network isolation is a predefined task and runs only automatically in the following cases:

- If you click the **Isolate device from the network** button in the device properties.
- If you enable network isolation of the device in the alert details window.

You cannot create a new instance of the *Enabling network isolation* task by clicking the **Add** button or run the task by clicking the **Start** button. This task is only available in the device properties, where you can change its settings before enabling network isolation for the device.

The *Enabling network isolation* task settings apply regardless of whether a policy is applied to the device.

To configure the network isolation parameters for a device:

1. In the main window of the Web Console, select **Assets (Devices)** → **Managed devices**.

   The list of managed devices opens.

2. Select the administration group containing the necessary device. To do so, click the link in the **Current path** field above the list of managed devices and select an administration group in the window that opens.

   The list displays only the managed devices for the selected administration group.

3. Find your device in the list and click on its name.

4. This opens a managed device properties window; in that window, go to the **Tasks** tab.

5. In the task list, click the *Enabling network isolation* task.

   The task properties window opens.

6. Go to the **Application settings** tab.

7. Click the **Configure exclusions** link to open the **Exclusions** window.

8. In the window that opens, use the buttons above the table to perform the necessary action:

   - If you want to add information about an excluded network connection, do so in one of the following ways:

     - Click the **Add** button and enter information about the network connection.

     - Click the **Add from profile** button and select a network profile from the dictionary.

   - If you want to delete information about an excluded network connection, select the check box next to the network connection to be removed and click the **Remove** button.

9. Click **OK**.

10. Enter the desired duration of network isolation of the device, in hours, in the **Isolate the device for** field.

    The default duration of network isolation is 5 hours.

    The minimum duration of network isolation is 1 hour.

11. Click the **Save** button to save the changes made.

Configuring exclusions from network isolation in the Web Console

When Kaspersky Endpoint Security is integrated with Endpoint Detection and Response Expert (on-premise), with Kaspersky Endpoint Detection and Response (KATA), or with Kaspersky Managed Detection and Response, exclusions from network isolation are configured on the side of the Detection and Response solution. For details, see the Kaspersky Endpoint Detection and Response Expert (on-premise) Help, the Kaspersky Anti Targeted Attack Platform Help, or the Kaspersky Managed Detection and Response Help.

When Kaspersky Endpoint Security is integrated with Kaspersky Endpoint Detection and Response Optimum, you can configure exclusions from network isolation in the following ways:

- In the policy properties in the Web Console. Exclusions configured in the policy are applied when network isolation is automatically enabled for a device that the policy is applied to.
- In the device properties in the Web Console. Exclusions configured in device properties are applied when network isolation is automatically enabled for a device that no policy is applied to.
- In the settings of the *Enabling network isolation* (*NetworkIsolationStart*) local task. Exclusions configured in the properties of this task are applied when you manually enable network isolation for a device. The *Enabling network isolation* task settings apply regardless of whether a policy is applied to the device.

For configuring exclusions from network isolation, the application provides a list of *standard network profiles*. Network profiles consist of rules that ensure uninterrupted operation of devices with the DNS/DHCP server and DNS/DHCP client roles. You can manage the settings of standard network profiles and configure exclusions manually.

Configuring exclusions from automatic network isolation

You can configure network isolation exclusions for automatically isolated devices in policy properties or in device properties. The network isolation settings in the policy properties in the Web Console are described in Appendix 5.

You can configure exclusions from network isolation only if integrated with Kaspersky Endpoint Detection and Response Optimum:

Adding or removing network isolation exclusions in the device properties is not available if a policy is applied to the device.

To add or remove a network isolation exclusion in the device properties:

1. In the main window of the Web Console, select **Assets (Devices)** → **Managed devices**.

   The list of managed devices opens.

2. Select the administration group containing the necessary device. To do so, click the link in the **Current path** field above the list of managed devices and select an administration group in the window that opens.

   The list displays only the managed devices for the selected administration group.

3. Find your device in the list and click on its name.
4. This opens a managed device properties window; in that window, go to the **Applications** tab.
5. In the list of applications installed on the device, click Kaspersky Endpoint Security.

   The application properties window opens.

6. In the application properties window that opens, on the **Application settings** tab, select **Detection and Response** and click the **Endpoint Detection and Response Optimum** link.
7. This opens a window; in that window, under **Exclusions**, click the **Configure exclusions** link to open the **Exclusions** window.

8. In the window that opens, use the buttons above the table to perform the necessary action:

   - If you want to add information about an excluded network connection, do so in one of the following ways:

     - Click the **Add** button and enter information about the network connection.

     - Click the **Add from profile** button and select a network profile from the dictionary.

   - If you want to delete information about an excluded network connection, select the check box next to the network connection that you want to delete and click **Delete**.

9. Click the **OK** button to save the changes you have made.

The window for adding a network isolation exclusion

In this window, you can enter information about a network connection that you do not want to be blocked when network isolation is enabled.

Network connection settings

Setting	Description
Name	Field for entering the name of the network connection.
Direction	In the drop-down list, you can select the direction of the network connection: • **Outgoing**. • **Incoming**. • **Incoming / Outgoing**.
Protocol	In the drop-down list, you can select the protocol used by the network connection: • **Any**. • **Custom**. • **ICMP**. • **IPv6_ICMP**. • **TCP**. • **UDP**. • **IGMP**. • **GRE**. • **IPv4**. • **IPv6**.
Number	Field for entering the network connection number. This field is available if **Custom** is selected in the **Protocol** drop-down list.
Local ports/ranges	This check box adds the local port numbers or local port ranges that are listed in the field below to the list of network isolation exclusions.
Remote ports/ranges	This check box adds the remote port numbers or remote port ranges that are listed in the field below to the list of network isolation exclusions.
Remote address	This check box adds the IP address of the remote device specified in the field below to the list of network isolation exclusions.
Appendices	This check box adds the applications listed in the table below the check box to the list of network isolation exclusions. You can add a path to an application whose network connection you do not want to block by clicking the **Add** button. In the window that opens, enter the path to the application in the **Path to application** field and save the changes. You can remove an application from the table by selecting the check box next to the application you want to remove and then clicking the **Remove** button. These settings are applicable to devices with kernel version 4.18 or later with eBPF and BTF support and with tracepoints and kprobes functions enabled for kernel tracing.

The Network profiles dictionary window

In this window, you can select one or more excluded network connection profiles.

Network connection profiles

Network connection profile	Description
DNS server	The service providing DNS name resolution by responding to requests to get IP addresses and requests to update DNS records.
DNS client	The service providing DNS name resolution by executing DNS name queries.
Active Directory Certificate Services	Services used to create, verify, and revoke public key certificates for internal use within the organization.
Active Directory Federation Services	Services used for granting users access to multiple web services or network resources through unified sets of credentials that are stored centrally.
Active Directory Lightweight Directory Services	Services that provide the same functionality as Active Directory Domain Services but do not require the creation of domains or domain controllers.
Active Directory Rights Management Services	Services used for controlling user access to documents.
DHCP	The service uses Dynamic Host Configuration Protocol (DHCP) to automatically allocate IP addresses.
File Transfer Protocol (FTP)	Standard network protocol for transferring files between a client and a server across a network.
Kerberos Key Distribution Center	The network service used to provide tickets (TGS) and temporary session keys to users and devices in an Active Directory domain.
Secure Shell (SSH)	A protocol that allows remote control of an operating system and tunneling of TCP connections.
Linux system components	Linux networking system services such as NetworkManager.

Managing the network isolation of a device on the command line

When integrated with Detection and Response solutions, on the command line, you can:

- Check the network isolation status of a device and view the list of network isolation exclusions.
- Disable network isolation of a device.

To disable network isolation for a device, run the following command:

```
kesl-control [-R] --isolation-off
```

To check the network isolation status and view the list of network isolation exclusions, run the following command:

```
kesl-control [-R] --isolation-stat
```

One of the following network isolation statuses is displayed:

- *Network isolation enabled*.
- *Network isolation disabled*.

Managing the Quarantine

Quarantine is a special storage location on the device for files that may be infected with viruses or cannot be disinfected at the time of detection. Quarantine allows isolating a file for further investigation. Quarantined files are stored in an encrypted form and do not threaten the security of the device. In contrast to Quarantine, Backup stores backup copies of files, in which malicious code was detected and which were deleted or modified during the disinfection process.

The application only uses Quarantine when integrated with Detection and Response solutions to perform recommended threat response actions. When the application is integrated with Kaspersky Endpoint Detection and Response Optimum or with Kaspersky Managed Detection and Response, you can also manually quarantine files that you consider dangerous for your device.

By default, the /var/opt/kaspersky/kesl/common/objects-backup/ directory is used to store quarantined files. This directory also contains Backup objects. You can change the directory for storing Backup and Quarantine objects using the command line.

Quarantined files may contain personal data. Root privileges are required to access quarantined files.

You can configure quarantine settings on a device using a policy in the Web Console or in the Administration Console or using the command line. You can configure the following Quarantine settings:

- The percentage of Quarantine that must be full to generate an event about Quarantine being full. By default, an event is generated when the Quarantine is 90% full.
- Maximum size of the Quarantine in megabytes. When the maximum Quarantine size is reached, the application automatically deletes the oldest quarantined files. By default, the maximum Quarantine size is 200 MB if the application is being used in Standard mode or EDR Agent mode, and 100 MB if the application is being used in Light Agent mode.
- Path to the directory where Backup and Quarantine objects are stored (can only be configured on the command line).

Quarantining files

Some files can be critically important for the operation of the operating system and the application. Quarantining such files can disrupt the operation of the system.

You cannot quarantine System Critical Objects (SCO). SCOs include files that are necessary for the operation of the operating system and the Kaspersky Endpoint Security application.

Placing a file in quarantine is possible only if one of the following conditions is met:

- Integration of Kaspersky Endpoint Security with Kaspersky Endpoint Detection and Response Optimum is enabled and the EDR Optimum component is activated.
- Integration of the Kaspersky Endpoint Security application with the Kaspersky Endpoint Detection and Response Expert (on-premise) or Kaspersky Endpoint Detection and Response (KATA) component is enabled, and the EDR Expert (on-premise) component is activated.
- Integration of Kaspersky Endpoint Security with Kaspersky Managed Detection and Response is enabled and the MDR component is activated.

The directory for storing Quarantine objects must be writable.

When integrated with Kaspersky Endpoint Detection and Response (on-premise) or Kaspersky Endpoint Detection and Response (KATA), files can be quarantined in one of the following ways:

- By a task configured on the side of the Detection and Response solution. For details, see the Kaspersky Endpoint Detection and Response Expert (on-premise) Help or the Kaspersky Anti Targeted Attack Platform Help.
- By a YARA Scan Task that scans process memory.

When integrated with Kaspersky Managed Detection and Response, files are quarantined in one of the following ways:

- As a result of the execution of a task configured on the side of Kaspersky Managed Detection and Response.
- As a result of the execution of a command to manage the quarantine on the device.

For more information on working with Quarantine when integrated with Kaspersky Endpoint Detection and Response, see the Kaspersky Endpoint Detection and Response Help.

When integrated with Kaspersky Endpoint Detection and Response, files are quarantined in one of the following ways:

- Automatically as a result of the detection of indicators of compromise.
- As a result of a *Quarantine* task, which you can create in the Web Console.
- As a result of the execution of a command to manage the quarantine on the device.
- As a result of following the recommendation in the alert details.

For more information on managing the Quarantine when integrated with Kaspersky Endpoint Detection and Response Optimum, see the Kaspersky Endpoint Detection and Response Optimum Help.

Managing quarantined files

You can manage quarantined files:

- In Kaspersky Security Center, in the common list of files quarantined by Kaspersky applications.

  To manage quarantined files in Kaspersky Security Center, you need to enable the transfer of data about quarantined files to the Administration Server.

- Locally on the device using the command line.

You can view information about quarantined files, and delete and restore files from quarantine.

Restoring, deleting, and retrieving a file from Quarantine is available regardless of whether integration with Detection and Response solutions is enabled, and regardless of whether a policy is applied to the device.

The general list of files quarantined by Kaspersky applications on client devices is kept in Kaspersky Security Center and is available in the Administration Console (**Advanced** → **Repositories** → **Quarantine**) and the Web Console (**Operations** → **Repositories** → **Quarantine**). Kaspersky Security Center does not copy files from Quarantine storages to the Administration Server; all files are stored in Quarantine storages on client devices. For detailed information about managing quarantined files in Kaspersky Security Center, refer to the Kaspersky Security Center Help.

The quarantined file is restored to its original location according to the specified settings. Restoration preserves the MAC label (only on Astra Linux devices) and attributes of the original file (including the immutable and append-only attributes). A file with immutable and append-only attributes can only be restored to the location if the original file is not present, or to the original location, but with a different name. Root privileges are required to restore a file from Quarantine to a different directory or to the original location with a different name.

Once the restoration process is complete, the application deletes the quarantined copy of the restored file.

Restoring a file from quarantine fails in the following cases:

- The file to be restored was not found in the quarantine storage.
- The name of the file being restored is specified incorrectly or with the wrong case.
- The file ID was specified incorrectly.
- The destination directory has been deleted, moved, renamed, or you do not have access rights to it.

  In this case, the application moves the file to the /var/opt/kaspersky/kesl/common/restored/ directory. You can manually move the file from this directory to the directory of your choice.
- A file with the same name already exists at the specified path.
- The device does not have enough space.
- Only on Astra Linux devices: the MAC label of the file is higher than the MAC label of the directory into which the file is being restored.
- Only on Astra Linux devices: the MAC label of the file is lower the MAC label of the directory into which the file is being restored, and the ccnr flag is not set for this directory.

Deleting a file from quarantine fails in the following cases:

- The file to be deleted was not found in the quarantine storage.
- The name of the file being deleted is specified incorrectly or with the wrong case.
- The file ID was specified incorrectly.

Quarantining a file using the Web Console

When integrated with Kaspersky Endpoint Detection and Response Optimum, you can quarantine files using the *Quarantine file* task in the Web Console.

You can create and run a Quarantine file task for all managed devices or for a specific device.

The task is performed for files listed in the task properties on the **Application settings** tab, in the **Quarantine file** table. The table contains the following information about the files that need to be quarantined:

- **Path** – Path to the directory on the device where the file is located.
- **Checksum type** – File checksum verification type.

Using the buttons above the table, you can add or delete information about the files you want to quarantine.

To add information about the file you want to quarantine, you need to click the **Add** button and specify the task settings in the window that opens.

Quarantine file task settings

Setting	Description
Specify the file you want to quarantine	In the drop-down list, you can select how to specify the path to the file to be quarantined: • **Specify file by full path** • **Specify file by directory path and checksum**
Full path to file	Field for entering the full path to the file to be quarantined. This field is displayed if in the **Specify the file you want to quarantine** drop-down list, you selected **Specify file by full path**. If the file is located on a network drive, enter the path to the file starting with the `//` characters. For example, you can enter `//server_ip/shared_folder`.
Checksum type	In the drop-down list, you can select the checksum type of the file to be quarantined: • **MD5**. • **SHA256**. This drop-down list is displayed if in the **Specify the file you want to quarantine** drop-down list, you selected **Specify file by directory path and checksum**.
File checksum	Field for entering the checksum of the file to be quarantined. This field is displayed if in the **Specify the file you want to quarantine** drop-down list, you selected **Specify file by directory path and checksum**.

Setting	Description
File path	Field for entering the path to the directory of the file to be quarantined. This field is displayed if in the **Specify the file you want to quarantine** drop-down list, you selected **Specify file by directory path and checksum**. If the file is located on a network drive, enter the path to the file starting with the `//` characters. For example, you can enter `//server_ip/shared_folder`.

If you are trying to quarantine a file that is too big, the *Quarantine file* task may finish with the *Insufficient space in Quarantine* error. In this case, you can clear the quarantine or increase the quarantine size and then try again.

You can view the result of the Start process task in the task properties in the Web Console under **Results**.

Editing Quarantine settings in the Web Console

In the Web Console, you can manage Quarantine settings in the policy properties (**Application settings** → **General Settings** → **Reports and Storage**) and in managed device properties (**Assets (Devices)** → **Managed Devices** → <device name> link → **Applications** tab → <Kaspersky Endpoint Security application name> link → **Application settings** tab → **Storage settings** section).

The Quarantine settings in the managed device properties are described in the table below.

Quarantine settings in device properties

Setting	Description
Limit the size of Quarantine to (MB):	Text box for entering the maximum size of the Quarantine (MB). If the check box is cleared, the size of quarantine is not limited. Default value: 200.
Notify when quarantine is (%) full:	Field for entering the percentage of Quarantine that must be full to generate an event about Quarantine being full. If the check box is cleared, the event about Quarantine being full is not generated. Possible values: 1–100. Default value: 90.

Editing Quarantine settings in the Administration Console

In the Administration Console, you can manage Quarantine settings in the policy properties (Managing policies in the Administration Console, Creating a policy using the Administration Console) (**General settings** → **Storage settings**) and in managed device properties (**Managed devices** → **Devices** tab → device properties window → **Applications** section → application properties window → **Storage settings**).

Quarantine settings

Setting	Description
Limit the size of Quarantine to (MB):	This check box enables or disables limiting the maximum size of the Quarantine to the specified value (in megabytes). If the check box is cleared, the size of quarantine is not limited. Possible values: 1–999999. Default value: 200 if the application is being used in Standard mode or Endpoint Detection and Response Agent mode, and 100 if the application is being used in Light Agent mode.

Setting	Description
Notify when quarantine is (%) full:	This check box enables or disables the limit on the percentage of Quarantine that must be full to generate an event about Quarantine being full. If the check box is cleared, the event about Quarantine being full is not generated. Possible values: 1–100. Default value: 90.

Editing Quarantine settings on the command line

On the command line, you can configure Quarantine using the `QuarantineSizeLimit`, `QuarantineFillingNotification`, and `QuarantineBackupFolder` settings in the general application settings.

You can change the values of the settings with the help of command line switches or a configuration file that contains all general application settings.

Quarantine settings

Setting	Description	Value
`QuarantineFillingNotification`	The percentage of Quarantine that must be full to generate an event about Quarantine being full. To disable generating events about Quarantine being full, enter 0.	0 to 100 0 – generating events about Quarantine being full is disabled. Default value: 90.
`QuarantineSizeLimit`	Maximum size of the Quarantine (in megabytes). When the maximum Quarantine size is reached, the application deletes the oldest files. To make the size of Quarantine unlimited, enter 0.	0 to 999999 0 means the Quarantine size is not limited. Default value: 200 if the application is being used in Standard mode or Endpoint Detection and Response Agent mode, and 100 if the application is being used in Light Agent mode.
`QuarantineBackupFolder`	Path to the directory in which the Backup and Quarantine objects are stored. You can specify a directory that is different from the default directory. You can use a directory on any device as the directory for storing Backup and Quarantine objects. It is not recommended to assign directories that are located on remote devices, such as those mounted via the Samba and NFS protocols. If the specified directory does not exist or is unavailable, the application uses the default directory.	Default value: /var/opt/kaspersky/kesl/common/objects-backup/ Root privileges are required for access to the default directory.

Managing quarantined files on the command line

When integrated with Detection and Response solutions, on the command line, you can use Quarantine management commands to:

- Put files into Quarantine (only when integrated with Kaspersky Endpoint Detection and Response Optimum or with Kaspersky Managed Detection and Response).
- View information about quarantined files.

- Delete all files or specified files from Quarantine.
- Restore files from Quarantine.

Restoring infected files may lead to a device infection.

Quarantine file

To quarantine a file, run the following command:

```
kesl-control [-Q] --put <file path> [--md5] [--sha256] [--save-original-file]
```

where:

- `<file path>` is the path to the file that you want to quarantine.
- `--md5` is the MD5 hash of the file that you want to quarantine.
- `--sha256` is the SHA256 hash of the file that you want to quarantine.
- `--save-original-file` keeps the original file. If you do not specify this option, the original file is deleted.

The original file is deleted only if the user account has permission to delete objects. If the rights are insufficient, a file deletion error message is displayed.

You can use this command only when integrated with Kaspersky Endpoint Detection and Response Optimum or with Kaspersky Managed Detection and Response.

Viewing information about quarantined files

To view information about quarantined files, run the following command:

```
kesl-control -Q --query ["<filter conditions>"] [-n <number>] [--json]
```

where:

- `< filter conditions >` specifies one or more logical expressions in the `< field > < comparison operation > '< value >'` format combined using the `and` logical operator to restrict query results. If you do not specify any filter conditions, the application will display the details of all quarantined files.
- `< number >` is the count of the most recent quarantined files that you want to display. If you do not specify the `-n` option, the last 30 files are displayed. Specify 0 to show all files.
- `--json`: output data in JSON format.

The `ObjectId` line displays the numeric ID that the application assigned to the file when quarantining it. This ID is used to perform actions on the file, such as restoring the file or deleting it from Quarantine.

Restore files from Quarantine

To restore a file from Quarantine under its original name to its original location, execute the following command:

```
kesl-control -Q --restore < object ID >
```

where `< object ID >` is a numeric ID that the application assigned to the file when it was quarantined.

To restore a file from Quarantine under a new name to a specified directory, execute the following command:

```
kesl-control -Q --restore < object ID > --file < file path >
```

where `--file < file path >` is the new name of the file and the path to the directory where you want to save the file.

You can restore a file from Quarantine to a different directory only if your user has root rights. If your user's rights are insufficient, a file can only be restored to its original location.

On Astra Linux devices in the closed software environment mode, you can restore a file only under the same account under which it was placed in Backup.

Delete files from Quarantine

To delete selected files from Quarantine, run the following command:

```
kesl-control -Q --mass-remove --query "< filter conditions >"
```

where `< filter conditions >` is one or several logical expressions in the format `< field > < comparison operator > '< value >'`, combined with the help of the logical operator `and` to limit the results.

Examples:
To delete files that contain "test" in their names or paths:

```
kesl-control -Q --mass-remove --query "FileName like '%test%'"
```

To delete all files from Quarantine, run the following command:

```
kesl-control -Q --mass-remove
```

Start process

When Kaspersky Endpoint Security is integrated with Detection and Response solutions, you can remotely run processes and executable files on a protected device using the *Run process* task.

You can create and run tasks to run a process in Web Console only when integrated with Kaspersky Endpoint Detection and Response Optimum. When integrated with Endpoint Detection and Response Expert (on-premise), with Kaspersky Endpoint Detection and Response (KATA), or with Kaspersky Managed Detection and Response, the tasks are created and run on the side of the Detection and Response solution.

Using the *Start process* task, you can start:

- Processes stopped as a result of malicious activity on the device.
- Processes stopped by you. For example, you can remotely start a process that you have stopped using the Terminating a process *task*.
- Scripts. For example, you can run a script to collect data from the device to investigate a threat.
- Utilities. For example, you can run a utility that saves device configuration information to a file.
- Applications.

If SELinux is installed in your operating system in `Enforcing` mode, starting the *Start process* task requires additional configuration of SELinux.

You can create and run the *Start process* task, as well as edit its settings in the Web Console: The *Start process* task cannot be managed on the command line.

Start process task settings

Setting	Description
Executable command	Field for entering the command to start the process. For example, if you want to run the `klnagchk` tool, which checks the connection to the Administration Server, enter `/< absolute path to the directory with the utility >/klnagchk` and then, if necessary, fill in the other fields described in the table below.
Command line arguments (optional)	Field for entering command line arguments to pass additional input to the script, utility, or application at startup. For example, you can enter the `-logfile /tmp/klnagchk.log` argument. This argument tells the tool to save the result to a file named `klnagchk.log` in `/tmp`. If you need to pass multiple arguments, separate them with spaces. For example, you can enter `-logfile /tmp/klnagchk.log -savecert /home/user/certificate.cer` arguments. These arguments tell the tool to save the result to a file named `klnagchk.log` in the `tmp` directory, and to save the certificate used to check access to the Administration Server in the `certificate.cer` file in the `/home/user/` directory.
Working directory path (optional)	Field for the path to the working directory in which the command from the **Executable command** field is executed. For example, you can enter `/tmp` and run the `klnagchk` utility with the following arguments: `-logfile klnagchk.log -savecert certificate.cer`. In this case, both files are created in `tmp`.

You can view the result of the *Start process* task in the task properties in the Web Console under **Application settings → Execution results**.

The table displays a list of devices on which the *Start process* task has been run, as well as the results of the task. In the **Device** drop-down list, you can choose to display task results for all managed devices on which the task has run, or for a specific device.

The table contains the following information:

- **Status** – Task completion status
- **Device** – Name of the device on which the task was started
- **Time** – Date and time when the task was performed
- **Results** – Task execution result in the form of a return code The link with the return code opens the **Task results** window, which displays the following information:
  - task completion status
  - process start time
  - process completion time
  - name of the device on which the process was started
  - executed command
  - command line arguments
  - working directory path
  - return code

By clicking the **Download STDOUT stream** link in the **Task results** window, you can download a report about the successful execution of the task in TXT format. If the *Start process* task failed, you will see an error message if you try to download this report.

By clicking the **Download STDERR stream** link in the **Task results** window, you can download a report about errors that occurred during execution of the tax in TXT format. If the *Start process* task completed successfully, you will see an error message if you try to download this report.

Terminate process

When Kaspersky Endpoint Security is integrated with Detection and Response solutions, you can remotely terminate processes on a protected device using the *Terminate process* task.

You can create and run tasks to terminate a process in Web Console only when integrated with Kaspersky Endpoint Detection and Response Optimum. When integrated with Endpoint Detection and Response Expert (on-premise), with Kaspersky Endpoint Detection and Response (KATA), or with Kaspersky Managed Detection and Response, the tasks are created and run on the side of the Detection and Response solution.

Using the *Terminate process* task, you can terminate:

- Processes started on a device as a result of malicious activity.
- Processes started by you. For example, you can remotely terminate a process that you have started using the *Start process* task.
- Scripts. For example, you can remotely terminate a script that you have started using the *Start process* task.
- Utilities. For example, you can remotely terminate an internet speed test utility that you started using the *Start process* task.
- Applications.

The processes of System Critical Objects (SCOs) cannot be terminated. SCOs include files that are necessary for the operation of the operating system and the Kaspersky Endpoint Security application.

You can create and run the *Terminate process* task, as well as edit its settings in the Web Console: The *Terminate process* task cannot be managed on the command line.

Terminating a process task settings

Setting	Description
Specify the file whose processes you want to terminate	In the drop-down list, you can select how to specify the path to the file: • **By path to directory and checksum** • **By full path** • **By PID** The **By PID** value is present in the drop-down list only for tasks created in device properties.
Full path to file	Field for entering the full path to the file. This field is displayed only if in the **Specify the file whose processes you want to terminate** drop-down list, you selected **By full path**.

Setting	Description
Checksum type	In the drop-down list, you can select the file checksum type: • **MD5**. • **SHA256**. This drop-down list appears if you select **By path to directory and checksum** in the **Specify the file whose processes you want to terminate** drop-down list.
File checksum	Field for entering the file checksum. This field is displayed if in the **Specify the file whose processes you want to terminate** drop-down list, you selected **By path to directory and checksum**, and in the **Checksum type** drop-down list, you selected **MD5**.
Directory path	Field for entering the path to the directory of the file. This field is displayed if in the **Specify the file whose processes you want to terminate** drop-down list, you selected **By path to directory and checksum**.
Process ID	Process ID (PID) entry field. This field is displayed if in the **Specify the file whose processes you want to terminate** drop-down list, you selected **By PID**.

You can view the result of the *Terminate process* task in the task properties in the Web Console under **Results**.

Receiving a file from a device

When Kaspersky Endpoint Security is integrated with Detection and Response solutions, you can get files from a protected device using the *Get file* task.

> You can create and run tasks to get a file from a device in Web Console only when integrated with Kaspersky Endpoint Detection and Response Optimum. When integrated with Endpoint Detection and Response Expert (on-premise), with Kaspersky Endpoint Detection and Response (KATA), or with Kaspersky Managed Detection and Response, the tasks are created and run on the side of the Detection and Response solution.

For example, you can receive an event log file that was generated by a third-party application.

You can create and run the *Receiving a file from a device* task, as well as edit its settings in the Web Console: The *Receive file from device* task cannot be managed on the command line.

The *Receive file from device* task is performed for files specified in the task properties on the **Application settings** tab, in the **Receive file** table.

The table contains the following information about the files that the task is supposed to get:

- **Directory path** – Path to the directory on the device where the file is located.
- **Checksum verification type** – File checksum verification type.

Using the buttons above the table, you can add, change, or delete information about the files you want to get from the device.

To add information about the file you want to get, you need to click the **Add** button and specify the task settings in the **Receive file** window that opens.

Receiving a file from a device task settings

Setting	Description
Specify the file to receive	In the drop-down list, you can select how to specify the path to the file: • **By path to directory and checksum** • **By full path**
Full path to file	Field for entering the full path to the file. This field is displayed if in the **Specify the file to receive** drop-down list, you selected **By full path**.
Checksum type	In the drop-down list, you can select the file checksum type: • **MD5**. • **SHA256**. This drop-down list appears if you select **By path to directory and checksum** in the **Specify the file to receive** drop-down list.
File checksum	Field for entering the file checksum. This field is displayed if in the **Specify the file to receive** drop-down list, you selected **By path to directory and checksum**.
Path to file directory	Field for entering the path to the directory of the file. This field is displayed if in the **Specify the file to receive** drop-down list, you selected **By path to directory and checksum**.

As a result of the *Receiving a file from a device* task, a copy of the file is quarantined on the device. You can use the Web Console to download this copy from Quarantine to the device from which you initiated the download.

The file size must not exceed 100 MB.

The original file on the user device remains in its original directory.

In Kaspersky Security Center, in the list of quarantined files, all files received through the *Receive file from device* task will have the *Infected* status regardless of the file scan results.

The *Receive file from device* task ends with an error if:

- The specified file is not found.
- Incorrect file information (file name or checksum) is specified.
- Insufficient rights to manage the specified file.
- The specified file is blocked.
- Insufficient space in Quarantine.
- The specified file is too big (more than 100 MB).

You can view the result of the Start process task in the task properties in the Web Console under **Results**.

Delete file from device

When Kaspersky Endpoint Security is integrated with Detection and Response solutions, you can remove files from a protected device using the *Delete file* task.

You can create and run tasks to delete a file in Web Console only when integrated with Kaspersky Endpoint Detection and Response Optimum. When integrated with the Kaspersky Endpoint Detection and Response (KATA) component, the tasks are generated and run on the Kaspersky Endpoint Detection and Response (KATA) side.

System Critical Objects (SCO) cannot be deleted. SCOs include files that are necessary for the operation of the operating system and the Kaspersky Endpoint Security application.

You can create and run the *Delete file from device* task, as well as edit its settings in the Web Console: The *Delete file from device* task cannot be managed on the command line.

Deleting a file from a device task settings

Setting	Description
Specify the file to be deleted	In the drop-down list, you can select how to specify the path to the file to be deleted: • **By path and checksum** • **By full path**
Full path to file	Field for entering the full path to the file to be deleted. This field is displayed if in the **Specify the file to be deleted** drop-down list, you selected **By full path**.
Checksum type	In the drop-down list, you can select the type of the checksum of the file to be deleted: • **MD5**. • **SHA256**. This drop-down list is displayed if in the **Specify the file to be deleted** drop-down list, you selected **By path to directory and checksum**.
File checksum	Field for entering the checksum of the file to be deleted. This field is displayed if in the **Specify the file to be deleted** drop-down list, you selected **By path and checksum**.
Directory path	Field for entering the path to the directory of the file to be deleted. This field is displayed if in the **Specify the file to be deleted** drop-down list, you selected **By path and checksum**.
Include subdirectories	This check box enables or disables subdirectories.

If the file is blocked by another process, the task is displayed with the *Completed* status, but the file itself is deleted only after the device is restarted. After restarting the device, make sure that the file was deleted.

If you are trying to delete a running executable file, the *Delete file from device* task may finish with an *Access denied* error. In this case, you need to create and run the *Terminate process* task for the file, and then try again.

You can view the result of the Start process task in the task properties in the Web Console under **Results**.

Searching for indicators of compromise

An *Indicator of Compromise (IOC)* is a set of data about an object or activity that indicates unauthorized access to a device (compromised data). For example, an indicator of compromise could be a high number of failed login attempts. When Kaspersky Endpoint Security is integrated with Detection and Threat Response solutions, you can detect indicators of compromise on protected devices and perform threat response actions.

The IOC Scan functionality is available in the Kaspersky Endpoint Security application if one of the following conditions is satisfied:

- Integration of Kaspersky Endpoint Security with the Kaspersky Endpoint Detection and Response Optimum solution is enabled and the EDR Optimum component is activated.
- Integration of the Kaspersky Endpoint Security application with the Kaspersky Endpoint Detection and Response Expert (on-premise) or Kaspersky Endpoint Detection and Response (KATA) component is enabled, and the EDR Expert (on-premise) component is activated.

When integrated with Kaspersky Endpoint Detection and Response (on-premise) or Kaspersky Endpoint Detection and Response (KATA), the IoC Scan is performed on the side of the relevant solution.

When integrated with Kaspersky Endpoint Detection and Response Optimum, an IOC Scan is performed using the *IOC Scan* task. You can create IOC Scan tasks:

- In the Web Console
- From the alert details window
- On the command line

The *IOC Scan* task checks for IOC terms (properties of IOC objects, for example, a file hash) only in the operating system's main namespace. The *IOC Scan* task does not calculate hashes of files larger than 200 MB.

To search for *indicators of compromise*, Kaspersky Endpoint Security uses IOC files prepared by the user. If you want to add an indicator of compromise manually, please see IOC file requirements. If the IOC file does not meet the requirements, the application will not be able to use it.

IDs of all IOC files used in an IOC Scan task must be unique. If you load multiple IOC files with the same ID, the application only uses one of those IOC files. The other IOC files will be automatically excluded.

Searching for indicators of compromise in the Web Console

You can scan for indicators of compromise using the IOC Scan task in Web Console only when integrated with Kaspersky Endpoint Detection and Response Optimum. When integrated with Kaspersky Endpoint Detection and Response (on-premise) or Kaspersky Endpoint Detection and Response (KATA), the IoC Scan is performed on the side of the relevant Detection and Response solution.

You can create and run the *IoC Scan* task, as well as edit its settings in the Web Console.

For the *IOC Scan* task, the Wake-on-LAN feature is not available in the schedule settings. For the task to run, make sure the device is powered on.

You can change the main settings of the *IOC Scan* task in the task properties on the **Application settings** tab → **IOC Scan settings**.

IOC Scan task settings

Setting	Description
Redefine IOC files	This button opens the **Redefine IOC files** panel. Clicking the **Add IOC files** button located in the **Redefine IOC files** panel opens a window where you can select and download the IOC files on the device that are necessary to search for indicators of compromise. After uploading the IOC files, you can view a list of indicators from the IOC files.
Export IOC collection	Clicking this button downloads IOC files to the device.

Setting	Description
Apply response actions when an IOC is detected	This check box enables or disables the application of response actions when indicators of compromise are detected. If the check box is selected, then when indicators of compromise are detected, the application performs the actions you selected: • **Start critical areas scan**. If this check box is selected, then when indicators of compromise are detected, the application starts the *Critical Areas Scan* task. By default, Kaspersky Endpoint Security scans the kernel memory, running processes, boot sectors, and other **critical areas**. ◦ /lib/systemd ◦ /lib/udev ◦ /lib/dbus-1.0 ◦ /usr/local/lib/systemd/user ◦ /usr/share/dbus-1 ◦ /usr/share/gdm/autostart ◦ /usr/share/gnome/autostart ◦ /var/spool/at ◦ /var/spool/at/spool ◦ /var/spool/anacron ◦ /var/spool/cron ◦ /boot ◦ /bin ◦ /sbin ◦ /lib ◦ /lib32 ◦ /lib64 ◦ /libx32 ◦ /usr/lib ◦ /usr/lib32 ◦ /usr/lib64 ◦ /usr/libx32 ◦ ~/.config/autostart ◦ ~/.config/autostart-scripts ◦ ~/.config/plasma-workspace/env ◦ ~/.config/plasma-workspace/shutdown ◦ ~/.config/lxsession ◦ ~/.fluxbox/startup ◦ ~/.kde/Autostart ◦ /etc • **Quarantine a copy, delete the object**. If the check box is selected, when indicators of compromise are detected, the application quarantines a copy of the object and deletes the original object.

Setting	Description
	• **Isolate device from the network**. If this check box is selected, then when indicators of compromise are detected, the application isolates the device from the network to prevent the spread of the threat. You can configure the isolation duration. If the policy applies to an isolated device, the Automatically disable isolation after a specified period and Network isolation exclusions settings specified in the policy properties are applied. If the policy does not apply to the isolated device, the settings specified in the device properties are applied. If the check box is cleared, the application does not perform any threat response actions when indicators of compromise are detected. Information about detected indicators of compromise is displayed in the window with alert details and in the task properties.

You can change the additional settings of the *IOC Scan* task in the task properties on the **Application settings** tab → **Additional**.

The **Additional** section can be edited if you have loaded an IOC file in the **Redefine IOC files** panel.

Additional settings of the *IOC Scan* task

Setting	Description
Data types (IOC documents) to analyze during IOC Scan	The check boxes in the **Additional** section include the following data types (IOC documents) in the analysis during an IOC scan: • **Processes - ProcessItem**. • **Files - FileItem**. • **IOC documents**. The **IOC documents** link is available if you have loaded an IOC file in the **Redefine IOC files** panel. This link takes you to the **File Scan settings – FileItem** window, where you can add scan scopes. • **ARP tables - ArpEntryItem**. • **Network ports - PortItem**. • **User accounts - UserItem**. • **System objects - SystemItem**.
Search for IOCs in the following areas	This check box enables or disables the scanning of the following scopes. • **Files on all drives of the device**. • **Files on system drives of the device**. • **Critical areas on the device**. This option is selected by default. • **Do not scan predefined areas**.
Scan custom areas	The check box adds the scopes listed in the table under the check box to the list of scan scopes. You can add a path to the scope you want to scan by clicking the **Add** button. In the window that opens, enter the path to the scope in the **Scope** field and save the changes. You can remove a scope from the table by select the check box next to the scope you want to remove and then clicking the **Remove** button. You cannot clear this check box if in the **Search for IOCs in the following areas** list, the **Do not scan predefined areas** option is selected.

We do not recommend adding or deleting IOC files after starting this task. This may result in incorrect display of IOC scan results for previous runs of the task. We recommend creating a new task to run an IOC scan based on new IOC files.

You can view the result of the *IOC Scan* task in the task properties in the Web Console under **Application settings** → **IOC Scan results**. The table displays a list of devices on which the *IOC Scan* task has been run, as well as the results of the task. In the **Device** drop-down list, you can choose to display task results for all managed devices on which the task has run, or for a specific device.

The table contains the following information:

- **Status** – Status of indicator of compromise detection, displayed as an icon.
- **Device** – Name of the device on which the task was started
- **Time** – Date and time when the task was performed
- **Results** – Information about the result of the *IOC Scan* task. One of the following statuses may be displayed:
  - *IOCs detected* –– This status is displayed as a link; clicking the link opens a window with the alert details.
  - *No IOCs detected*.

IOC Scan results are stored for 30 days. After this time expires, Kaspersky Endpoint Security automatically deletes old entries.

Searching for indicators of compromise in the command line

You can scan for indicators of compromise using the IOC Scan task on the command line only when integrated with Kaspersky Endpoint Detection and Response Optimum. When integrated with Kaspersky Endpoint Detection and Response (on-premise) or Kaspersky Endpoint Detection and Response (KATA), the IoC Scan is performed on the side of the relevant Detection and Response solution.

To create, configure, and run an IOC Scan task from the command line, run the following command:

```
kesl-control [-T] --scan-ioc --path <path to directory or file> [--process on|off] [--hint <regular expression>] [--arpentry on|off] [--ports on|off] [--system on|off] [--files on|off] [--drives all|system|critical|custom] [--excludes <list of exclusions>] [--scope <list of directories>] [--action Skip|QuarantineFile|IsolateHost|ScanCriticalAreas]
```

where:

- `--path <path to directory or file>` is the path to IOC file or directory with IOC files with the .IOC or .XML extension, which should be used to perform the scan.

  You can specify multiple paths by separating them with a space. You can also specify both types of paths (path to a file and path to a directory).

- `--process` – enable analysis of processes running on the device.

  Possible arguments:

  - `on` – enable analysis of processes running on the device (default value).
  - `off` – disable analysis of processes running on the device.

If you do not specify the `--process` option, the application analyzes processes only if the used IOC file specifies the details of these processes (`ProcessItem`).

- `--hint <regular expression>` is the regular expression that matches the full path to the file (`FileItem`) or executable file of the process (`ProcessItem`) to be analyzed.

  You can use the following regular expression elements:

  - meta characters: `. ^ $ |`
  - character classes: digit, alpha, lower, upper, cntrl
  - quantifiers: `* + ? {n} {n,} {n, m}`
  - negation: `[^a-c]`
  - escaped characters: `\a \e \f`, `\n \r \t \v \b`

- `--arpentry` – enable analysis of entries in the ARP table (`ArpEntryItem`).

  Possible arguments:

  - `on` – enable analysis of entries in the ARP table (default value).
  - `off` – disable analysis of entries in the ARP table.

  If you do not specify the `--arpentry` option, the application analyzes the ARP table only if the used IOC file specifies the details of the ARP table (`ArpEntryItem`).

  `--ports` – enable analysis of ports open for connection.

  Possible arguments:

  - `on` – enable analysis of ports open for connection and scan active connections on the device (default value).
  - `off` – disable analysis of ports open for connection and do not scan active connections on the device.

  If you do not specify the `--ports` option, the application only analyzes ports if the used IOC file specifies the details of these ports (`PortItem`).

- `--system` – enable analysis of the system environment.

  Possible arguments:

  - `on` – enable analysis of the system environment (default value).
  - `off` – disable analysis of the system environment.

  If you do not specify the `--system` option, the application analyzes the system environment only if the used IOC file specifies details of the system environment (`SystemInfoItem`).

- `--files` – enable file analysis.

  Possible arguments:

  - `on` – enable file analysis (default value).
  - `off` – disable file analysis.

If you do not specify the `--files` option, the application analyzes files only if the used IOC file specifies the details of those files (`FileItem`).

- `--drives` – areas to be scanned.

  Possible arguments:

  - `all` – check all available file areas.
  - `system` – scan all files within the root file system.
  - `critical` – scan files in user and system directories (default value).
  - `custom` – scan only files in the areas you specify.

  If you do not specify the `--drives` option, the application analyzes files in user and system directories.

- `--excludes <list of exclusions>` is the list of paths excluded from scans.

  The exclusions specified by this option are global and are valid regardless of the scope type or directory list. These exclusions take precedence over other command line options, including `--hint` and `--scope`.

  > Exclusions are specified as paths, but cannot contain recursive elements or wildcard characters (e.g. `*`).

  If you do not specify the `--excludes` option, the scan is performed without exclusions.

  You can specify multiple exclusions by separating them with a space.

- `--scope <list of directories>` is the list of additional directories to be scanned.

  > This option is required if you specified the `--drives` argument for the `custom` option.

- `--action` – action performed when indicators of compromise are detected.

  Possible arguments:

  - `Skip` – the application will not perform any actions with the detected object, but information about it will be saved in the task execution results (default value).
  - `QuarantineFile` – the application will quarantine the detected object.
  - `IsolateHost` – the application imposes network isolation on the device on which the object is detected.
  - `ScanCriticalAreas` – the application will perform scan **critical areas**.
    - /lib/systemd
    - /lib/udev
    - /lib/dbus-1.0
    - /usr/local/lib/systemd/user
    - /usr/share/dbus-1

- /usr/share/gdm/autostart
- /usr/share/gnome/autostart
- /var/spool/at
- /var/spool/at/spool
- /var/spool/anacron
- /var/spool/cron
- /boot
- /bin
- /sbin
- /lib
- /lib32
- /lib64
- /libx32
- /usr/lib
- /usr/lib32
- /usr/lib64
- /usr/libx32
- ~/.config/autostart
- ~/.config/autostart-scripts
- ~/.config/plasma-workspace/env
- ~/.config/plasma-workspace/shutdown
- ~/.config/lxsession
- ~/.fluxbox/startup
- ~/.kde/Autostart
- /etc

You can specify multiple actions by separating them with commas.

> If you specify the `Skip` argument, do not add any other arguments. The `Skip` argument can only be used on its own.

Requirements for IOC files

When creating IOC Scan tasks, consider the following IOC file requirements and limitations:

- The application supports IOC files with the .IOC or .XML extension in OpenIOC format versions 1.0 and 1.1, an open standard for describing indicators of compromise.
- Semantic errors and unsupported IOC terms and tags in IOC files do not cause the task to fail. For such sections of IOC files, the application registers the absence of a match.
- IDs of all IOC files used in an IOC Scan task must be unique. If there are IOC files with the same identifier, it might affect the task execution results.
- We recommend creating an IOC file for each threat. This makes the results of the *IOC Scan* task easier to read.

The file that can be downloaded by clicking the link below contains a table with the full list of IOC terms of the OpenIOC standard.

DOWNLOAD THE IOC TERMS.XLSX FILE

Special considerations and limitations of the way the application supports the OpenIOC standard are listed in the table below.

Features and limitations of the OpenIOC standard versions 1.0 and 1.1

Supported conditions	OpenIOC 1.0: • `is` • `isnot` (as an exclusion from the set) • `contains` • `containsnot` (as an exclusion from the set) OpenIOC 1.1: • `is` • `contains` • `starts-with` • `ends-with` • `matches` • `greater-than` • `less-than`
Supported attributes of conditions	OpenIOC 1.1: • `preserve-case` • `negate`
Supported operators	`AND` `OR`
Supported data types	`"date"`: date (applicable conditions: `is`, `greater-than`, `less-than`) `"int"`: integer (applicable conditions: `is`, `greater-than`, `less-than`) `"string"`: string (applicable conditions: `is`, `contains`, `matches`, `starts-with`, `ends-with`) `"duration"`: duration in seconds (applicable terms: `is`, `greater-than`, `less-than`)

Special considerations for interpreting data types	The `"boolean string"`, `"restricted string"`, `"md5"`, `"IP"`, `"sha256"`, `"base64Binary"` data types are interpreted as strings.
	The application supports the interpretation of the `Content` parameter for `int` and `date` data types specified as intervals:
	• OpenIOC 1.0:
	Using the `TO` operator in the `Content` field:
	`<Content type="int">49600 TO 50700</Content>`
	`<Content type="date">2009-04-28T10:00:00Z TO 2009-04-28T16:00:00Z</Content>`
	`<Content type="int">[154192 TO 154192]</Content>`
	• OpenIOC 1.1:
	◦ Using `greater-than` and `less-than` conditions
	◦ Using the `TO` operator in the `Content` field
	The application supports the interpretation of the `date` and `duration` data types if the indicators are specified in the `ISO 8601, Zulu time zone, UTC` format.

Execution prevention for objects

When integrated with Detection and Response solutions, as part of a threat response action, Kaspersky Endpoint Security can control the execution of executable files and scripts, as well as the opening of office application files on the device. Execution prevention for objects supports a certain set of file extensions for office applications and a certain set of script interpreters. By blocking the launch of objects, you can stop the spread of a threat.

Object execution prevention is based on the execution prevention rules. An *execution prevention rule* is a set of criteria that the Kaspersky Endpoint Security application takes into account when responding to the execution of an object. The application blocks the execution of an object only if the object satisfies all criteria of an execution prevention rule. The application identifies files by their paths or checksums calculated using MD5 and SHA256 hashing algorithms.

The execution prevention functionality is available in the Kaspersky Endpoint Security application if one of the following conditions is satisfied:

- Integration of Kaspersky Endpoint Security with the Kaspersky Endpoint Detection and Response Optimum solution is enabled and the EDR Optimum component is activated.
- Integration of the Kaspersky Endpoint Security application with the Kaspersky Endpoint Detection and Response Expert (on-premise) or Kaspersky Endpoint Detection and Response (KATA) component is enabled, and the EDR Expert (on-premise) component is activated.

If the blocking mode of file operation interception is not enabled, execution prevention works in inform mode, regardless of the configured operating mode.

Execution prevention for objects is disabled by default.

Enabling execution prevention for objects may affect the startup speed of applications in the operating system.

For object execution prevention to work, you need to enable execution prevention rules.

Special considerations involved in object execution prevention when integrating with Kaspersky Endpoint Detection and Response Expert (on-premise) or Kaspersky Endpoint Detection and Response (KATA)

When the Kaspersky Endpoint Security application is integrated with the Kaspersky Endpoint Detection and Response Expert (on-premise) or Kaspersky Endpoint Detection and Response (KATA), the application uses *execution prevention rules of the EDR Expert (on-premise) component*. The application gets these rules from Kaspersky Endpoint Detection and Response Expert (on-premise) or Kaspersky Endpoint Detection and Response (KATA).

When integrated with Kaspersky Endpoint Detection and Response Expert (on-premise) or with Kaspersky Endpoint Detection and Response (KATA), you can:

- Enable or disable the application of object execution prevention rules of the EDR Expert (on-premise) component in the Web Console, the Administration Console, or on the command line.

  When execution prevention rules are triggered, Kaspersky Endpoint Security sends a report to Endpoint Detection and Response Expert (on-premise) or Kaspersky Anti Targeted Attack Platform. For details, see the Help for the relevant solution.

- View the list of object execution prevention rules of the EDR Expert (on-premise) component on the command line.

Special considerations for object execution prevention when integrated with Kaspersky Endpoint Detection and Response Optimum

When Kaspersky Endpoint Security is integrated with the Kaspersky Endpoint Detection and Response Optimum solution, the application uses *object execution prevention rules of the EDR Optimum component*. You can create these rules manually in the Web Console. You can also create execution prevention rules automatically in the alert details window.

When integrated with Kaspersky Endpoint Detection and Response Optimum, you can:

- Enable or disable the application of object execution prevention rules of the EDR Optimum component in the Web Console or on the command line.

- Create and configure EDR Optimum execution prevention rules for objects in the Web Console.

  You can also automatically create an execution prevention rule for an object by preventing the execution of a file in the alert details window. The execution prevention rule is added to the policy for the administration group that the device belongs to.

  > You can prevent the execution of files in the alert details window only if a policy is applied to the device.

- View the list of object execution prevention rules of the EDR Optimum component on the command line.

When integrated with Kaspersky Endpoint Detection and Response Optimum, object execution prevention can work in one of two modes:

- **Block**. In this mode, the application blocks the execution of objects or the opening of documents that satisfy the criteria of the prevention rules, and logs an event about attempts to run objects or open documents.

  The Kaspersky Endpoint Security application blocks execution of a script that is prohibited by a run prevention rule, even if that script is imported by an allowed script.

- **Inform**. In this mode, the application logs an event about attempts to run executable objects or open documents that satisfy the criteria of the prevention rules, but does not actually block their execution or opening. This mode is selected by default.

Limitations of execution prevention for objects

The following limitations apply to object execution prevention rules:

- The Kaspersky Endpoint Security application does not block objects specified in the execution prevention rules until the application is started.
- The Kaspersky Endpoint Security application does not block files that are opened before a prevention rule is created or modified.
- The Kaspersky Endpoint Security application does not block objects covered by an execution prevention rule that were executed before the execution prevention rule was created or modified to cover these objects.
- Some files can be critically important for the operation of the operating system and the application. Preventing the execution of such files may disrupt the operation of the system.
- We do not recommend creating more than 50000 execution prevention rules because as this may lead to system instability.

Configuring execution prevention for objects in the Web Console

Configuring Execution prevention for objects (EDR Expert (on-premise))

If integration with the Kaspersky Endpoint Detection and Response Expert (on-premise) solution or the Kaspersky Endpoint Detection and Response (KATA) component is enabled, you can enable or disable execution prevention for objects in the policy properties (**Application settings → Built-in Agents Configuration → Endpoint Detection and Response Expert (on-premises)**).

The **Execution prevention** toggle switch enables or disables EDR Expert (on-premise) rules for execution prevention for objects.

Configuring EDR Optimum execution prevention for objects.

If integration with Kaspersky Endpoint Detection and Response Optimum is enabled, you can enable or disable object execution prevention and configure object execution prevention rules of the EDR Optimum component:

- In the policy properties (**Application settings** → **Built-in Agents Configuration** → **Endpoint Detection and Response**).
- In the managed device properties (**Assets (Devices)** → **Managed devices** → <device name> link → **Applications** tab → <Kaspersky Endpoint Security application name> link → **Application settings** tab → **Detection and Response** section → **Endpoint Detection and Response Optimum**).

Object execution prevention cannot be enabled or disabled in the device properties if a policy is applied to the device.

EDR Optimum execution prevention for objects settings in device properties

Setting	Description
Execution prevention for objects is enabled/disabled	Enables or disables EDR Optimum rules for execution prevention for objects. By default, rules are not applied.
Action when starting or opening an object	You can select the mode of object execution prevention: • **Block**. In this mode, the application blocks the execution of objects or the opening of documents that satisfy the criteria of the prevention rules, and logs an event about attempts to run objects or open documents in the event log. • **Inform**. In this mode, the application logs an event about attempts to run executable objects or open documents that satisfy the criteria of the prevention rules in the event log, but does not actually block their execution or opening. This mode is selected by default.
List of object execution prevention rules.	The **Add** link opens a window in which you can configure an object execution prevention rule of the EDR Optimum component. If necessary, you can delete a rule from the list using the **Delete** button.

To add a rule to the list of object execution prevention rules of the EDR Optimum component in device properties:

1. Click the **Add** button above the list of execution prevention rules.
2. This opens a window; in that window, enter the name of the execution prevention rule.
3. Specify the status of the execution prevention rule by setting the switch to the appropriate position:
   - **Enabled** means the rule is enabled, the application applies this rule.
   - **Disabled** means the rule is disabled and is not used by the application.

   You can enable or disable the created rule at any time.
4. In the **Type** drop-down list, select the type of object you want to block:
   - **Executable file**.
   - **Script**.
   - **Office application files**.

If you select the wrong object type, the application will be unable to block the file or script.

5. To add an object, specify the path to the object and/or the checksum of the object.

   To specify a path to an object, select **Use path** and enter the path to the object.

   To specify an object checksum, select the **SHA256** or **MD5** option and enter the object checksum.

6. Click **OK**.

   The created rule is added to the list of rules in the **Execution prevention for objects** settings block.

Configuring object execution prevention in the Administration Console

You can enable or disable execution prevention for objects in the Administration Console only if integration with Kaspersky Endpoint Detection and Response Expert (on-premise) or with Kaspersky Endpoint Detection and Response (KATA) is enabled.

You can enable or disable execution prevention for objects in the policy properties (Managing policies in the Administration Console, Creating a policy using the Administration Console) (**Application settings** → **Detection and Response** → **EDR Expert (on-premise)**).

The **Enable execution prevention for objects** check box under **Execution prevention** enables or disables execution prevention rules of the EDR Expert (on-premise) component.

Managing execution prevention for objects on the command line

On the command line, you can start and stop the application of execution prevention rules for objects using the following predefined tasks:

- *Execution Prevention for objects (EDR Expert (on-premise))* (*KATAEDR_Prevention*).
- *Execution prevention for objects (EDR Optimum)* (*EDRO_Prevention*).

By default, the *Execution prevention for objects (EDR Expert (on-premise))* and *Execution prevention for objects (EDR Optimum)* tasks are not started. You can start and stop these tasks manually.

You can run the *Execution prevention for objects (EDR Expert (on-premise))* task only if integration with Kaspersky Endpoint Detection and Response Expert (on-premise) or with Kaspersky Endpoint Detection and Response (KATA) is enabled.

You can run the *Execution prevention for objects (EDR Optimum)* task only if integration with Kaspersky Endpoint Detection and Response Optimum is enabled.

You can use object execution prevention rule management commands to view the list of object execution prevention rules of the EDR Expert (on-premise) and EDR Optimum components.

To view the list of EDR Expert (on-premise) object execution prevention rules, run the following command:

```
kesl-control [-T] --get-prevention-state --kata
```

To view the list of EDR Optimum object execution prevention rules, run the following command:

```
kesl-control [-T] --get-prevention-state --edro
```

Cloud Sandbox

The Cloud Sandbox technology allows detecting advanced threats on the device. The Kaspersky Endpoint Security application automatically sends detected files to Cloud Sandbox for analysis. Cloud Sandbox runs these files in an isolated environment to detect malicious activity and decides on the reputation of these files. Information about these files is then sent to the Kaspersky Security Network. Thus, if Cloud Sandbox detects a malicious file, Kaspersky Endpoint Security performs an action to eliminate the threat on all devices on which it detects this file.

For Cloud Sandbox to work, you need to enable the use of Kaspersky Security Network.

If you are using Kaspersky Private Security Network, the Cloud Sandbox technology is not available.

The Cloud Sandbox technology is always enabled and is available to all users of Kaspersky Security Network, regardless of the type of license under which you are using the application.

If you have the Kaspersky Endpoint Detection and Response Optimum solution deployed, you can enable a separate counter in the Web Console for threats detected using Cloud Sandbox:

- In the policy properties (**Application settings** → **Built-in Agents Configuration** → **Endpoint Detection and Response**)
- In the managed device properties (**Assets (Devices)** → **Managed devices** → <device name> link → **Applications** tab → <Kaspersky Endpoint Security application name> link → **Application settings** tab → **Detection and Response** section → **Endpoint Detection and Response Optimum**).

A counter of threats detected by Cloud Sandbox is also displayed in the GUI reports. You can use this counter to compile statistics when analyzing detected threats.

To enable the Cloud Sandbox counter in the Web Console in device properties:

1. In the main window of the Web Console, select **Assets (Devices)** → **Policies and policy profiles**.

   The list of policies opens.

2. Select the administration group containing the necessary device. To do so, click the link in the **Current path** field above the list of managed devices and select an administration group in the window that opens.

   The list displays only the managed devices for the selected administration group.

3. Find your device in the list and click its name.

4. This opens a managed device properties window; in that window, go to the **Applications** tab.

5. In the list of applications installed on the device, click Kaspersky Endpoint Security.

6. In the application properties window that opens, on the **Application settings** tab, select **Detection and Response** and click the **Endpoint Detection and Response Optimum** link.

7. In the opened window, under **Cloud Sandbox**, enable the **Cloud Sandbox** toggle switch.

8. Click **OK**.

Integration with Kaspersky Unified Monitoring and Analysis Platform

Kaspersky Endpoint Security is compatible with the Kaspersky Unified Monitoring and Analysis Platform solution (hereinafter also KUMA).

Kaspersky Unified Monitoring and Analysis Platform is a comprehensive software solution that provides the following functionality:

- Receiving, processing, and storing information security events (telemetry).
- Analysis and correlation of incoming data.
- Search within the obtained events.
- Creation of notifications upon detecting symptoms of information security threats.

For more information about the solution, see the Kaspersky Unified Monitoring and Analysis Platform Help.

When integrated with Kaspersky Unified Monitoring and Analysis Platform, devices running Kaspersky Endpoint Security establish encrypted connections with the KUMA server. To ensure a secure connection, the following certificates issued by the KUMA server are used:

- KUMA server certificate. The connection is encrypted using the server's TLS certificate. You can elevate the security of the connection by verifying the server certificate on the Kaspersky Endpoint Security side. To do this, add the KUMA server certificate before enabling the Kaspersky Unified Monitoring and Analysis Platform Integration.
- Client certificate. This certificate is used for additional protection of the connection using two-way authentication (scanning devices with Kaspersky Endpoint Security KUMA server). The same client certificate can be used by multiple devices. By default, the KUMA server does not check client certificates, but two-way authentication can be enabled on the Kaspersky Unified Monitoring and Analysis Platform side. In this case, you need to enable two-way authentication in the Kaspersky Unified Monitoring and Analysis Platform integration settings and add the client certificate (cryptocontainer with certificate and private key).

The certificates for securing the connection to the KUMA server are provided by the administrator of Kaspersky Unified Monitoring and Analysis Platform.

A proxy server is used to connect to the KUMA server if use of a proxy server is configured in the general application settings of Kaspersky Endpoint Security.

By default, Kaspersky Unified Monitoring and Analysis Platform integration is disabled. You can enable or disable the integration, and configure the following integration settings via the command line, Web Console, and Administration Console:

- Configure general KUMA server connection settings.
- Add or remove KUMA server certificates.
- Configure two-way authentication when connecting to KUMA servers and add client certificates.
- Manage event transfer settings.

Before enabling integration with Kaspersky Unified Monitoring and Analysis Platform, make sure one of the following conditions is satisfied:

- You are using Kaspersky Endpoint Security under a license that covers the Kaspersky Unified Monitoring and Analysis Platform functionality.
- You have purchased a separate license for the Kaspersky Unified Monitoring and Analysis Platform functionality and added the license key for the additional functionality (KUMA key) to the application.

If Kaspersky Endpoint Security is used in Light Agent mode to protect virtual environments, activation is performed on the Protection Server (a component of Kaspersky Hybrid Cloud Security for Virtualization Light Agent) by adding license keys to SVMs.

Configuring the KUMA integration in the Web Console

In the Web Console, you can manage Kaspersky Unified Monitoring and Analysis Platform Integration settings in the policy properties (**Application settings** → **Built-in Agents Configuration** → **KUMA Integration**).

Configuring the KUMA integration in the Administration Console

In the Administration Console, you can enable or disable the integration of Kaspersky Endpoint Security with Kaspersky Unified Monitoring and Analysis Platform and manage integration settings in the policy properties (Managing policies in the Administration Console, Creating a policy using the Administration Console) (**KUMA Integration** → **KUMA Integration**).

Settings for integration with Kaspersky Unified Monitoring and Analysis Platform

Setting	Description
Enable KUMA Integration	Enables or disables the integration of the Kaspersky Endpoint Security application with the Kaspersky Unified Monitoring and Analysis Platform solution. KUMA Integration is disabled by default.
Use encrypted connection	The check box enables or disables server certificate verification for additional protection of the connection to the KUMA server. To verify the server certificate, you need to select this check box and add the server certificate in the **KUMA servers** window. This check box is cleared by default.
KUMA servers	The **Configure** button opens the **KUMA servers** window. In this window, you can configure a connection to KUMA servers and view the list of servers to which a connection is configured.

Setting	Description
KUMA server connection settings	Clicking the **Configure** button opens the **Server connection settings** window where you can configure general settings for connecting to KUMA servers, add a server certificate, and configure two-way authentication when connecting to KUMA servers.
Maximum delay when sending events (sec)	The maximum delay in sending events to the KUMA server in seconds. Default value: `30`.

KUMA servers window

The table in the window displays the list of settings for connecting to KUMA servers. For each server to which a connection is configured, the table indicates:

- IP address (IPv4 or IPv6) or fully qualified domain name (FQDN) of the server. If you selected the Use encrypted connection check box in the **KUMA integration settings** window, you must specify the fully qualified domain name (FQDN) of the server from the certificate received when purchasing the license to use KUMA.
- Port to connect to the KUMA server.
- Protocol used to connect to the KUMA server.

You can use the buttons and the menu above the table to perform the following actions:

- Add KUMA server connection settings
- Edit or remove previously configured connection settings
- Export or import the list of configured connection settings

KUMA server window

In this window you can specify the KUMA server connection settings.

KUMA server connection settings

Setting	Description
Address	KUMA server address IP address (IPv4 or IPv6) or fully qualified domain name (FQDN) of the integration server can be specified. If you selected the Use encrypted connection check box in the **KUMA integration settings** window, you must specify the fully qualified domain name (FQDN) of the server from the certificate received when purchasing the license to use KUMA.
Port	Port to connect to the KUMA server. Default value: `443`.
Protocol	Protocol for connecting to the KUMA server: TCP or UDP. When selecting the UDP protocol, the use of certificates to provide connection protection is not supported, and there are no events about the connection to the KUMA server. The default is TCP.

KUMA server connection settings window

In this window, you can configure general settings for connecting to KUMA servers.

KUMA server connection settings

Setting	Description
Maximum time to wait for the server connection (sec)	Maximum time to wait for a connection to the KUMA server in seconds. Default value: `5`.
Server certificate	The section contains buttons for adding or removing a server certificate.
Add (server certificate)	Opens adding a server certificate window. The button is displayed if the server certificate has not been added yet.
Remove (server certificate)	Removes the server certificate. The button is displayed only if a server certificate has been added.
Additional connection protection	This section contains controls for configuring additional security of the connection using two-way authentication.
Use two-way authentication	The check box enables or disables the use of two-way authentication for additional protection of the connection to the KUMA server. To use two-way authentication, you need to add a client certificate. Two-way authentication must be enabled on the KUMA server side.
Add (client certificate)	Opens the window for adding a client certificate for security of the connection with the KUMA server. The button is displayed if the client certificate has not been added yet. If you want to configure additional protection for the connection, enable verification of the client certificates on the KUMA server side and select the **Use two-way authentication** check box in this window.
Remove (client certificate)	Removes the client certificate. The button is displayed if a client certificate has been added.
Use two-way authentication	Enables or disables the use of two-way authentication to further secure the connection to the KUMA server. To use two-way authentication, you need to add a client certificate. Two-way authentication must be enabled on the KUMA server side.

Adding a server certificate window

In this window, you can add a KUMA server certificate in one of the following ways:

- Specify the path to the certificate file in the **Add from file** field. The **Browse** button opens the standard file selection window. Specify the path to the file that contains the certificate in DER or PEM format.
- Copy the contents of the certificate file to the **Enter certificate details** field.

If a server certificate has been added, the server certificate is verified on the Kaspersky Endpoint Security side. This elevates the security of the connection.

Adding a client certificate window

In this window, you can add a client certificate to further secure the connection with the KUMA server.

If you want to configure additional protection for the connection, enable verification of the client certificates on the KUMA server side and select the **Use two-way authentication** check box in the **KUMA server connection settings** window.

To add a client certificate, specify the path to the cryptocontainer (PFX archive) containing the client certificate and private key. The **Browse** button opens the standard file selection window. If the archive is password-protected, enter the password in the **Crypto container password** field.

Configuring the MDR integration on the command line

On the command line, you can manage the integration of Kaspersky Endpoint Security with Kaspersky Unified Monitoring and Analysis Platform using the predefined task: *Kaspersky Unified Monitoring and Analysis Platform Integration*.

By default, the *Kaspersky Unified Monitoring and Analysis Platform Integration* task is not running. You can start and stop this task manually.

You can configure Kaspersky Unified Monitoring and Analysis Platform Integration settings by editing the settings of the predefined task.

Using the commands for managing the Kaspersky Unified Monitoring and Analysis Platform Integration settings, you can manage certificates that are used for connecting to KUMA servers.

Kaspersky Unified Monitoring and Analysis Platform Integration task settings

The table describes all available settings and the default values of all the settings that you can specify for the *Kaspersky Unified Monitoring and Analysis Platform Integration* task.

Kaspersky Unified Monitoring and Analysis Platform Integration task settings

Setting	Description	Value
`UseTls`	Enable or disable the server certificate verification for additional protection of the connection to the KUMA server.	`Yes` — use a certificate to further secure the connection to the KUMA server. `No` (default) — do not use a certificate to secure the connection to the KUMA server.
`UseClientCertificate`	Enable and disable two-way authentication to further secure the connection to the KUMA server. If client certificate validation is enabled on the KUMA server side, enable the use of a client certificate and add a client certificate before starting the Kaspersky Unified Monitoring and Analysis Platform Integration task.	`Yes` – use two-way authentication to further secure the connection to the KUMA server. `No` (default value) — do not use two-way authentication.
`ConnectionTimeout`	Maximum time to wait for a connection to the KUMA server in seconds.	Default value: `5`.

Setting	Description	Value
The **[Servers.item_#]** section contains the settings of the KUMA server.		
`ServerAddress`	KUMA server address IP address (IPv4 or IPv6) or fully qualified domain name (FQDN) of the integration server can be specified. If you set `UseTls=Yes`, you must specify the fully qualified domain name (FQDN) of the server from the certificate received when purchasing the license to use KUMA.	Default value: `127.0.0.1`.
`ServerPort`	Port to connect to the KUMA server.	Default value: `443`.
`ServerProtocol`	Protocol for connecting to the KUMA server.	`tcp` (default value) — use the TCP protocol to connect to the KUMA server. `udp` — use the UDP protocol to connect to the KUMA server. When the UDP protocol is selected, the use of certificates to provide connection protection is not supported (the values of the `UseTls`, `UseClientCertificate` and `ConnectionTimeout` settings are ignored), and there are no events about the connection to the KUMA server.
The **[SiemTransferSettings]** section contains settings for sending events to the KUMA server.		
`EventTransferTimeMax`	The maximum delay in sending events to the KUMA server in seconds.	Default value: `30`.

Managing certificates for connecting to the KUMA server

When selecting the UDP protocol, the use of certificates to provide connection protection is not supported.

Managing certificates requires the rights of a user with the Administrator (admin) role.

You can use commands to manage the certificates used for the connection to the KUMA server. You can do the following with certificates:

- Add or replace the server certificate
- Display information about the server certificate
- Remove the server certificate
- Add or replace the client certificate
- Display information about the client certificate
- Remove the client certificate

To add or replace the server certificate, run the following command:

```
kesl-control [-M] --add-kuma-server-certificate <file path>
```

where < `file path` > is the path to the DER or PEM file containing the server certificate.

To add or change a client certificate:

1. Execute the command:

   `kesl-control [-M] --add-kuma-client-certificate < file path >`

   where < `file path` > is the path to the cryptocontainer (PFX archive) containing the client certificate and private key.

2. If the cryptocontainer is password-protected, enter the password when prompted.

The client certificate is used for additional protection of the connection to the KUMA server if client certificate verification is enabled in the KUMA server settings and in the *Integration with Kaspersky Unified Monitoring and Analysis Platform* task settings the `UseClientCertificate` setting is set to `yes`.

To display certificate information, run the following command:

- for the server certificate:

  `kesl-control [-M] --query-kuma-server-certificate`

- for the client certificate:

  `kesl-control [-M] --query-kuma-client-certificate`

Running the command displays the following certificate information:

- Certificate serial number
- Certificate subject
- Certificate issuer
- Certificate start date
- Certificate expiration date
- SHA1 and SHA256 certificate fingerprints

To delete the server certificate information, run the following command:

`kesl-control [-M] --remove-kuma-server-certificate`

To delete the client certificate information, run the following command:

`kesl-control [-M] --remove-kuma-client-certificate`

Configuring settings for using the application in Light Agent mode

The settings described in this section apply only if Kaspersky Endpoint Security is used in Light Agent mode for protecting virtual environments.

Running Kaspersky Endpoint Security in Light Agent mode requires constant interaction between the Light Agent and the Protection Server installed on the SVM. If there is no connection to the Protection Server, the Light Agent cannot transfer file fragments to the Protection Server for scanning, and scanning is not performed.

To interact with the Protection Server, the Light Agent establishes and maintains a connection to the SVM on which this Protection Server is installed.

You can configure the settings for connecting Light Agent to SVMs in the Web Console or Administration Console. You cannot configure the settings in the command line; you can only view information about application usage in Light Agent mode.

You can configure the following settings for connecting the Light Agent to the SVM:

- SVM detection method. You can select a method that Light Agents will use to discover SVMs available to connect to. The Light Agent can discover SVMs running on the network in one of the following ways:
  - Using the Integration Server. SVMs transmit information about themselves to the Integration Server. The Integration Server generates a list of SVMs available for connection and provides it to Light Agents.

    To use this method of detecting SVMs, you need to connect SVMs and Light Agents to the Integration Server.

    If a Linux-based high-availability cluster of Integration Servers is deployed in your infrastructure, you need to specify the address and port of the load balancer as the address and port for connecting to the Integration Server. For more details, refer to the Kaspersky Security for Virtualization Light Agent Help.
  - Using a list of SVM addresses. You can specify a list of SVM addresses to which Light Agents can connect.
- Algorithm for selecting SVMs to connect to. After receiving information about available SVMs, the Light Agent selects the optimal SVM to connect to in accordance with the SVM selection algorithm. You can specify which algorithm Light Agents should use when selecting an SVM to connect to.
- Connection tags. You can use connection tags to control Light Agents' connection to SVMs. If you use connection tags, Light Agent can only connect to SVMs that are configured to use that connection tag.
- Security of the connection between the Light Agent and the Protection Server. You can use encryption to protect the connection between Light Agents and Protection Servers.

For more information about the settings for connecting the Light Agent to the SVM, refer to the Help for Kaspersky Hybrid Cloud Security for Virtualization Light Agent.

Configuring Light Agent settings in the Web Console

In the Web Console, you can manage the settings for connecting the Light Agent to SVMs in the policy properties (**Application settings** → **Light Agent Mode**).

Configuring Light Agent settings in the Administration Console

In the Administration Console, you can manage the Light Agent's SVM connection settings in the policy properties (Managing policies in the Administration Console, Creating a policy using the Administration Console) (**Light Agent mode**).

Connection to the Integration Server

The settings described in this section apply only if Kaspersky Endpoint Security is used in Light Agent mode for protecting virtual environments.

A connection to the Integration Server is required if you want Light Agents to receive information about the SVM through the Integration Server, or if you want to protect the connection between the Protection Server and the Light Agent.

This window displays the current settings for connecting Light Agents to the Integration Server: address and port for connecting. The **Edit** button opens the **Connection to the Integration Server** window, where you can configure the connection to the Integration Server.

Connection to the Integration Server window

In this window, you can specify or change the settings for connecting Light Agents to the Integration Server.

Integration Server connection settings

Setting	Description
Address	IP address in IPv4 format or fully qualified domain name (FQDN) of the device on which the Integration Server is installed. If the device on which Kaspersky Security Center Administration Console is installed is part of a domain, the field indicates the domain name of this device by default. If the device on which the Kaspersky Security Center Administration Console is installed is not part of a domain or the Integration Server is installed on another device, the field must be filled in manually. If the address is specified as a NetBIOS name, localhost or 127.0.0.1, connection to the Integration Server completes with an error.
Port	Port for connecting to the Integration Server. By default, port 7271 is specified.

If a Linux-based high-availability cluster of Integration Servers is deployed in your infrastructure, you need to specify the address and port of the load balancer as the address and port for connecting to the Integration Server. For more details, refer to the Kaspersky Security for Virtualization Light Agent Help.

Verify Integration Server certificate window

This window appears if the SSL certificate received from the Integration Server contains an error or is not trusted.

You can click the link in the window to view the details of the received certificate.

If you encounter problems with an SSL certificate, we recommend to make sure that the data transmission channel you are using is secure.

To continue connecting to the Integration Server, click the **Ignore** button. The received certificate will be installed as a trusted certificate on the device where the Kaspersky Security Center Administration Console is installed.

Authentication on the Integration Server window

This window appears if the device hosting the Kaspersky Security Center Administration Console does not belong to a domain or your account does not belong to the KLAdmins local or domain group or to the local administrator group.

Specify the password of the Integration Server administrator (password of the `admin` account) and click the **OK** button.

It is recommended to make sure that the password complexity and anti-bruteforce mechanisms ensure that the password cannot be guessed within 6 months.

After connecting to the Integration Server with administrator rights, the policy automatically receives the password of the `agent` account, which is used to connect Light Agents to the Integration Server.

SVM discovery settings

The settings described in this section apply only if Kaspersky Endpoint Security is used in Light Agent mode.

In this window, you can select the method that Light Agents use to discover SVMs available to connect to.

SVM discovery settings

Setting	Description
Use the Integration Server	If this option is selected, Light Agent connects to Integration Server to get a list of SVMs available for connection and their details. If you want to use the Integration Server, you need to configure the settings for connecting Light Agents to the Integration Server.
Use a custom list of SVM addresses	If this option is selected, you can specify a list of SVMs that Light Agents managed by this policy can connect to. Light agents will only connect to SVMs specified in the list.
List of SVMs	The list of IP addresses in IPv4 format or fully qualified domain names (FQDNs) of the SVMs to which Light Agents covered by the policy can connect. Click **Add** to open a window in which you can specify the IP address in IPv4 format or the fully qualified domain name (FQDN) of the SVM. You can enter several IP addresses or full domain names of the SVMs by typing them from a new line. Specify only fully qualified domain names (FQDNs) that map to a single IP address. Using a fully qualified domain name that corresponds to multiple IP addresses can lead to errors in the application. You can delete addresses selected in the list by clicking the **Delete** button. The list of SVM addresses is displayed if the **Use a custom list of SVM addresses** option is selected.

If you select the **Use a custom list of SVM addresses** option, the Light Agent is using the extended SVM selection algorithm, and large infrastructure protection mode is enabled on an SVM (for more information, see the Kaspersky Security for Virtualization Light Agent Help), then connecting a Light Agent to this SVM is only possible if the SVM path is ignored. In the **SVM selection algorithm** section, you need to set the **SVM path** setting to **Ignore**. If any other value is set, Light Agents will not be able to connect to the SVM.

SVM connection tag

In this window, you can enable the Light Agent to use tags and assign a tag that the Light Agent will use to connect.

Make sure that the use of connection tags is also configured in the Protection Server settings: For more information, see the Help for Kaspersky Security for Virtualization Light Agent. Light Agents assigned a tag can only connect to SVMs that are allowed to connect to Light Agents with that tag.

Settings for using connection tags

Setting	Description
Use connection tag	The check box enables or disables the use of SVM connection tags by the Light Agent.
Tag	A tag that is assigned to Light Agents. For a tag, you can enter a text string up to 255 characters long. You can use any character except the ; character. The field is available if the **Use connection tag** check box is selected.

SVM selection algorithm

In this window, you can specify which SVM selection algorithm Light Agents must use, and configure the settings for using the extended SVM selection algorithm.

SVM selection algorithm

Setting	Description
Use the standard SVM selection algorithm	If this option is selected, after installing and running on a virtual machine, the Light Agent selects an SVM to connect to that is local to Light Agent. For more details, refer to the Help for Kaspersky Hybrid Cloud Security for Virtualization Light Agent. If no local SVMs suitable for connection are to be found, the Light Agent selects an SVM to which the least number of Light Agents is connected, regardless of the position of the SVM in the virtual infrastructure. This option is selected by default.
Use the extended SVM selection algorithm	If this option is selected, you can use the **SVM path** slider to specify how the SVM's location in the virtual infrastructure will be taken into account when determining whether the SVM is local relative to the Light Agent. The Light Agent will only be able to connect to SVMs that are local. You can also specify that the SVM path in the virtual infrastructure should not be taken into account when selecting an SVM to connect to. When selecting an SVM, Light Agents consider the number of Light Agents connected to the SVM to ensure an even distribution of Light Agents among the SVMs available to connect to.

Setting	Description

SVM path	Allows you to specify the type of SVM path in the virtual infrastructure, which is taken into account when selecting SVMs for connection:
	• **Hypervisor**. The Light Agent selects an SVM to connect to that meets the criteria (depending on the type of virtual infrastructure):
	  • The SVM is deployed on the same hypervisor as the virtual machine with the Light Agent installed (in a virtual infrastructure on the Microsoft Hyper-V platform, XenServer, VMware vSphere, KVM, Proxmox VE, Basis, Skala-R, HUAWEI FusionSphere, Nutanix Acropolis, ALT Virtualization Server, Astra Linux, Numa vServer, or Basis Dynamix Standard).
	  • The SVM is located in the same Server Group as the virtual machine with the Light Agent installed (in a virtual infrastructure running on the OpenStack platform, VK Cloud (VK Private Cloud), or the TIONIX Cloud Platform).
	  If there are no SVMs available for connection on the same hypervisor or in the same Server Group where the virtual machine with the Light Agent is located, the Light Agent does not connect to the SVM.
	• **Cluster**. The Light Agent selects an SVM to connect to that meets the criteria (depending on the type of virtual infrastructure):
	  • The SVM is deployed in the same hypervisor cluster as the virtual machine with the Light Agent installed (in a virtual infrastructure on the Microsoft Hyper-V platform, XenServer, VMware vSphere, KVM, Proxmox VE, Basis, Skala-R, HUAWEI FusionSphere, Nutanix Acropolis, ALT Virtualization Server, Astra Linux, Numa vServer, or Basis Dynamix Standard).
	  • The SVM is deployed in the same OpenStack project as the virtual machine with the Light Agent installed (in a virtual infrastructure running on the OpenStack platform, VK Cloud (VK Private Cloud), or the TIONIX Cloud Platform).
	  If there are no SVMs available for connection in the same hypervisor cluster or within the same OpenStack project where the virtual machine with the Light Agent is located, the Light Agent does not connect to the SVM.
	• **Data center**. The Light Agent selects an SVM to connect to that meets the criteria (depending on the type of virtual infrastructure):
	  • The SVM is deployed in the same data center as the virtual machine with the Light Agent installed (in a virtual infrastructure on the Microsoft Hyper-V platform, XenServer, VMware vSphere, KVM, Proxmox VE, Basis, Skala-R, HUAWEI FusionSphere, Nutanix Acropolis, ALT Virtualization Server, Astra Linux, Numa vServer, or Basis Dynamix Standard).
	  • The SVM is located in the same Availability Zone as the virtual machine with the Light Agent installed (in a virtual infrastructure running on the OpenStack platform, VK Cloud (VK Private Cloud), or the TIONIX Cloud Platform).
	  If there are no SVMs available for connection in the same data center or Availability Zone where the virtual machine with the Light Agent is located, the Light Agent does not connect to the SVM.
	• **Ignore**. When selecting an SVM, the Light Agent does not consider its location.
	The **Hypervisor** option is selected by default.
	The option is available if the **Use the extended SVM selection algorithm** option is selected.

If a Light Agent uses the extended SVM selection algorithm and a list of SVM addresses is selected as the SVM discovery method, and large infrastructure protection mode is enabled on an SVM (for more information, see the Kaspersky Security for Virtualization Light Agent Help), then connecting a Light Agent to this SVM is only possible if the SVM path is ignored. You must set the **SVM path** setting to **Ignore**. If any other value is set, Light Agents will not be able to connect to the SVM.

Protecting the connection

In this window, you can enable encryption of the data transmission channel between the Light Agent and the Protection Server

Make sure that encryption of the data transmission channel between the Light Agent and the Protection Server is enabled in the Protection Server settings on the SVM. For more details, refer to the Help for Kaspersky Hybrid Cloud Security for Virtualization Light Agent.

Connection protection settings

Setting	Description
Encrypt data channel between Light Agent and the Protection Server	Use encryption to protect the connection between Light Agents and Protection Servers. If the check box is selected, an encrypted connection is established between the Light Agent, which is managed by policy, and the Protection Server on the SVM that the Light Agent is connecting to. A Light Agent for which connection protection is enabled can only connect to an SVM on which connection protection is enabled or an unprotected connection to the Protection Server is allowed. If the check box is cleared, an unprotected connection is established between the Light Agent and the Protection Server on the SVM that the Light Agent is connecting to. This check box is cleared by default.

Viewing information about application usage in Light Agent mode in the command line

In the command line, you can view the following information about using the application in Light Agent mode for protecting virtual environments:

- Settings for using the application in Light Agent mode
- Connecting the Light Agent to the Integration Server
- Connecting the Light Agent to SVMs

To view information about the settings for using the application in Light Agent mode, run:

```
kesl-control [-V] --ksvla-info
```

The command outputs the following information to the console:

- Light Agent mode for protecting virtual environments: enabled/disabled.

  If Light Agent mode is enabled, the application is used as a Light Agent as part of Kaspersky Hybrid Cloud Security for Virtualization Light Agent.

- VDI protection mode: enabled/disabled.

  VDI protection mode optimizes the Kaspersky Endpoint Security for running on temporary virtual machines. If VDI protection mode is enabled, updates that require restarting the protected virtual machine are not installed on temporary virtual machines. When receiving updates that require a restart, the Light Agent installed on a temporary virtual machine sends a message to Kaspersky Security Center about the need to update the protected virtual machine template.

- Type of protected virtual machine: temporary or persistent.
- The role of the protected virtual machine in the virtual infrastructure: server or workstation.
- The identifier (UUID) of the protected virtual machine.

To view information about connecting Light Agent to the Integration Server, run:

```
kesl-control [-V] --viis-info
```

The command outputs the following information to the console:

- Address and port of the Integration Server that the Light Agent connects to.

  If your infrastructure has a Linux-based high-availability cluster, the address and port of the load balancer are displayed. For more details, refer to the Help for Kaspersky Hybrid Cloud Security for Virtualization Light Agent.

- Status of the connection to the Integration Server.
- Date and time of the last connection between the Light Agent and the Integration Server.

To view information about connecting Light Agent to SVMs, run:

```
kesl-control [-V] --svm-info
```

The command outputs the following information to the console:

- The address of the SVM to which the Light Agent is connected, and the location of the SVM in the virtual infrastructure relative to the Light Agent: local or not local.
- SVM discovery method that the Light Agent uses: using an Integration Server or using a custom list of SVM addresses.
- List of SVM addresses, if the selected SVM discovery method is lists of SVM addresses.
- Tag for connecting Light Agent to the SVM.
- SVM selection algorithm: standard or advanced. If the extended SVM selection algorithm is used, the type of the SVM's location in the virtual infrastructure is also displayed.
- Protection of the connection between the Light Agent and the Protection Server.

For information about the settings for connecting Light Agents to the Integration Server and SVMs, refer to the Kaspersky Security for Virtualization Light Agent Help.

Viewing events and reports

While the application is running, various *events* occur. The events may be informational or may contain important data. For example, the application can use an event to inform about a successful application database update, or about an error of application components that needs to be fixed.

Kaspersky Endpoint Security saves information about application events to the following logs:

- The application event log. By default, the application saves information about events to the database at /var/opt/kaspersky/kesl/private/storage/events.db. You can configure the application event log in the command line.
- Operating system log (syslog). The operating system log is not used by default. You can enable saving events to this log.

Access to the application event log and operating system log requires root privileges.

If Kaspersky Endpoint Security is managed by Kaspersky Security Center, information about events may be transmitted to the Kaspersky Security Center Administration Server. Aggregation rules apply to certain events. If a large number of same-type events are created within a short period of time while the application is running, the application will switch to event aggregation mode and send to Kaspersky Security Center one aggregated event with a description of the events settings. Different aggregation rules may be used for different events. For more information about events, refer to the Kaspersky Security Center Help.

You can receive information about application events in the following ways:

- In the Administration Console and in the Web Console
- On the command line (Viewing events on the command line, Viewing events in Kaspersky Security Center)
- When using the application's graphical user interface – in pop-up notifications if displaying notifications is enabled in the policy properties or in the application's general settings

The application can generate various types of *reports* on the events that occur while the application is running. Reports contain information about the operation of each Kaspersky Endpoint Security component, the results of each task, and the overall operation of the application.

You can view reports in the following ways:

- Kaspersky Security Center reports are available in the Administration Console and in the Web Console. You can use these to get information about infected files or usage of keys and application databases, among other things. For detailed information on working with Kaspersky Security Center reports, please refer to the Kaspersky Security Center Help.
- The graphical user interface of Kaspersky Endpoint Security displays reports of the application, its components and tasks.

Contents of reports and events

Events and reports may contain the following personal data:

- User name and user ID of operating system users
- Paths to user files
- IP addresses of remote devices that are scanned by the Anti-Cryptor component
- IP addresses of senders and receivers of network packets scanned by the Firewall Management component
- Web addresses of the update sources
- General application settings values
- Names and settings of command line tasks
- Detected malicious, phishing, adware web addresses, and web addresses containing legitimate applications that intruders can use to compromise devices or data
- Names of the containers and images
- Paths to the containers and images
- Names and IDs of the devices
- Names of application categories
- Web addresses of the repositories
- File names, paths, and hashes of executable files of applications

Rules of escaping characters in file paths

Some events may contain file paths. For output, the file path is treated as a UTF-8 string. If any of the bytes in the path does not comply with the UTF-8 encoding rules, is it replaced with the `?` character. Any four-byte sequence that encodes a character code outside the Unicode range (greater than 0x10FFFF) is also replaced with the `?` character. Special characters are escaped (replaced) in a certain way.

The following rules apply for escaping characters in file paths inside events in the output of `kesl-control -E --query`:

- '\a', '\b', '\t', '\n', '\v', '\f', '\r' characters are replaced by two characters as follows:
  '\a' -> "\\a"
  '\b' -> "\\b"
  '\t' -> "\\t"
  '\n' -> "\\n"

'\v' -> "\\v"

'\f' -> "\\f"

'\r' -> "\\r"

- All other special characters are output without modification.

The following rules apply for escaping characters in file paths inside events in the output of `kesl-control -E --query --json`:

- In accordance with the JSON format, the '\b', '\f', '\n', '\r', '\t', '"', '\\' characters are escaped as follows:

  '\b' -> "\\b"

  '\f' -> "\\f"

  '\n' -> "\\n"

  '\r' -> "\\r"

  '\t' -> "\\t"

  '"' -> "\\\""

  '\\' -> "\\\\"

- All other special characters are escaped in accordance with the general JSON rules for escaping special characters ('\a' -> '\u0007').

Rules for escaping characters in file paths in events when sending to syslog:

- In accordance with the JSON format, the '\b', '\f', '\n', '\r', '\t', '"', '\\' characters are escaped as follows:

  '\b' -> "\\b"

  '\f' -> "\\f"

  '\n' -> "\\n"

  '\r' -> "\\r"

  '\t' -> "\\t"

  '"' -> "\\\""

  '\\' -> "\\\\"

- All other special characters are escaped in accordance with the general JSON rules for escaping special characters ('\a' -> '\u0007').

The first backslash in the sequence when describing rules is the escape character.

Examples:
`'\a'` is one character (a control character).

`'\\a'` is two characters (backslash + the `a` character).

`'\\'` is one character (backslash).

`'\\\\'` is two characters (backslash + backslash).

Configuring event logging to the operating system log

Events that occur during the operation of Kaspersky Endpoint Security can be recorded in the operating system log. You can enable or disable the recording of events in this log using the Web Console, Administration Console, or the command line.

If you use the command line to manage the application, the recording of events in the operating system log is disabled by default.

If you use the Kaspersky Endpoint Security application in standard mode or in Endpoint Detection and Response Agent mode, and you manage the application using Kaspersky Security Center, information about adding and removing license keys and about the license term expiring is recorded in the default operating system log. You can select the events that you want to be recorded in the operating system log in the properties of the policy that is applied to the application.

Configuring in the Web Console

In the Web Console, you can enable or disable event logging to the operating system log in the policy properties (**Application settings** → **General Settings** → **Event settings**).

Clicking the **Settings** button under the event severity level (critical events, functional failures, warnings, informational messages) opens a window containing a list of events of the corresponding severity level. For each event, you can configure logging in the operating system log.

Configuring in the Administration Console

In the Administration Console, you can configure the logging of events to the operating system log in the policy properties (Managing policies in the Administration Console, Creating a policy using the Administration Console) (**General settings** → **Application settings**).

Clicking **Configure** under **Notifications** opens the **Notification settings** window. In this window, you can use the check boxes to select the events that the application records in the operating system log.

You can select individual event types or all event types of a certain severity level (critical events, functional failures, warnings, informational messages).

Configuring on the command line

You can enable or disable saving events to the operating system log in the command line via the `UseSyslog` option in the general application settings.

You can edit the option via command line switches or a configuration file that contains all general application settings.

The `UseSyslog` parameter can take the following values:

- `Yes`: enable saving events to syslog.
- `No` (default): disable saving events to syslog.

Configuring application event log settings

By default, information about events is saved to the application event log located on the device.

The event log database contains the following files:

- Several files with events. The number of files depends on the current number of events in the event log and on the maximum number of events that the application is configured to store (the `MaxEventsNumber` setting).

  The name of the file with events includes its serial number (for example, events.db.0001). When a file fills up, a new file is created. If the maximum number of events in all event files not counting the earliest file reaches the `MaxEventsNumber` value, the earliest file is deleted. This means that the application may store more events than indicated in the setting.

- The main file of the database for managing event files that stores information about the event log files. This file cannot be deleted.

You can manage the following application event log options on the command line via the general application settings:

- Change the path to the application event log database using the `EventsStoragePath` setting. Default value: /var/opt/kaspersky/kesl/private/storage/events.db.
- Specify the maximum number of events to be stored by the application via the `MaxEventsNumber` option. Default value: 500000.

You can change the values of the settings with the help of command line switches or a configuration file that contains all general application settings.

Viewing events in Kaspersky Security Center

A list of all Kaspersky Endpoint Security events is displayed in the Web Console and in the Administration Console.

Events of the Kaspersky Endpoint Security application fall into the following types by severity:

- *Critical events* pose a serious threat to the device's security (detection of malicious objects, vulnerabilities, problems with the operation of the application). Critical events require your immediate attention. We recommend not to disable critical event notifications.
- *Functional failures* occur when the application fails (processing error, task misconfiguration). Such events do not pose a direct threat to the security of the device, but they require your actions for the application to work correctly.

- *Warnings* do not require your immediate action, but may indicate a potential future threat to the security of the device.
- *Informational messages* correspond to events of an informational nature.

You can configure event notifications. A *notification* is a message containing information about an event that occurred on a protected device. Notifications give you timely information about application events. You can configure the execution of a script upon receiving events from the application or upon receiving notifications about events by e-mail.

For detailed information about using Kaspersky Security Center notifications, refer to the Kaspersky Security Center Help.

Viewing events on the command line

On the command line, you can view:

- Current application events
- Events in the application event log

Displaying current events

You can output information about all current application events or about current events associated with starting or stopping a specified task. You can use the filter to output certain current events, for example, events of a specified type.

To output information about all current application events, run:

```
kesl-control -W
```

The command returns the name of the event and additional information about the event.

To output only information about current events associated with a running task, run:

```
kesl-control --start-task <task ID/name> -W
```

Example:
Enable display of the current events of the running task with ID=1:

```
kesl-control --start-task 1 -W
```

To output information about current events that match the filter conditions, run:

```
kesl-control -W --query "<filter conditions>"
```

Filter conditions are set with one or more logical expressions in the format `<field> <comparison operator> '<value>'`, combined with the logical operator `and`.

Example:
Display TaskStateChanged events:

```
kesl-control -W --query "EventType == 'TaskStateChanged'"
```

Display TaskSettingsChanged events initiated by the 'User' user:

```
kesl-control -W --query "EventType == 'TaskSettingsChanged' and Initiator == 'User'"
```

Displaying events from the event log

You can output information about events from the application event log to the console or a file. You can use a filter to display only certain events.

To output information about all events in the application event log, run:

```
kesl-control -E --query [--db <database file>]
```

where <database file> is the full path to the event log database file to output events from. By default, the application saves information about events to the database at /var/opt/kaspersky/kesl/private/storage/events.db. The location of the database is determined by the EventsStoragePath general application setting.

If the event log is located in the default database, you can output information about all events using the kesl-control -E command.

You can use less to navigate the list of displayed events. By default, the application stores up to 500,000 events. The maximum number of events that the application stores is determined by the MaxEventsNumber general application setting.

To output information about events in the application event log that meet certain criteria, run:

```
kesl-control -E --query "<filter conditions>" [--db <database file>] [-n <number>] [--json] [--reverse]
```

where:

- <filter conditions> specifies one or more logical expressions in the <field> <comparison operation> '<value>' format combined using the and logical operator to restrict query results.
- <number> is the number of the latest events of the selection (records counting from the end of the selection) to be displayed.
- --json: output events in JSON format.
- --reverse: display events in reverse order (from the newest event at the top to the oldest at the bottom).

To output information about events in the application event log that meet certain criteria to a file, run:

```
kesl-control -E --query "<filter conditions>" [--db <database file>] [-n <number>] --file <file path> [--json]
```

where `--file <file path>` is the full path to the file to output events to.

Configuring pop-up notifications in the graphical interface

By default, in the graphical interface of the application, information about events is displayed in pop-up notifications. You can enable or disable pop-up notifications using the Administration Console or the command line.

Configuring in the Administration Console

In the Administration Console, you can enable or disable the display of pop-up notifications in the graphical interface in the policy properties (Managing policies in the Administration Console, Creating a policy using the Administration Console) (**General settings** → **Application settings**).

The **Show pop-up notifications in the graphical user interface** check box enables pop-up notifications in the graphical user interface.

This check box is selected by default.

Configuring on the command line

On the command line, you can enable or disable pop-up notifications in the graphical interface using the `ShowPopUpNotifications` setting in the General application settings.

You can edit the option via command line switches or a configuration file that contains all general application settings.

The `ShowPopUpNotifications` parameter can take the following values:

- `Yes` (default value) – show pop-up notifications in the graphical user interface.
- `No` – do not show pop-up notifications in the graphical user interface.

Managing the application using the graphical interface

If Kaspersky Endpoint Security is used in Light Agent mode to protect virtual environments, the graphical interface is not supported.

You can use the Kaspersky Endpoint Security graphical interface to do the following:

- View information about device protection status.
- Enable and disable application components:
  - File Threat Protection.
  - Firewall Management.
  - Anti-Cryptor.
  - Removable Drives Scan.
  - Web Threat Protection.
  - Mail Threat Protection.
  - Device Control.
  - Network Threat Protection.
  - BadUSB Attack Prevention.
  - Behavior Detection.
  - Exploit Prevention.
  - Application Control.
  - Web Control.
  - System Integrity Monitoring.
- Start and stop scan tasks:
  - Malware Scan.
  - Critical Areas Scan.
  - Container Scan.
- Run a custom scan of files and directories.

- Start and stop database update and rollback tasks.
- Send a file or directory for scanning in Sandbox.
- Enable and disable Kaspersky Security Network.
- Manage application license keys and view information about the license under which the application is being used as well as the key associated with the license.
- Request and obtain temporary access to a blocked device from the administrator of the organization's local network.
- View application statistics and reports.
- View information about objects placed in Backup.
- Create application trace files.

If the application is being used in EDR Agent mode, only a limited subset of application component and tasks is available. You can manage certain protection components, activate the application, and update the databases. Learn more about the special aspects of the EDR Agent mode in the Known issues and limitations article.

If an application component or task is running in "Notify only" mode, the application interface displays the *"Notify only" mode selected* warning for the component or task.

Graphical interface

Application icon in the notification area

The Kaspersky Endpoint Security icon in the tray provides access to the context menu and the main window of the graphical interface of the application.

In some operating systems, the default application icon may be missing after installing the application graphical interface package.

The context menu of the application icon contains the following items:

- **Kaspersky Endpoint Security 12.4 for Linux**. Opens the main window of the graphical interface of the application, which displays the protection status of a device and contains interface elements that provide access to the application functions.
- **Exit**. Exits the graphical interface.

The main window of the application graphical interface

To open the main application window, do one of the following:

- Select the application name in the application menu of the operating system window manager.
- Right-click or double-click the application icon in the notification area of the taskbar.

The main graphical interface window of the application is divided into several parts:

- The upper part of the main window displays the protection status of the device. Clicking the **View** button opens the **Protection Center** window. This window displays information about the protection status of a device and recommendations on the actions to be performed to fix protection problems (if any).
- Under **Scan**, the Malware Scan task status and the number of detected threats are displayed. Clicking here opens the **Scan** window. In this window, you can start and stop the *Malware Scan*, *Critical Areas Scan* and *Container Scan* tasks. Also, you can view reports for these tasks.
- Under **Update**, the status of the *Update* task is displayed. Clicking here opens the **Update** window. In this window, you can start the *Update* and *Rollback* tasks. Also, you can view reports for these tasks.
- The lower part of the main window contains the following elements:
  - **Reports** button. Clicking this button opens the **Reports** window, where you can view component and task statistics and various reports.
  - **Backup** button. Clicking this button opens the **Backup** window, which contains information about objects in Backup.
  - **Settings** button. Clicking this button opens the **Settings** window, where you can enable or disable application components and configure the use of the Kaspersky Security Network.
  - **Temporary access** button. Clicking this button opens the **Temporary access** window, in which you can request and obtain temporary access to the blocked device.
  - **Support** button. Clicking this button opens the **Support** window where you can view information about the application and create an application trace file.
- The lowest part of the main application window displays information about the license and the key, as well as about licensing problems (if any). Clicking on this area of the window opens the **Licenses** window, which displays detailed license information. Clicking the **Purchase a license** button in this window opens the Kaspersky online store, where you can purchase a license. After purchasing a license, you will receive an activation code or a key file, which you must use to activate the application.

Managing the graphical interface requires the rights of the Administrator (admin) role. Parts of the graphical interface may not be available to users with other roles.

Enabling and disabling application components

You can enable or disable application components using a toggle switch in the graphical interface.

By default, the following components are enabled: File Threat Protection, Device Control, and Behavior Detection. The Web Threat Protection component can be enabled automatically if local management of Web Threat Protection settings is allowed on the device (a policy is not applied or the "lock" is not set in the policy properties) and one of the supported browsers is detected in the system.

To enable or disable an application component:

1. Open the main window of the application graphical interface.
2. In the lower part of the main window, click the **Settings** button.

   The **Settings** window opens.
3. Enable or disable the toggle switch for the relevant component.

Starting and stopping scan tasks

To start or stop a scan task:

1. Open the main window of the application graphical interface.
2. In the main window, click **Scan**.

   The **Scan** window will open.
3. Do one of the following:

   - To start a scan task, click the **Start** button under the scan task that you want to start.

     The progress of the running scan task is displayed.
   - To stop a scan task, click the **Stop** button under the scan task that you want to stop.

     The scan task stops, and information about the scanned objects and detected threats is displayed.
4. To view the report on the scan task, click the **Show report** button.

When an infected object is detected or the scan task is completed, a pop-up window appears in the notification area near the application icon on the right side of the taskbar.

The **Scan** window also displays the progress and results of temporary boot sector scan tasks (*Scan_Boot_Sectors_{ID}*) and temporary custom file scan tasks (*Scan_File_{ID}*). You can hide information about temporary tasks that are already completed by clicking the cross or by closing the **Scan** window (when switching to the main window or when exiting the application).

Starting a custom scan and a Sandbox scan

You can run custom scans of files and directories using the graphical interface.

To run a custom scan of a file or directory:

1. Right-click the file or directory that you want to scan to open the context menu.
2. Select **Kaspersky Endpoint Security 12.4 for Linux** as the application for scanning the file or directory.

   Depending on the desktop environment, the names of the context menu commands may differ.

The custom scan task and its progress are displayed in the graphical interface.

If the integration of the Kaspersky Endpoint Security application with Sandbox is enabled, you can send a file or directory for scanning to Sandbox using the graphical interface.

To submit a file or directory to Sandbox to be scanned:

1. Right-click the file or directory that you want to send for scanning to open the context menu.
2. Select **Kaspersky Endpoint Security 12.4 for Linux** as the application for scanning the file or directory.

   Depending on the desktop environment, the names of the context menu commands may differ.
3. In the window that opens, select the **Send to Sandbox to be scanned**.

Starting and stopping the Update task

To start or stop an update task:

1. Open the main window of the application graphical interface.
2. In the main application window, click **Update**.

   The **Update** window opens.
3. Do one of the following:

   - To start a task, click the **Start** button under the task that you want to start.

     The progress of the running update task is displayed.

     If the Update task finishes successfully, the **Roll back update** link becomes available, and you can roll back the last successful database update.
   - To stop a task, click the **Stop** button under the scan task that you want to stop.

     The Update task stops.
4. To view the report on the task, click the **Show report** button.

To start a rollback task:

1. Open the main window of the application graphical interface.
2. In the main application window, select the **Update** section.

   The **Update** window opens.
3. Run the Rollback task by clicking the **Roll back update** link.

Configuring Kaspersky Security Network

You can enable or disable Kaspersky Security Network using the graphical interface.

To enable use of Kaspersky Security Network:

1. Open the main window of the application graphical interface.
2. In the lower part of the main window, click the **Settings** button.

   The **Settings** window opens.
3. In the **Settings** window, select one of the following options:

   - **Extended KSN mode**, if you want to use Kaspersky Security Network, obtain information from the knowledge base, and send anonymous statistics and information about the types and sources of threats.
   - **Basic KSN mode**, if you want to use Kaspersky Security Network, obtain information from the knowledge base, but not to send anonymous statistics and information about the types and sources of threats.
4. Click the **Enable** button.

   The **Using Kaspersky Security Network** window opens.
5. In the **Using Kaspersky Security Network** window, carefully read the Kaspersky Security Network Statement and select the **I confirm that I have fully read, understand, and accept the terms and conditions of the Kaspersky Security Network Statement** option.
6. Click **OK**.

   The **OK** button is not available if none of the options are selected in the **Kaspersky Security Network usage** window.

To disable use of Kaspersky Security Network:

1. Open the main window of the application graphical interface.
2. In the lower part of the main application window, click the **Settings** button.

   The **Settings** window opens.
3. Click **Enable**.
4. In the window that opens, click the **Yes** button to decline use of Kaspersky Security Network.

Viewing reports

You can view reports of application components and tasks using the graphical interface. Reports are displayed in the window that opens when clicking **Reports** in the lower part of the main window of the application graphical interface.

Report data is presented as a table that contains a list of events. Each line in the table contains information about a separate event. Event attributes are displayed in the table columns. Events logged while various components and tasks are running have different sets of attributes.

The following event importance levels are used in reports:

- *Critical* – events with the critical importance level that need your attention as they indicate problems in the application operation or vulnerabilities in the device protection
- *High*
- *Medium*
- *Low*
- *Information*
- *Error*

The following reports are available in the application:

- **Statistics**. This report contains File Threat Protection and scan task statistics. You can update the displayed report by clicking the **Reload** button.
- **System audit**. This report contains information about events that occur during the application operation and during the user interaction with the application.
- **Threat protection**. This report contains information about the events that are logged while the following application components were running:
  - File Threat Protection
  - Removable Drives Scan
  - Anti-Cryptor
  - Web Threat Protection
  - Mail Threat Protection
  - Network Threat Protection
  - BadUSB Attack Prevention
  - Firewall Management
  - Application Control
  - Device Control
  - Behavior Detection
  - Exploit Prevention

- System Integrity Monitoring
- Web Control

- **On-demand tasks**. This report contains information about events logged by scan tasks, update tasks, and system integrity check tasks.
- **Execution prevention** This report contains information about events logged during object execution prevention by the EDR Expert (on-premise) and EDR Optimum components.

To view the report:

1. Open the main window of the application graphical interface.
2. In the lower part of the main application window, click the **Reports** button.

   The **Reports** window will open.
3. In the left part of the **Reports** window, select the required report type.

   A report containing a list of events is displayed in the right part of the window.

   By default, events are sorted in ascending order by the values in the **Date** column.
4. To view detailed information about an event, select the event in the report.

   The section that contains the attributes of this event is displayed at the bottom of the window.

For convenient processing of reports, you can modify the presentation of data on the screen in the following ways:

- Filter the list of events by occurrence time.
- Use the search function to find a specific event.
- View the selected event in a separate section.

Viewing Backup objects

You can do the following with objects in Backup using the graphical interface:

- View information about objects placed in Backup on the device.
- Restore objects from Backup to their original directories.
- Remove objects from Backup. Deleted objects cannot be restored in the future.

Information about restoring and deleting objects is saved to the event log.

To view objects in Backup:

1. Open the main window of the application graphical interface.
2. In the lower part of the main application window, click the **Backup** button.

   This opens the **Backup** window.

In this window the following information about the objects in Backup storage is displayed:

- Object name.
- Full path to an object.
- The date when the object was added to Backup.
- The date when the object was deleted from Backup (this field is displayed if Backup retention period is set).
- Object size.

Managing license keys

Using the graphical interface, you can add or remove application license keys, and view information about the license under which the application is being used as well as the license key associated with the license.

To activate the Kaspersky Endpoint Security application on a protected device, you need to add main license key to the application.

Activation is the process of giving effect to license that allows you to use a fully functional version of the application until the license expires.

If the main license which you are using for the application does not cover the additional Kaspersky Endpoint Security functionality that you need, you also need to add a license key to activate the additional functionality:

- A separate license key, "Kaspersky Endpoint Detection and Response Optimum Add-on" (hereinafter also referred to as the "EDR Optimum key"), to activate the Kaspersky EDR Optimum component.
- A separate license key, "Kaspersky Unified Monitoring and Analysis Platform Add-on" (hereinafter also referred to as the "KUMA key"), to activate the Kaspersky Unified Monitoring and Analysis Platform functionality.
- A separate license key, "Kaspersky Managed Detection and Response Optimum/Expert Add-on" (hereinafter also referred to as the "MDR key"), to activate the MDR component functionality.

You can also add a reserve key for the basic functionality and a reserve key for the additional functionality. A reserve key becomes active when the license associated with the active key expires or when the active key is deleted. Availability of a reserve key allows you to avoid application functionality limitation when your license expires.

A reserve license key can be added only after adding an active license key.

Adding a license key

If the application is not yet activated (an active main license key has not been added), you can activate the application under a commercial license or under a trial license.

To activate the application:

1. Open the main window of the application graphical interface.
2. Do one of the following:
   - In the lower part of the main window, click the area that displays information about the license and the key.
   - In the lower part of the main window, click the **Support** button to open the **Support** window, and in that window, click either the **License key** or the **Licenses** link in the lower part of the window.

   This opens the **Licenses** window. Clicking the **Purchase a license** button in this window opens the Kaspersky online store, where you can purchase a license.
3. If you want to activate the application under a commercial license:
   a. Click the **Add** button in the **Commercial key** section and perform the following actions, depending on the method you are using to add the key:
      - If you want to add a key using an activation code, enter the activation code and click the **Next** button.
      - If you want to add a key using a key file, click the **Select a key file** link to open the file selection window that window, select the file with the .key extension.

      The window displays information about the key and the license associated with it.
   b. Click the **Activate** button.
4. If you want to activate the application under a trial license, click the **Activate** button in the **Trial key** section. The window displays information about the trial license and the associated key.

   You can use the application under a trial license for only one trial period.

After activating the application, you can add a reserve main license key and, if necessary, an active and reserve key for additional functionality. The procedures for adding a reserve main key and keys for additional functionality are the same.

To add a reserve main key or keys for additional functionality to the application:

1. Open the main window of the application graphical interface.
2. Do one of the following:
   - In the lower part of the main window, click the area that displays information about the license and the key.
   - In the lower part of the main window, click the **Support** button to open the **Support** window, and in that window, click either the **License key** or the **Licenses** link in the lower part of the window.

   This opens the **Licenses** window. The window displays information about previously added license keys.

3. Click the **Add** button and perform the following actions, depending on the method you are using to add the key:

   - If you want to add a key using an activation code, enter the activation code and click the **Next** button.
   - If you want to add a key using a key file, click the **Select a key file** link to open the file selection window that window, select the file with the .key extension.

   The window displays information about the key and the license associated with it.

4. Click the **Add** button.

If you add a main license key and the application is already activated, the new key is added as a reserve main key.

If you add a separate key for additional functionality, it is added as active unless a key for this additional functionality has previously been added to the application. A new key for additional functionality is added as a reserve key if a key for that additional functionality has already been added to the application.

> If both an active key and a reserve key were previously added to the application, the new key replaces the previously added reserve key.

A trial license key and a subscription key cannot be added as a reserve key.

Removing a license key

To remove a license key that has been added to the application:

1. Open the main window of the application graphical interface.
2. Do one of the following:

   - In the lower part of the main window, click the area that displays information about the license and the key.
   - In the lower part of the main window, click the **Support** button to open the **Support** window, and in that window, click either the **License key** or the **Licenses** link in the lower part of the window.

   This opens the **Licenses** window.

3. Click the **Remove** button to the right of the information about the key that you want to remove.
4. Confirm the removal in the window that opens.

Viewing license information

To view license information:

1. Open the main window of the application graphical interface.

2. Do one of the following:

   - In the lower part of the main window, click the area that displays information about the license and the key.

   - In the lower part of the main window, click the **Support** button to open the **Support** window, and in that window, click either the **License key** or the **Licenses** link in the lower part of the window.

   This opens the **Licenses** window.

   The window displays information about the active and reserve keys added to the application. Click the **More info** link to view full information about the licenses and keys.

The **Current licenses** section displays information about the added active keys (active main key and active additional functionality key) and the licenses associated with these keys:

- License type, license limitation, and license term.
- **License key** – a unique alphanumeric sequence.
- **Key status** – the status of the key or a message about the problems associated with the key (if any).
- **Valid from** – date when the application was activated by adding this key.
- **Expires** – the number of days before the license expires and the license expiration date (UTC).
- **Name** – the name of the application for which the activation key was added.
- **Protection** – information about restrictions on protection functions and the ability to update application databases.

The **Reserve keys** section displays information about the added reserve keys (reserve main key and reserve additional functionality key) and the licenses associated with these keys:

- Type of reserve key, license limit, and license term associated with the key.
- **License key** – a unique alphanumeric sequence.
- **License type** – the type of license associated with the reserve key.
- **Name** – the name of the application for which the activation key was added.
- **Protection** – information about restrictions on protection functions and the ability to update application databases.

Gaining temporary access to device

When a device is connected, and access to that device is denied by Device Control, a window with a message about blocked access to the device is displayed.

You can request temporary access to a blocked device from your organization's local network administrator using the graphical interface:

- From the window with the message about blocked access to the device, by clicking **OK**
- From the main window of the application graphical interface

To request temporary access to a blocked device:

1. Open the main window of the application graphical interface.
2. In the lower part of the main window, click the **Temporary access** button.

   This opens the **Temporary access** window.

   You can also open the **Temporary access** window from the window with the message about blocked access to the device by clicking **OK**.
3. In the **Request access to the blocked device** section, in the list of connected devices, select the device to which you want to gain access.
4. In the **Device access duration (hours)** field, specify the time period for which you want to gain access to the device (in hours).
5. Click the **Create request access file** button.
6. In the opened window, specify the path to the directory in which you want to save the access request file with the .akey extension.
7. Send the access request file to the administrator, for example, by email or in any available way (the administrator can configure this in the block message template).

After getting the access key from the administrator, you can upload the access key to gain temporary access to the blocked device.

To get temporary access to a blocked device:

1. Open the main window of the application graphical interface.
2. In the lower part of the main window, click the **Temporary access** button.

   This opens the **Temporary access** window.
3. In the **Get access to the device** section, click the **Upload access key** button.
4. In the opened window, select the file with the device access key (file with the .acode extension) received from the administrator of the organization's local network.

5. A window is displayed with information about the device to which access has been granted and the access duration.

6. Click **OK**.

Viewing information about the application

You can view information about the installed application and its device in the **Support** window, which you can open by clicking the **Support** button in the lower part of the main window of the application graphical interface.

The **Support** window displays the following information:

- Application version.
- **License key** displays the active main license key added to the application, or a message saying that no key has been added. The link in this field opens the **Licenses** window, which displays detailed license information.
- **Key status** displays information about the status of the active main license key, or a message saying that no key has been added.
- **Database release date** – status and release date of the application databases.
- **Operating system** – information about the operating system of the device.
- **Application management** – Information about whether the device is managed by a policy.

If the **Application is allowed to retrieve policy's extended data on device** option is enabled in the Network Agent policy, the window also displays the following information about the policy that is applied on the device with the application installed.

- **Policy name** is the name of the policy that is applied to the device on which application is installed.
- **Date applied** – the date and time when the policy was last applied or updated on the device with the installed application.
- **Administration group** is the name of the administration group that includes the device on which the application is installed, that is managed by a policy.
- **Active policy profiles** is a list of active policy profiles applied on the device (if any).

The following links are displayed at the bottom of the **Support** window:

- **Licenses**, which opens the **Licenses** window, which displays detailed license information.
- **Knowledge Base**, which opens the Knowledge Base page.
- **Support**, which opens the Kaspersky CompanyAccount page.
- **Tracing**, which opens the **Tracing** window. In this window, you can create application trace files and configure the level of detail of the trace files.

  To follow the **Tracing** link, you need the rights of the admin role.

Creating a trace file

You can create application trace files and configure the level of detail of the trace files using the graphical interface.

To create a trace file and configure its level of detail, you need a user with the Administrator role (admin).

To create a trace file:

1. Open the main window of the application graphical interface.
2. In the lower part of the main application window, click the **Support** button.

   The **Support** window opens.
3. Click the **Tracing** link to open the **Tracing** window
4. In the **Level** drop-down list, select the level of detail for the trace file.

   You are advised to clarify the required level of detail with a Kaspersky Technical Support specialists. The default value is **Diagnostic (300)**.
5. Click the **Enable** button to start tracing.
6. Reproduce the situation which caused the problem.
7. Click the **Disable** button to stop tracing.

Created trace files are stored in /var/log/kaspersky/kesl/ directory.

Application components integrity check

Kaspersky Endpoint Security contains many various binary modules in the form of dynamic linked libraries, executable files, configuration files, and interface files. A hacker can replace one or more executable modules or files of the application with other files containing malicious code. To prevent such replacement of modules and files, Kaspersky Endpoint Security can check the integrity of application components. The application checks modules and files for unauthorized changes or corruption. If an application module or file has an incorrect checksum, it is considered to be corrupted.

An integrity check is run for the following application components if installed on the device:

- application package
- Graphical user interface package
- Kaspersky Security Center Network Agent package
- Kaspersky Endpoint Security management web plug-in
- Kaspersky Endpoint Security MMC management plug-in

The integrity of the application components is checked using an integrity check utility. The utility checks integrity of the files in the special lists called *manifest files*. Each application component has its own manifest file that contains a list of application files whose integrity is important for correct operation of this application component. The name of the manifest file is the same for each component, but the content of the manifest files differs. The manifest files are digitally signed and their integrity is checked as well.

To run the integrity check utility on Linux devices, an account with root privileges is required. An administrator account is required to run the integrity check utility on Windows devices.

The integrity check utility is installed with the application and located at the following paths:

- As part of the application package (integrity_checker): /opt/kaspersky/kesl/bin/integrity_checker.
- As part of the MMC management plug-in for Kaspersky Endpoint Security (integrity_checker.exe):
  - %ProgramFiles%\Kaspersky Lab\Kaspersky Security Center\Plugins\kesl_<version number>.plg\integrity_checker.exe – for 32-bit operating systems
  - %ProgramFiles(x86)%\Kaspersky Lab\Kaspersky Security Center\Plugins\kesl_<version number>.plg\integrity_checker.exe – for 64-bit operating systems

The manifest files are located at the following paths:

- To check the integrity of the application package: /opt/kaspersky/kesl/bin/integrity_check.xml.
- To check the integrity of the graphical user interface package: /opt/kaspersky/kesl/bin/gui_integrity_check.xml.

- To check Network Agent:
  - /opt/kaspersky/klnagent/bin/kl_file_integrity_manifest.xml – for 32-bit operating systems
  - /opt/kaspersky/klnagent64/bin/kl_file_integrity_manifest.xml – for 64-bit operating systems
- To check the Kaspersky Endpoint Security MMC management plug-in:
  - %ProgramFiles%\Kaspersky Lab\Kaspersky Security Center\Plugins\kesl_<plugin version>.plg\integrity_check.xml – for 32-bit operating systems
  - %ProgramFiles(x86)%\Kaspersky Lab\Kaspersky Security Center\Plugins\kesl_<plugin version>.plg\integrity_check.xml – for 64-bit operating systems
- To check the Kaspersky Endpoint Security management web plug-in directory:
  - %ProgramFiles%\Kaspersky Lab\Kaspersky Security Center Web Console\server\plugins\kesl_<version number>\integrity_check.xml – on devices with Windows operating systems
  - /var/opt/kaspersky/ksc-web-console/server/plugins/kesl_<version number>/integrity_check.xml – on devices with Linux operating systems

To check the integrity of a solution component, you need to run the tool from the folder of that component's tool.

To run the integrity check utility, run one of the following commands:

- To perform an application integrity check of the package:

  ```
  integrity_checker [<path to manifest file>] --crl
  /var/opt/kaspersky/kesl/private/data/KDSCRL/ --signature-type kds-with-filename
  ```

- To check the integrity of the graphical user interface package:

  ```
  integrity_checker <path to manifest file> --crl
  /var/opt/kaspersky/kesl/private/data/KDSCRL/ --signature-type kds-with-filename
  ```

- To check the integrity of the Kaspersky Endpoint Security MMC management plug-in:

  ```
  integrity_checker.exe [<path to manifest file>]
  ```

- To check the integrity of Network Agent:

  ```
  integrity_checker <path to manifest file>
  ```

- To check the integrity of the Kaspersky Endpoint Security management web plug-in directory:

  ```
  integrity_checker <path to manifest file> --crl
  /var/opt/kaspersky/kesl/private/data/KDSCRL/ --signature-type kds
  ```

  The default path is for a manifest file located in the same directory as the integrity checker utility.

You can run the utility with the following optional settings:

- `--crl <directory>` is the path to the directory containing the Certificate Revocation List.
- `--verbose` – display detailed information about performed actions and their results. If you do not specify this setting, only errors, objects that did not pass the check, and scan statistics summary will be displayed.

- `--trace < file name >`, where `< file name >` is the name of the file where events that happen during scans will be logged at the DEBUG level of detail.

- `--signature-type kds` is the type of signature to be checked (this option is required for scanning the directory of the Kaspersky Endpoint Security management web plug-in).

- `--signature-type kds-with-filename` is the type of the signature to be checked (this option is required for checking the application package and the graphical user interface package).

- `--single-file < file >` checks only the specified file in the manifest and ignores all the other objects of the manifest.

- `--version` – display the version of the utility and do not perform an integrity check.

You can view description of all available integrity check utility settings in the help on the utility options by running the `integrity_checker --help` command.

The result of checking the manifest files is displayed as follows:

- `SUCCEEDED` — integrity of the files has been confirmed (return code 0).

- `FAILED` – integrity of the files has not been confirmed (return code is not 0).

If a violation of the integrity of the application or Network Agent is detected when the application starts, Kaspersky Endpoint Security generates the corresponding event in the event log and in Kaspersky Security Center.

Contact Technical Support

If you do not find a solution to your problem in the application documentation or other sources of information about the application, it is recommended to contact Technical Support. Technical Support specialists will answer any of your questions about installing and using Kaspersky Endpoint Security.

Kaspersky provides support for Kaspersky Endpoint Security for the whole duration of its life cycle (see Application life cycle). Before contacting Technical Support, please read the support rules.

You can contact Technical Support in one of the following ways:

- Visit Technical Support website.
- Submit a request to Kaspersky Technical Support from the Kaspersky CompanyAccount portal.

Technical Support via Kaspersky CompanyAccount

Kaspersky CompanyAccount is a portal for companies that use Kaspersky applications. The Kaspersky CompanyAccount portal is designed to facilitate interaction between users and Kaspersky specialists through online requests. The Kaspersky CompanyAccount portal lets you monitor the progress of electronic request processing by Kaspersky specialists and store a history of electronic requests.

You can register all of your organization's employees under a single account on Kaspersky CompanyAccount. A single account lets you centrally manage electronic requests from registered employees to Kaspersky and also manage the privileges of these employees via Kaspersky CompanyAccount.

The Kaspersky CompanyAccount portal is available in the following languages:

- English
- Spanish
- Italian
- German
- Polish
- Portuguese
- Russian
- French
- Japanese

To learn more about Kaspersky CompanyAccount, visit the Technical Support website.

Obtaining information for Technical Support

After you inform Kaspersky Technical Support specialists about the problem, they may ask you to send a *trace file* or *dump file*.

Technical Support specialists may also need additionally information about the operating system and running processes on the device, as well as detailed reports on the operation of application components.

While diagnosing the problem, Technical Support specialists may ask you to change the application settings to:

- activate functionality to receive advanced diagnostic information;
- perform more detailed configuration of individual application components that cannot be performed through the standard user interface;
- change settings for storing received diagnostic information;
- to configure the capture and storage of network traffic in a file.

Technical Support specialists will tell you all the information required to perform these actions (the sequence of steps, the settings to change, configuration files, scripts, advanced command line capabilities, debugging modules, special utilities, etc.), as well as the body of information received for diagnostic purposes. The received advanced diagnostic information is stored on the user device. This information is not automatically sent to Kaspersky.

The steps listed above should be performed only with the guidance of Technical Support specialists based on instructions they provide. Independently changing application files using means not described in the application documentation or not recommended by Technical Support specialists may lead to poor performance and failures in the application and operating system, reduced protection, as well as inaccessible and corrupted data.

About application trace files

A *trace file* tracks the step-by-step execution of application commands and detects at what stage of application operation the error occurs.

Application trace files are not generated by default. You can enable or disable generation of application trace files and define the level of detail in trace files in the command line via the general application settings and the graphical user interface.

If you have enabled application trace files, these will be stored at /var/log/kaspersky/kesl/. Access to this directory requires root privileges.

To store trace files, the application needs disk space in addition to the disk space listed in minimum hardware requirements.

Trace files are stored on the device as long as the application is in use, and are deleted permanently when the application is removed. Trace files are not sent to Kaspersky automatically.

Trace files are saved in a human-readable format. It is recommended to protect information from unauthorized access before sending it to Kaspersky.

Application trace file contents

Trace files contain the following general data:

- Event time.
- Number of the thread of execution.
- Application component that caused the event.
- Degree of event severity (informational event, warning, critical event, error).
- A description of the event involving command execution by a component of the application and the result of execution of this command.

Trace files may store the following information in addition to general data:

- The statuses of the application components and their operational data.
- Data on user activity in the application.
- Data on the hardware installed on the device.
- Data about all operating system objects and events, including information about user activity.
- Data contained in the objects of the operating system (for example, the contents of files that may contain any user personal data).
- Network traffic data (for example, the contents of the entry fields on a website, which may include bank card information or any other sensitive data).
- Data received from Kaspersky servers (such as the version of the application databases).
- Data received from KATA servers, OSMP servers, NDR servers, and servers that provide interaction with Sandbox.
- Data on consumed CPU resources.
- Data on consumed RAM resources.
- Data about file read and write operations by applications.
- Data on the amount of cached information required for the application to work.

Configuring application trace settings

If you are managing the Kaspersky Endpoint Security application through Kaspersky Security Center, you can manage the trace settings of the application in the Kaspersky Endpoint Security policy settings using the Web Console or the Administration Console.

If you are managing the application on the command line, you can configure trace settings of the application in the general application settings.

Editing trace settings in the Web Console

In the Web Console, you can manage application trace settings in the policy properties (**Application settings** → **General Settings** → **Technical Support**).

To apply trace settings, you must restart the application.

Editing trace settings in the Administration Console

In the Administration Console, you can manage application trace settings in the policy properties (Managing policies in the Administration Console, Creating a policy using the Administration Console) (**Security Controls** → **Application settings**).

Under **Trace and dump settings**, click **Configure** to open a window in which you can edit the trace settings (see the table below).

Application trace settings

Setting	Description
Path to the trace file directory	Input field for the path to the directory where the trace files are stored. Default value: /var/log/kaspersky/kesl. If you specify a different directory, make sure that the user running Kaspersky Endpoint Security has read and write permissions for that directory. Root privileges are required to access the default trace files directory.
Maximum trace file size (MB)	In this field, you can enter the maximum size of an application trace file (in megabytes). Default value: 500.
Maximum number of trace files	In this field, you can enter the maximum number of application trace files. Default value: 10.

To apply trace settings, you must restart the application.

Editing trace settings in the command line

In the command line, you can configure application tracing settings using the `TraceLevel`, `TraceFolder`, `TraceMaxFileCount` and `TraceMaxFileSize` settings in general application settings.

The `TraceLevel` setting lets you enable or disable the creation of application trace files and specify the level of detail in trace files. This setting can take the following values:

- `Detailed` – Generate a detailed trace file.
- `MediumDetailed` – Generate a trace file that contains informational messages and error messages.
- `NotDetailed` – Generate a trace file that contains error messages.
- `None` (default value) — Do not generate a trace file.

The `TraceFolder` settings lets you specify the directory where application trace files are stored. Default value: /var/log/kaspersky/kesl. If you specify a different directory, make sure that the account under which Kaspersky Endpoint Security is running has only read/write permissions for this directory (rwx-------- 700 permissions). Root privileges are required to access the default trace files directory.

The `TraceMaxFileCount` setting lets you specify the maximum number of application trace files. The setting can take values from 1 to 10000. Default value: 10.

The `TraceMaxFileSize` setting lets you specify the maximum size of an application trace file (in megabytes). The setting can take values from 1 to 1000. Default value: 500.

You can change the values of the settings with the help of command line switches or a configuration file that contains all general application settings.

After changing the values of the `TraceFolder`, `TraceMaxFileCount`, or `TraceMaxFileSize` settings, you need to restart the application.

Application management plug-in trace files

Management plug-in trace files are not sent to Kaspersky automatically.

Trace files are saved in a human-readable format. It is recommended to protect information from unauthorized access before sending it to Kaspersky.

MMC administration plug-in trace files

If you use the Administration Console to manage Kaspersky Endpoint Security, information about events that occur while the administration MMC plug-in is running can be saved to the Kaspersky Endpoint Security MMC plug-in trace file on the device where the Administration Server is installed. The file name contains the application version number, file creation date and time, and process identifier (PID). This file contains information about the events that occur during MMC plug-in operation, in particular, about the operation of policies and tasks.

MMC plug-in trace files are not generated by default. You can use registry keys to create the MMC plug-in trace file. Contact Technical Support representatives for detailed information on how to create trace files.

All created trace files of the MMC plug-in are located in the folder specified by the user during registry key configuration.

Management web plug-in trace files

If you use the Web Console to manage Kaspersky Endpoint Security, information about events that occur while the administration web plug-in is running can be written to the web plug-in trace files.

Trace files for the web plug-in are created automatically if logging of Web Console activities is enabled in Web Console Installation Wizard (for more details, refer to the Kaspersky Security Center Help).

Trace files of the web plug-in are stored in the Web Console installation folder in the "logs" subfolder.

Contents of management plug-in trace files

Trace files contain the following general data:

- Event time.
- Number of the thread of execution.
- Application component that caused the event.
- Degree of event severity (informational event, warning, critical event, error).
- A description of the event involving command execution by a component of the application and the result of execution of this command.

In addition to general data, trace files may contain the following information:

- Personal data, including the last name, first name, and middle name, if such data is part of the path to files.
- The name of the account used to log in to the operating system if the user account name is part of a file name.

About dump files

A *dump file* contains all information about the working memory of Kaspersky Endpoint Security processes at the time of creating the dump

Dump files may contain personal data. It is recommended to protect information from unauthorized access before sending it to Kaspersky.

No dump files are generated by default. You can enable or disable dumping in case of application failures.

If you have enabled dumping, by default, dump files are stored in the following directories:

- /var/opt/kaspersky/kesl/common/dumps (dump files of the kesl process)
- /var/opt/kaspersky/kesl/common/dumps-user (dump files of user processes)

Root privileges are required to access the default dump file directory. You can specify a different directory for storing the dump files of the kesl process. If you specify a different directory, make sure that only the root has read and write permissions to this directory (`700` or `rwx--------` permissions).

To store dump files, the application needs disk space in addition to the disk space listed in minimum hardware requirements.

Dump files are stored on the computer as long as the application is in use, and are deleted permanently when the application is removed. Dump files are not sent to Kaspersky automatically.

Managing dump file settings

If you are managing the Kaspersky Endpoint Security application through Kaspersky Security Center, you can manage dump file settings of the application in the Kaspersky Endpoint Security policy settings using the Web Console or the Administration Console.

If you use the command line to manage the application, you can enable or disable dumping via the kesl.ini configuration file.

The maximum number of dump files is limited.

Depending on the operating system settings, user dump files may not be created. Make sure that the system kernel is configured using `sysctl kernel.yama.ptrace_scope=0`.

Managing dump file settings in the Web Console

In the Web Console, you can manage application dump file settings in the policy properties (**Application settings** → **General Settings** → **Technical Support**).

The application dump file settings in the policy properties in the Web Console are described in Appendix 5.

You must restart the application to apply the dump file settings.

Managing dump file settings in the Administration Console

In the Administration Console, you can manage dumping settings for the application in the policy properties (Managing policies in the Administration Console, Creating a policy using the Administration Console) (**Security Controls** → **Application settings**).

Under **Trace and dump settings**, click **Configure** to open a window in which you can edit the dumping settings (see the table below).

Dump file settings

Setting	Description
Create a dump file if the application crashes	This check box enables or disables the creation of a dump file when the application crashes. This check box is cleared by default.
Path to the dump file directory	Input field for the path to the directory where the dump files are stored. The input field is limited to 128 characters. Default value: /var/opt/kaspersky/kesl/common/dumps.

You must restart the application to apply the dump file settings.

Managing dump file settings on the command line

To enable or disable dumping via the kesl.ini configuration file, do as follows:

1. Stop Kaspersky Endpoint Security.
2. Open the /var/opt/kaspersky/kesl/common/kesl.ini file for editing.
3. Under **[General]**, set the parameter value:
   - `CoreDumps=yes`: enable dumping in case of a failure.
   - `CoreDumps=no`: disable dumping.

4. If you want to change the default directory where dump files are saved, specify the path to the directory in the `CoreDumpsPath` option.

5. Start Kaspersky Endpoint Security.

Remote device diagnostics using Kaspersky Security Center

In Kaspersky Security Center you can perform remote diagnostics of client devices. The remote diagnostics procedure lets you remotely run the following operations:

- Enable or disable tracing.
- Change the trace level.
- Download trace files.
- Download a remote application installation log.
- Download system event (syslog) logs.
- Start, stop, and restart applications.

Remote diagnostics in the Web Console

If you use the Web Console to manage Kaspersky Endpoint Security, remote diagnostics of a client device is done in the remote diagnostics window.

To open the remote device diagnostics window for a device:

1. In the main window of the Web Console, select **Assets (Devices)** → **Managed devices**.
   The list of managed devices opens.
2. Select a device that you want to diagnose remotely and click the <device name> link.
   The device properties window opens.
3. On the **Advanced** tab, select the **Remote diagnostics** section.

In the device remote diagnostics window, you can view the remote installation log.

To view the remote installation log on a device, do as follows:

1. Open the remote device diagnostics window.
2. On the **Event logs** tab, under **Trace files** block, click **Remote installation logs**.
   The **Device trace event logs** window opens.

For more information about the remote diagnostics, see the Kaspersky Security Center Help.

Remote diagnostics using the Administration Console

If you use the Administration Console to manage Kaspersky Endpoint Security, remote diagnostics is done using the special Kaspersky Security Center remote diagnostics utility automatically installed on the device together with the Administration Console.

To open the main window of the remote diagnostics utility, do as follows:

1. In the Administration Console tree, in the **Managed devices** folder, select the administration group containing the necessary device.
2. In the workspace, select the **Devices** tab.
3. In the list of managed devices, select the device to which you want to connect the remote diagnostics utility, and select **External tools → Remote diagnostics** in the device context menu.

   The main window of the **Kaspersky Security Center remote diagnostics utility** opens.

You can use the remote device diagnostics utility to view the remote installation log.

To view the remote installation log on a device, do as follows:

1. Open the main window of the remote diagnostics utility.
2. Configure the options for connecting the utility to the device if needed. In the main window of the remote diagnostics utility, click the **Log in** button.
3. In the window that opens, in the objects tree, select the **Remote installation logs** folder.

For more information about the remote diagnostics utility, refer to Kaspersky Security Center Help section.

Appendices

This section provides information that complements the primary Help text.

Appendix 1. Commands for managing Kaspersky Endpoint Security

In the command line, Kaspersky Endpoint Security is managed using Kaspersky Endpoint Security management commands.

You can view the help on management commands by running:

```
kesl-control --help <command group prefix>
```

Where <command group prefix> accepts the following values:

- -A: commands for managing Application Control
- -B: commands for managing Backup
- -C: commands for managing general Container Scan settings (Container Scan, Container Monitoring)
- -D: commands for managing Device Control
- -E: commands for managing application events (Viewing events on the command line, Viewing events in Kaspersky Security Center)
- -F: commands for managing firewall
- -H: commands for managing blocked devices
- -J: commands for managing the obtaining of system performance metrics
- -L: commands for managing license keys
- -M: commands for managing the integration settings of the Kaspersky Endpoint Security application with Kaspersky Unified Monitoring and Analysis Platform
- -N: commands for managing network traffic scan settings
- -Q: commands for managing the Quarantine
- -R: commands for managing the settings of Kaspersky Endpoint Security integration with Kaspersky Endpoint Detection and Response (KATA), Kaspersky Network Detection and Response (KATA), Kaspersky Endpoint Detection and Response Expert (on-premise), and Kaspersky Endpoint Detection and Response Optimum
- -S: statistics commands
- -T: commands for managing application tasks and settings

- -U: commands for managing users and roles
- -V: application commands in light agent mode for protecting virtual environments
- -W: event output commands (Viewing events on the command line, Viewing events in Kaspersky Security Center)
- -X: commands for managing the integration settings of the Kaspersky Endpoint Security application with Sandbox

Commands for managing application tasks and settings

The -T prefix indicates that the command belongs to the group of commands for managing application settings and tasks.

The -C prefix indicates that the command belongs to the group of commands for managing container scan settings (Container Scan, Container Monitoring).

The -N prefix indicates that the command belongs to the group of commands for managing network traffic scan settings.

kesl-control --export-settings

This command outputs all application settings to the console or exports to a configuration file. These include general container scan settings, encrypted connections scan settings, general application settings, and task settings.

Command syntax

```
kesl-control [-T] --export-settings [--file <path to configuration file>] [--json]
```

Arguments and keys

`--file <configuration file path>` is the full path to the configuration file where the application settings will be saved.

`--json` is specified to output the settings in JSON format. If the `--json` option is not specified, the settings are output in the INI format.

kesl-control --import-settings

This command imports all application settings from a configuration file, including general container scan settings, encrypted connections scan settings, general application settings, and task settings.

Command syntax

```
kesl-control [-T] --import-settings --file <path to configuration file> [--json]
```

Arguments and keys

`--file <configuration file path>` is the full path to the configuration file from which the settings will be imported into the application.

`--json` is specified to import the settings from the configuration file in JSON format. If the `--json` option is not specified, the application attempts to import from an INI file. If the import fails, an error is displayed.

kesl-control --update-application

This command installs a downloaded application module update.

> The command cannot be run if the application is being used in Light Agent mode

Command syntax

```
kesl-control [-T] --update-application
```

Commands for managing general application settings

The kesl-control --get-app-settings command

The command outputs the current values of the general application settings to the console or a configuration file.

Command syntax

```
kesl-control [-T] --get-app-settings [--file <path to configuration file>] [--json]
```

Arguments and keys

`--file <configuration file path>` is the path to the configuration file where the application general settings will be written. If you do not specify the `--file` option, settings will be output to the console.

If you specify the name of a file without its path, the file will be created in the current directory. If a file already exists in the specified path, it will be overwritten. If the specified directory does not exist, no configuration file will be generated.

`--json` is specified to output the settings in JSON format. If the `--json` option is not specified, the settings are output in the INI format.

The kesl-control --set-app-settings command

This command configures the general application settings via command options or by importing settings from a configuration file.

Command syntax

Define settings via command options:

```
kesl-control [-T] --set-app-settings <setting name>=<setting value> [<setting name>=<setting value>]
```

Define settings via a configuration file:

```
kesl-control [-T] --set-app-settings --file <path to configuration file> [--json]
```

Arguments and keys

`<setting name>=<setting value>` is the name and value of one of the general application settings.

`--file <configuration file path>` is the full path to the configuration file from which the settings will be imported into the application.

`--json` is specified to import the settings from the configuration file into the application in JSON format. If the `--json` option is not specified, the application attempts to import from an INI file. If the import fails, an error is displayed.

Commands for managing task settings

kesl-control --get-settings

This command outputs the current settings for a specified task to the console or a configuration file.

Command syntax

```
kesl-control [-T] --get-settings <task ID/name> [--file <path to configuration file>] [--json]
```

Arguments and keys

`<task ID/name>` is the ID assigned to the task at the time of its creation, or the name of the task in the command line.

`--file <configuration file path>` is the path to the configuration file where the task settings will be written. If you do not specify the `--file` option, settings will be output to the console.

If you specify the name of a file without its path, the file will be created in the current directory. If a file already exists in the specified path, it will be overwritten. If the specified directory does not exist, no configuration file will be generated.

`--json` is specified to output the settings in JSON format. If the `--json` option is not specified, the settings are output in the INI format.

kesl-control --set-settings

This command defines the settings for a specified task via command options or by importing settings from a configuration file.

Command syntax

Define settings via command options:

```
kesl-control [-T] --set-settings <task ID/name> <setting name>=<setting value>
[<setting name>=<setting value>] [--add-path <path>] [--del-path <path>] [--add-
exclusion <path>] [--del-exclusion <path>]
```

Define settings via a configuration file:

```
kesl-control [-T] --set-settings <task ID/name> --file <path to configuration file> [--
json]
```

Arguments and keys

`<task ID/name>` is the ID assigned to the task at the time of its creation, or the name of the task in the command line.

`<setting name>=<setting value>` is the name and value of one of the task settings.

`--add-path <path>` adds a path to a directory with objects to be scanned.

`--del-path <path>` removes a path to a directory with objects to be scanned.

`--add-exclusion <path>` adds a path to a directory with objects to be excluded from scanning.

`--del-exclusion <path>` removes a path to a directory with objects to be excluded from scanning.

`--file <configuration file path>` is the full path to the configuration file from which the task settings will be imported.

`--json` is specified to import the settings from the configuration file in JSON format. If the `--json` option is not specified, the application attempts to import from an INI file. If the import fails, an error is displayed.

kesl-control --set-to-default

The command restores the default settings for the specified task.

Command syntax

```
kesl-control [-T] --set-settings <task ID/name> --set-to-default
```

Arguments and keys

< task ID/name > is the ID assigned to the task at the time of its creation, or the name of the task in the command line.

The kesl-control --get-schedule command

The command outputs the current schedule of the specified task to the console or a configuration file.

Command syntax

```
kesl-control [-T] --get-schedule < task ID/name > [--file < path to configuration file >] [--json]
```

Arguments and keys

< task ID/name > is the ID assigned to the task at the time of its creation, or the name of the task in the command line.

--file < configuration file path > is the path to the configuration file where the task schedule settings will be written. If you do not specify the --file option, settings will be output to the console.

If you specify the name of a file without its path, the file will be created in the current directory. If a file already exists in the specified path, it will be overwritten. If the specified directory does not exist, no configuration file will be generated.

--json is specified to output the settings in JSON format. If the --json option is not specified, the settings are output in the INI format.

The kesl-control --set-schedule command

The command defines a schedule for the specified task via command options or by importing settings from a configuration file.

Command syntax

Define settings via command options:

```
kesl-control [-T] --set-schedule < task ID/name > < setting name >=< setting value > [< setting name >=< setting value >]
```

Define settings via a configuration file:

```
kesl-control [-T] --set-schedule < task ID/name > --file < path to configuration file > [--json]
```

Arguments and keys

< task ID/name > is the ID assigned to the task at the time of its creation, or the name of the task in the command line.

< setting name >=< setting value > is the name and value of one of the task schedule settings.

`--file <configuration file path>` is the full path to the configuration file from which the task schedule settings will be imported.

`--json` is specified to import the settings from the configuration file in JSON format. If the `--json` option is not specified, the application attempts to import from an INI file. If the import fails, an error is displayed.

Commands for managing tasks

kesl-control --get-task-list

This command outputs a list of existing tasks.

Command syntax

```
kesl-control [-T] --get-task-list [--json]
```

Arguments and keys

`--json` is specified to output the settings in JSON format.

kesl-control --get-task-state

This command outputs the status of the specified task.

Command syntax

```
kesl-control [-T] --get-task-state <task ID/name> [--json]
```

Arguments and keys

`<task ID/name>` is the ID assigned to the task at the time of its creation, or the name of the task in the command line.

`--json` is specified to output the settings in JSON format.

kesl-control --create-task

This command creates a task of the specified type with the default settings or settings specified in a configuration file.

Command syntax

Create a task with the default settings:

```
kesl-control [-T] --create-task <task name> --type <task type>
```

Create a task with the settings from a configuration file:

```
kesl-control [-T] --create-task <task name> --type <task type> [--file <path to configuration file>] [--json]
```

Arguments and keys

`<task name>` is the name that you specify for the new task.

`<task type>` is the designation of the type of the task you are creating.

`--file <path to configuration file>` is the full path to the configuration file with the settings that will be used for creating the task.

`--json` is specified to import the settings from the configuration file in JSON format. If the `--json` option is not specified, the application attempts to import from an INI file. If the import fails, an error is displayed.

kesl-control --delete-task

This command deletes a task.

Command syntax

```
kesl-control [-T] --delete-task <task ID/name>
```

Arguments and keys

`<task ID/name>` is the ID assigned to the task at the time of its creation, or the name of the task in the command line.

kesl-control --start-task

This command starts a task.

Command syntax

```
kesl-control [-T] --start-task <task ID/name> [-W] [--progress]
```

Arguments and keys

`<task ID/name>` is the ID assigned to the task at the time of its creation, or the name of the task in the command line.

`[-W]`: enable current events output.

`[--progress]`: display task progress.

kesl-control --stop-task

This command stops a task.

Command syntax

```
kesl-control [-T] --stop-task <task ID/name> [-W]
```

Arguments and keys

`<task ID/name>` is the ID assigned to the task at the time of its creation, or the name of the task in the command line.

`[-W]`: enable current events output.

kesl-control --suspend-task

This command pauses a task.

Command syntax

```
kesl-control [-T] --suspend-task <task ID/name>
```

Arguments and keys

`<task ID/name>` is the ID assigned to the task at the time of its creation, or the name of the task in the command line.

kesl-control --resume-task

This command resumes a task.

Command syntax

```
kesl-control [-T] --resume-task <task ID/name>
```

Arguments and keys

`<task ID/name>` is the ID assigned to the task at the time of its creation, or the name of the task in the command line.

kesl-control --scan-file

This command creates and runs a custom scan task.

Command syntax

```
kesl-control [-T] --scan-file <path> [--action <action>]
```

Arguments and keys

`<path>` is the path to the file or directory that you want to scan. You can specify multiple paths by separating them with a space.

`--action <action>` is the action to be performed by the application on the infected objects. If you do not specify the `--action` option, the application performs the recommended action.

kesl-control --scan-container

This command creates and runs a custom container or image scan task.

Command syntax

```
kesl-control [-T] --scan-container <ID/name[:tag]>
```

Arguments and keys

`<ID/name[:tag]>` is the name or ID of the container or image. You can use **masks** to scan several objects.

You can use the `*` (asterisk) character to create a file or directory name mask.

You can indicate a single `*` character to represent any set of characters (including an empty set) preceding the `/` character in the file or directory name. For example, `/dir/*/file` or `/dir/*/*/file`.

You can indicate two consecutive `*` characters to represent any set of characters (including an empty set and the `/` character) in the file or directory name. For example, `/dir/**/file*/` or `/dir/file**/`.

The `**` mask can be used only once in a directory name. For example, `/dir/**/**/file` is an incorrect mask.

You can use a single `?` character to represent any one character in the file or directory name.

Commands for managing execution prevention for objects

kesl-control --get-prevention-state

This command outputs execution prevention rules for objects of the specified component.

Command syntax

```
kesl-control [-T] --get-prevention-state [--kata|--edro]
```

Arguments and keys

`--kata`: execution prevention rules of the EDR Expert (on-premise) component

`--edro`: execution prevention rules of the EDR Optimum component

Commands for managing general Container Scan settings

The kesl-control --get-container-settings command

The command outputs the current general container scan settings to the console or a configuration file.

Command syntax

```
kesl-control [-C] --get-container-settings [--file <path to configuration file>] [--json]
```

Arguments and keys

`--file <path to configuration file>` is the path to the configuration file to which the general Container Scan settings will be written. If you do not specify the `--file` option, settings will be output to the console.

If you specify the name of a file without its path, the file will be created in the current directory. If a file already exists in the specified path, it will be overwritten. If the specified directory does not exist, no configuration file will be generated.

`--json` is specified to output the settings in JSON format. If the `--json` option is not specified, the settings are output in the INI format.

The kesl-control --set-container-settings command

The command configures the general container scan settings with command options or by importing settings from a configuration file.

Command syntax

Define settings via command options:

```
kesl-control [-C] --set-container-settings <setting name>=<setting value> [<setting name>=<setting value>]
```

Define settings via a configuration file:

```
kesl-control [-C] --set-container-settings --file <path to configuration file> [--json]
```

Arguments and keys

`<setting name>=<setting value>` is the name and value of one of the general Container Scan settings.

`--file <configuration file path>` is the full path to the configuration file; general container scan settings from this file will be imported into the application.

`--json` is specified to import the settings from the configuration file into the application in JSON format. If the `--json` option is not specified, the application attempts to import from an INI file. If the import fails, an error is displayed.

Commands for managing network traffic scan settings

The -N prefix indicates that the command belongs to the group of commands for managing network traffic scan settings.

kesl-control -N --query

The command outputs lists of exclusions from encrypted connections scanning:

- a list of exclusions added by the user;
- a list of exclusions added by the application;
- list of exclusions received from the application databases.

Command syntax

```
kesl-control -N --query user

kesl-control -N --query auto

kesl-control -N --query kl
```

kesl-control --clear-web-auto-excluded

This command clears the list of domains that the application has automatically excluded from scanning.

Command syntax

```
kesl-control -N --clear-web-auto-excluded
```

kesl-control --get-net-settings

This command outputs the current network traffic scan settings to the console or a configuration file.

Command syntax

```
kesl-control [-N] --get-net-settings [--file <path to configuration file>] [--json]
```

Arguments and keys

`--file <configuration file path>` is the path to the configuration file to which network traffic scan settings will be written. If you do not specify the `--file` option, settings will be output to the console.

If you specify the name of a file without its path, the file will be created in the current directory. If a file already exists in the specified path, it will be overwritten. If the specified directory does not exist, no configuration file will be generated.

`--json` is specified to output the settings in JSON format. If the `--json` option is not specified, the settings are output in the INI format.

kesl-control --set-net-settings

This command configures the network traffic scan settings with command options or by importing settings from a configuration file.

Command syntax

Define settings via command options:

```
kesl-control [-N] --set-net-settings <setting name>=<setting value> [<setting name>=<setting value>]
```

Define settings via a configuration file:

```
kesl-control [-N] --set-net-settings --file <path to configuration file> [--json]
```

Arguments and keys

`<setting name>=<setting value>` is the name and value of one of the network traffic scan settings.

`--file <configuration file path>` is the full path to the configuration file from which the network traffic scan settings will be imported.

`--json` is specified to import the settings from the configuration file into the application in JSON format. If the `--json` option is not specified, the application attempts to import from an INI file. If the import fails, an error is displayed.

kesl-control --list-certificates

This command outputs a list of trusted root certificates.

Command syntax

```
kesl-control [-N] --list-certificates
```

kesl-control --add-certificate

This command adds a certificate to the list of trusted root certificates.

Command syntax

```
kesl-control [-N] --add-certificate <path to certificate>
```

Arguments and keys

`<path to certificate>` is the path to the certificate file that you want to add (PEM or DER format).

kesl-control --remove-certificate

This command removes a certificate from the list of trusted root certificates.

Command syntax

```
kesl-control [-N] --remove-certificate <certificate subject>
```

kesl-control --add-bypass-endpoints

This command lets you add traffic interception exclusion.

Command syntax

```
kesl-control [-N] --add-bypass-endpoints --direction <in|out> --remote-ip <remote IP address> --dst-port <destination port>
```

Arguments and keys

`<in|out>` is the direction of traffic in the excluded connection, outbound or inbound.

`<remote IP address>` is the IPv4 or IPv6 address of the remote device. If you exclude inbound traffic from interception, traffic coming from the specified IP address is excluded. If you exclude outbound traffic from interception, traffic going to the specified IP address is excluded.

`<destination port>` is a port on the protected device (exclusion for inbound traffic) or a port on the remote device (exclusion for outbound traffic). Traffic to this port is excluded from interception.

kesl-control --list-bypass-endpoints

This command lets you view the list of configured traffic interception exclusions.

Command syntax

```
kesl-control [-N] --list-bypass-endpoints
```

kesl-control --remove-bypass-endpoints

This command lets you remove a traffic interception exclusion.

Command syntax

```
kesl-control [-N] --remove-bypass-endpoints --direction <in|out> --remote-ip <remote IP address> --dst-port <destination port>
```

Arguments and keys

`<in|out>` is the direction of traffic in the excluded connection, outbound or inbound.

`<remote IP address>` is the IPv4 or IPv6 address of the remote device whose traffic is excluded from interception (depending on the direction of traffic).

`<destination port>` is a port on the protected device (exclusion for inbound traffic) or a port on the remote device (exclusion for outbound traffic).

Statistics commands

The -S prefix indicates that the command belongs to the statistics command group.

kesl-control --app-info

This command outputs information about the application.

Command syntax

```
kesl-control [-S] --app-info [--json]
```

Arguments and keys

`--json` is specified to output the settings in JSON format.

kesl-control --supported-tech-info

This command displays a list of application functions, information about their status (used or not used), and the Linux technologies that these application features are implemented with.

Command syntax

```
kesl-control [-S] --supported-tech-info [--json]
```

Arguments and keys

`--json`: output features in JSON format.

kesl-control --get-statistic

The command allows you to display statistics about the operation of the application and the list of mount points found on the device.

Command syntax

```
kesl-control [-S] --get-statistic [--files] [--processes] [--mountpoints]
```

Arguments and keys

`[--files]`: statistics of files most frequently scanned by the File Threat Protection component, and the number of times the component accesses these files.

`[--processes]`: statistics of process starts most frequently detected by Kaspersky Endpoint Security, and the number of such starts.

> Excluding processes from scanning by the Behavior Detection component does not remove these processes from statistics, but it improves the performance of the Kaspersky Endpoint Security application.

`[--mountpoints]`: list of mount points. In the output, paths to mount points are sorted as follows:

- Static, system, service and other mount points
- Mounted snap packages and mount points in their namespaces
- Mount points created by the Docker container management system

You can specify one or more options in any combination or no options at all. If you do not specify any options, the application displays three lists: statistics on the most frequently scanned files, statistics on the most frequently started processes, and the list of mount points found on the device.

kesl-control --omsinfo

This command creates a JSON file for integration with Microsoft Operations Management Suite.

Command syntax

```
kesl-control [-S] --omsinfo --file <file path>
```

Commands for displaying events

kesl-control -W

This command enables the display of current application events. The command returns the name of the event and additional information about the event. You can use the command to display all current application events or only events associated with a currently running task.

Command syntax

```
kesl-control -W [--query "<filter conditions>"]
```

Arguments and keys

`<filter conditions>` specifies one or more logical expressions in the `<field> <comparison operation> '<value>'` format combined using the `and` logical operator to output certain current events.

Commands for managing application events

The -E prefix indicates that the command belongs to commands for managing application events (Viewing events on the command line, Viewing events in Kaspersky Security Center).

kesl-control -E

This command outputs information about all events in the application event log. You can use the `less` command to navigate through the list of displayed events.

Command syntax

```
kesl-control -E
```

kesl-control -E --query

This command outputs information about events from the application event log. You can use the `less` command to navigate through the list of displayed events. You can use a filter to output specific events or output a list of events to a file.

Command syntax

```
kesl-control -E --query "<filter conditions>" [--db <database file>] [-n <number>] [--file <file path>] [--json] [--reverse]
```

Arguments and keys

`< database file >` is the full path to the event log database file to output events from. By default, the application saves information about events to the database at /var/opt/kaspersky/kesl/private/storage/events.db. The location of the database is determined by the `EventsStoragePath` general application setting.

`< filter conditions >` specifies one or more logical expressions in the `< field > < comparison operation > '< value >'` format combined using the `and` logical operator to restrict query results.

`< number >` is the number of the latest events of the selection (records counting from the end of the selection) to be displayed.

`--file < file path >` is the full path to the file to output events to. If you specify the name of a file without specifying its path, the file will be created in the current directory. If a file with the specified name already exists in the specified path, it will be overwritten. If the specified directory cannot be found on the disk, file will not be created.

If you do not specify the `--file` option, the list of events will be output to the console.

`--json`: output events in JSON format.

`--reverse`: display events in reverse order (from the newest event at the top to the oldest at the bottom).

Commands for managing license keys

The -L prefix indicates that the command belongs to the group of commands used to manage license keys.

> Commands for adding or removing license keys can be used only if the application is running in Basic mode or in Endpoint Detection and Response Agent mode. If Kaspersky Endpoint Security is used in Light Agent mode to protect virtual environments, commands for managing license keys finish with an error. You activate the application as part of Kaspersky Security for Virtualization Light Agent, and therefore do not need to activate the application separately.

kesl-control --add-active-key

The command lets you add an active license key to the application using a key file or activation code.

You can use this command to add main license keys of the application as well as license keys for additional functionality. You do not need to specify the type of the key in the command.

Command syntax

```
kesl-control [-L] --add-active-key < path to the key file >

kesl-control [-L] --add-active-key < activation code >
```

Arguments and keys

< path to the key file > is the path to the key file. If the key file is located in the current directory, it is sufficient to specify only the file name.

< activation code > is the activation code.

Example:
Add a key as an active key from the /home/test/00000001.key file:

```
kesl-control --add-active-key /home/test/00000001.key
```

kesl-control --add-reserve-key

The command lets you add a reserve license key to the application using a key file or an activation code.

You can use this command to add main license keys of the application as well as license keys for additional functionality. You do not need to specify the type of the key in the command.

If an active key has not yet been added to the application on the device, the command fails.

Command syntax

```
kesl-control [-L] --add-reserve-key < path to the key file >

kesl-control [-L] --add-reserve-key < activation code >
```

Arguments and keys

< path to the key file > is the path to the key file. If the key file is located in the current directory, it is sufficient to specify only the file name.

< activation code > is the activation code.

Example:
Add a reserve key using the /home/test/00000002.key file:

```
kesl-control --add-reserve-key /home/test/00000002.key
```

kesl-control --remove-active-key

This command lets you remove an active license key.

Command syntax

```
kesl-control [-L] --remove-active-key [--edr-optimum]

kesl-control [-L] --remove-active-key [--kuma]

kesl-control [-L] --remove-active-key [--mdr]
```

```
kesl-control [-L] --remove-active-key [--edr-kata]
```

Arguments and keys

`--edr-optimum` – delete the active EDR Optimum license key.

`--kuma –` – remove the active KUMA license key.

`--mdr –` – remove the active MDR license key.

`--edr-kata` – remove the active EDR Expert (on-premise) license key.

If you do not specify the `--edr-optimum`, `--kuma`, `--mdr`, or `--edr-kata` option on the command line, the command removes the primary active key from the application.

kesl-control --remove-reserve-key

This command lets you remove a reserve license key.

Command syntax

```
kesl-control [-L] --remove-reserve-key [--edr-optimum]

kesl-control [-L] --remove-reserve-key [--kuma]

kesl-control [-L] --remove-reserve-key [--mdr]

kesl-control [-L] --remove-reserve-key [--edr-kata]
```

Arguments and keys

`--edr-optimum` – delete the reserve EDR Optimum license key.

`--kuma` – remove the reserve KUMA license key.

`--mdr` – remove the reserve MDR license key.

`--edr-kata` – remove the reserve EDR Expert (on-premise) license key.

If you do not specify the `--edr-optimum`, `--kuma`, `--mdr`, or `--edr-kata` option on the command line, the command removes the primary reserve key from the application.

kesl-control -L --query

The `-L --query` command outputs information about the license that was used for activating the application and license keys currently in use.

Command syntax

```
kesl-control -L --query [--json]
```

Arguments and keys

`--json`: output data in JSON format.

kesl-control --load-mdr-blob

The `--load-mdr-blob` command lets you upload a BLOB file to the device, which can be used for integration with Kaspersky Managed Detection and Response. You can find the BLOB file in the ZIP archive of the MDR configuration file.

Command syntax

```
kesl-control [-L] --load-mdr-blob <file path MDR BLOB>
```

kesl-control --remove-mdr-blob

The `--remove-mdr-blob` command lets you remove the BLOB file, which is used for integration with Kaspersky Managed Detection and Response, from the device.

Command syntax

```
kesl-control [-L] --remove-mdr-blob
```

Commands for Firewall Management

The -F prefix indicates that the command belongs to the firewall management commands.

kesl-control --add-rule

This command adds a new network packet rule.

Command syntax

```
kesl-control [-F] --add-rule [--name <rule name>] [--action <action>] [--protocol
<protocol>] [--direction <direction>] [--remote <remote address>[:<port range>]] [--
local <local address>[:<port range>]] [--at <index>]
```

Arguments and keys

`--name <rule name>` is the name of the network packet rule.

`--action <action>` is the action to be performed on connections specified in network packet rule.

`--protocol <protocol>` is the type of communication protocol for which you want to monitor network activity.

`--direction <direction>` is the direction of the monitored network activity.

`--remote <remote address>[:<port range>]` is the network address of the remote device.

`--local <local address>[:<port range>]` is the network address of the Kaspersky Endpoint Security device.

`--at <index>` is the number of the rule in the list of network packet rules. If the `--at` option is not specified or its value is larger than the number of rules in the list, the new rule is added to the end of the list.

Parameters that you do not specify values for in the command are set to their default values.

kesl-control --del-rule

This command deletes the network packet rule with the specified name or index in the list of rules.

Command syntax

```
kesl-control [-F] --del-rule --name <rule name>

kesl-control [-F] --del-rule --index <index>
```

Arguments and keys

`--name <rule name>` is the name of the network packet rule.

`--index <index>` is the number of the rule in the list of network packet rules.

kesl-control --move-rule

This command changes the execution priority of a network packet rule.

Command syntax

```
kesl-control [-F] --move-rule --name <rule name> --at <index>

kesl-control [-F] --move-rule --index <index> --at <index>
```

Arguments and keys

`--name <rule name>` is the name of the network packet rule.

`--index <index>` is the current number of the rule in the list of network packet rules.

`--at <index>` is the new number of the rule in the list of network packet rules.

kesl-control --add-zone

This command adds an address to a network zone.

Command syntax

```
kesl-control [-F] --add-zone --zone <zone> --address <address>
```

Arguments and keys

`--zone <zone>` is the predefined name of the network zone.

`--address <address>` is the network address or subnet.

kesl-control --del-zone

This command removes an address from a network zone.

Command syntax

```
kesl-control [-F] --del-zone --zone <zone> --address <address>
```

```
kesl-control [-F] --del-zone --zone <zone> --index <address index>
```

Arguments and keys

`--zone <zone>` is the predefined name of the network zone.

`--address <address>` is the network address or subnet.

`--index <address index>` is the number of the address in the network zone.

kesl-control -F --query

This command displays firewall rules created with Kaspersky Endpoint Security.

Command syntax

```
kesl-control -F --query
```

Commands used to manage blocked devices

The -H prefix indicates that the command belongs to the group of commands for managing devices blocked by Anti-Cryptor and Network Threat Protection.

The kesl-control --get-blocked-hosts command

The command allows you to output the list of blocked devices to the console.

Command syntax

```
kesl-control [-H] --get-blocked-hosts
```

The kesl-control --allow-hosts command

The command allows you to unblock blocked devices.

Command syntax

```
kesl-control [-H] --allow-hosts <address>
```

Arguments and keys

`<address>` is an IP address of a device or subnet (IPv4/IPv6, including addresses in short form). You can specify multiple IP addresses of devices or subnets by separating them with a space.

Commands for managing Device Control

The D prefix indicates that the command belongs to the group of commands to manage Device Control.

kesl-control --get-device-list

This command outputs the list of devices installed on a host or connected to it, or exports a list of connected devices to a JSON file.

Command syntax

```
kesl-control [-D] --get-device-list [--all] [--json] [--export <file>]
```

Arguments and keys

`--all` lists all connected devices.

`--json` lists connected devices in JSON format.

`--export <file>` exports the list of connected devices to a file, formatted as a list of trusted devices. You need to specify the full path to the JSON file.

kesl-control --trusted-devices

The command lets you view the list of trusted devices, add and remove devices from the list, and import the list of trusted devices from a file.

Command syntax

```
kesl-control [-D] --trusted-devices [--list] [--add <id>] [--delete <id>] [--merge|--add|--replace --file <file>]
```

Arguments and keys

`--list` – display the list of trusted devices.

`--add <ID>` adds a device to the list of trusted devices by device ID or device ID mask.

`--delete <ID>` removes a device from the list of trusted devices by device ID or device ID mask.

`--merge` merges the lists of trusted devices. If the current list and the imported list contain entries for a device with the same ID, the existing entries are updated. For devices that are not in the current list, entries are added.

`--add` adds the current list of trusted devices when importing. Only entries for devices not previously on the list of devices are added to the list.

`--replace` replaces the current list of trusted devices. The existing list of trusted devices is replaced with the imported list.

`--file <file>` imports a list of trusted devices from the specified file. You need to specify the full path to the JSON file.

kesl-control --request-temporary-device-access

This command lets you create an access request file to request temporary access to a blocked device.

Command syntax

```
kesl-control [-D] --request-temporary-device-access --device-id <device ID> --access-duration <access duration> --path <path to access request file>
```

Arguments and keys

`--device-id <device ID>` specifies the ID of the blocked device to which you want to gain access.

`--access-duration <access duration>` specifies the time period during which you want to be able to gain access to the device (in hours). Possible values: 1 to 100

`--path <path to the access request file>` specifies the path to the directory in which you want to save the access request file with the .akey extension.

kesl-control --upload-temporary-device-access-key

This command allows you to upload an access key to gain temporary access to a blocked device.

Command syntax

```
kesl-control [-D] --upload-temporary-device-access-key --path <path to the file with the access key>
```

Arguments and keys

`--path <path to the file with the access key>` is the path to the file containing the access key to the device (file with the .acode extension).

Commands for managing Application Control

The -A prefix indicates that the command belongs to the group of commands to manage Application Control.

kesl-control --get-app-list

The command outputs a list of applications found on a client device by the Inventory task.

Command syntax

```
kesl-control [-A] --get-app-list [--json]
```

Arguments and keys

`--json`: output data in JSON format.

kesl-control --get-categories

This command outputs a list of created application control categories.

Command syntax

```
kesl-control [-A] --get-categories [--names <name of category 1> <name of category 2> ... <name of category N>] [--file <path to configuration file>] [--json]
```

Arguments and keys

`<name of category 1> <name of category 2> ... <name of category N>` are names of categories for which you want to view information. If you want to view information about several categories, specify the names of the categories, separated by a space.

`--file <path to configuration file>` is the full path to the JSON configuration file to which the settings will be written.

`--json`: output data in JSON format.

kesl-control --set-categories

This command lets you create or edit the list of created Application Control categories.

Command syntax

```
kesl-control [-A] --set-categories [--names <name of category 1> <name of category 2> ... <name of category N>] --file <path to configuration file>
```

Arguments and keys

`<name of category 1> <name of category 2> ... <name of category N>` are names of categories for which you want to change information. If you want to change information about several categories, specify the names of the categories, separated by a space. If you do not specify a category name, the category will be removed from the list.

`--file <path to configuration file>` is the path to the configuration file with the category settings.

kesl-control --get-settings 21

This command outputs a list of created application control rules.

Command syntax

```
kesl-control --get-settings 21 [--file <path to configuration file>] [--json]
```

Arguments and keys

`--file <path to configuration file>` is the full path to the configuration file to which the settings will be written.

`--json`: output data in JSON format.

kesl-control --set-settings 21

This command lets you edit the list of created application categories and Application Control rules.

Command syntax

```
kesl-control --set-settings 21 [--file <path to configuration file>] [--json]
```

Arguments and keys

`--file <path to configuration file>` is the full path to the configuration file from which the settings will be imported.

`--json` – import data from a JSON file.

kesl-control --set-to-default 21

This command lets you delete a list of application categories and Application Control rules.

Command syntax

```
kesl-control --set-settings 21 --set-to-default
```

Web Control management commands

kesl-control --get-settings 26

This command lets you display the list of specified Web Control settings.

Command syntax

```
kesl-control --get-settings 26 [--file <path to configuration file>] [--json]
```

Arguments and keys

`--file <path to configuration file>` is the full path to the configuration file to which the settings will be written.

`--json`: output data in JSON format.

kesl-control --set-settings 26

This command lets you edit the list of specified Web Control settings.

Command syntax

```
kesl-control --set-settings 26 [--file <path to configuration file>] [--json]
```

Arguments and keys

`--file <path to configuration file>` is the full path to the configuration file from which the settings will be imported.

`--json` – import data from a JSON file.

kesl-control --set-to-default 26

This command lets you delete specified settings and reset Web Control settings to the default rule.

Command syntax

```
kesl-control --set-settings 26 --set-to-default
```

Commands for managing Backup

The -B prefix indicates that the command belongs to the group of commands used to manage the Backup storage.

kesl-control -B --mass-remove

The command deletes some or all objects from Backup.

Command syntax

Delete all objects:

```
kesl-control -B --mass-remove
```

Delete objects that match the filter conditions:

```
kesl-control -B --mass-remove --query "<filter conditions>"
```

Arguments and keys

`<filter conditions>` specifies one or more logical expressions in the `<field> <comparison operation> '<value>'` format combined using the `and` logical operator to restrict query results.

kesl-control -B --query

This command outputs information about Backup objects.

Command syntax

Output information about all objects in Backup:

```
kesl-control -B --query [-n <number>] [--json] [--reverse]
```

Output information about Backup objects that match the filter conditions:

```
kesl-control -B --query ["<filter conditions>"] [-n <number>] [--json] [--reverse]
```

Arguments and keys

`<filter conditions>` specifies one or more logical expressions in the `<field> <comparison operation> '<value>'` format combined using the `and` logical operator to restrict query results. If you do not specify any filter conditions, the application will display the details of all objects in Backup.

`<number>` is the number of the most recent objects to display. If you do not specify the `-n` switch, the last 30 objects will be displayed. To display all objects, specify 0.

`--json`: output data in JSON format.

`--reverse` – output objects in reverse order (from the newest object at the top to the oldest at the bottom).

kesl-control -B --restore

This command restores an object from Backup.

Command syntax

```
kesl-control -B --restore <object ID> [--file <file path>]
```

Arguments and keys

`<object ID>` is the ID of the Backup object.

`--file <file path>` is the new name of the file and the path to the directory to save it to. If you do not specify the `--file` option, the object will be restored with its original name and to its original location.

Commands for managing the Quarantine

The -Q prefix indicates that the command belongs to the group of commands used to manage the Quarantine.

kesl-control -Q --mass-remove

The command deletes some or all files from Quarantine.

Command syntax

Delete all files:

```
kesl-control -Q --mass-remove
```

Delete files that match the filter conditions:

```
kesl-control -Q --mass-remove --query "<filter conditions>"
```

Arguments and keys

< filter conditions > specifies one or more logical expressions in the < field > < comparison operation > '< value >' format combined using the and logical operator to restrict query results.

kesl-control --put

This command is available only when Kaspersky Endpoint Security is integrated with Kaspersky Endpoint Detection and Response Optimum or with Kaspersky Managed Detection and Response.

The command allows to quarantine a file.

Command syntax

```
kesl-control [-Q] --put < file path > [--md5] [--sha256] [--save-original-file]
```

Arguments and keys

< file path > is the path to the file that you want to quarantine.

--md5 is the MD5 hash of the file that you want to quarantine.

--sha256 is the SHA256 hash of the file that you want to quarantine.

--save-original-file keeps the original file. If you do not specify this option, the original file is deleted.

kesl-control -Q --query

This command outputs information about quarantined files.

Command syntax

Output information about all quarantined files:

```
kesl-control -Q --query [-n < number >] [--json]
```

Display information about quarantined files that match filter conditions:

```
kesl-control -Q --query ["< filter conditions >"] [-n < number >]
```

Arguments and keys

< filter conditions > specifies one or more logical expressions in the < field > < comparison operation > '< value >' format combined using the and logical operator to restrict query results. If you do not specify any filter conditions, the application will display the details of all quarantined files.

< number > is the count of the most recent quarantined files that you want to display. If you do not specify the -n option, the last 30 files are displayed. To display all files, specify 0.

--json: output data in JSON format.

kesl-control -Q --restore

The command lets you restore a file from quarantine.

Command syntax

```
kesl-control -Q --restore <file ID> [--file <file path>]
```

Arguments and keys

`<file ID>`: the ID of the quarantined file.

`--file <file path>` is the new name of the file and the path to the directory to save it to. If you do not specify the `--file` option, the file will be restored with its original name and to its original location. If the directory is deleted or the user does not have access rights to it, the application places the file in the /var/opt/kaspersky/kesl/common/restored/ directory. You can manually move the file from this directory to the directory of your choice.

Commands for managing users and roles

The -U prefix indicates that the command belongs to the group of commands for managing users and roles.

kesl-control --get-user-list

This command outputs a list of users and roles.

Command syntax

```
kesl-control [-U] --get-user-list
```

kesl-control --grant-role

This command assigns a role to a specific user.

Command syntax

```
kesl-control [-U] --grant-role <role> <user>
```

kesl-control --revoke-role

This command revokes a role from a specific user.

Command syntax

```
kesl-control [-U] --revoke-role <role> <user>
```

Commands for managing the EDR Expert (on-premise) component

The -R prefix indicates that the command belongs to the group of commands for managing the settings of integration with the Kaspersky Endpoint Detection and Response (KATA), Kaspersky Network Detection and Response (KATA), Kaspersky Endpoint Detection and Response Expert (on-premise), and Kaspersky Endpoint Detection and Response Optimum.

kesl-control --add-kataedr-server-certificate

This command lets you add or replace a previously added certificate of the KATA server, OSMP threat response server, or OSMP telemetry server (depending on the integration mode).

Command syntax

```
kesl-control [-R] --add-kataedr-server-certificate <file> [--server-type
<response|telemetry>]
```

Arguments and keys

`<file>` is the path to the file containing the server certificate.

`--server-type <response|telemetry>` lets you select the type of server for which you want to add or replace a certificate in EDR Expert (OSMP) integration mode:

- `response` – OSMP threat response action server
- `telemetry` –OSMP telemetry server

If you are adding or replacing a KATA server certificate, omit the `--server-type` option.

kesl-control --remove-kataedr-server-certificate

This command lets you remove a previously added certificate of the KATA server, OSMP threat response server, or OSMP telemetry server (depending on the integration mode).

Command syntax

```
kesl-control [-R] --remove-kataedr-server-certificate [--server-type
<response|telemetry>]
```

Arguments and keys

`--server-type <response|telemetry>` lets you select the type of server for which you want to remove a certificate in EDR Expert (OSMP) integration mode:

- `response` – OSMP threat response action server
- `telemetry` –OSMP telemetry server

If you are removing a KATA server certificate, omit the `--server-type` option.

kesl-control --query-kataedr-server-certificate

This command lets you view information for a previously added certificate of the KATA server, OSMP threat response server, or OSMP telemetry server (depending on the integration mode).

Command syntax

```
kesl-control [-R] --query-kataedr-server-certificate [--server-type <response|telemetry>]
```

Arguments and keys

`--server-type <response|telemetry>` lets you select the type of server for which you want to view certificate information in EDR Expert (OSMP) integration mode:

- `response` – OSMP threat response action server
- `telemetry` –OSMP telemetry server

If you want to view information about a KATA server certificate, omit the `--server-type` option.

kesl-control --add-kataedr-client-certificate

This command lets you add or replace a previously added client certificate used for protecting the connection to the KATA server, OSMP threat response server, or OSMP telemetry server (depending on the integration mode).

Command syntax

```
kesl-control [-R] --add-kataedr-client-certificate <file> [--server-type
<response|telemetry>]
```

Arguments and keys

`<file>` is the path to the crypto container (PFX archive) containing the client certificate and private key.

`--server-type <response|telemetry>` lets you select the type of server for which you want to add a client certificate in EDR Expert (OSMP) integration mode:

- `response` – OSMP threat response action server
- `telemetry` –OSMP telemetry server

If you are adding or replacing a client certificate for the connection to a KATA server, omit the `--server-type` option.

kesl-control --remove-kataedr-client-certificate

This command lets you remove a previously added client certificate used for protecting the connection to the KATA server, OSMP threat response server, or OSMP telemetry server (depending on the integration mode).

Command syntax

```
kesl-control [-R] --remove-kataedr-client-certificate [--server-type
<response|telemetry>]
```

Arguments and keys

`--server-type <response|telemetry>` lets you select the type of server for which you want to remove a client certificate in EDR Expert (OSMP) integration mode:

- `response` – OSMP threat response action server
- `telemetry` –OSMP telemetry server

If you are removing a client certificate for the connection to a KATA server, omit the `--server-type` option.

kesl-control --query-kataedr-client-certificate

This command lets you view information about a previously added client certificate used for protecting the connection to the KATA server, OSMP threat response server, or OSMP telemetry server (depending on the integration mode).

Command syntax

```
kesl-control [-R] --query-kataedr-client-certificate [--server-type <response|telemetry>]
```

Arguments and keys

`--server-type <response|telemetry>` lets you select the type of server for which you want to view information about a client certificate in EDR Expert (OSMP) integration mode:

- `response` – OSMP threat response action server
- `telemetry` –OSMP telemetry server

If you want to view information about a client certificate for the connection to a KATA server, omit the `--server-type` option.

Commands for managing the NDR (KATA) component

The -R prefix indicates that the command belongs to the group of commands for managing the settings of integration with the Kaspersky Endpoint Detection and Response (KATA), Kaspersky Network Detection and Response (KATA), Kaspersky Endpoint Detection and Response Expert (on-premise), and Kaspersky Endpoint Detection and Response Optimum.

kesl-control --add-katandr-server-certificate

This command adds or replaces a previously added NDR server certificate.

Command syntax

```
kesl-control [-R] --add-katandr-server-certificate <file>
```

Arguments and keys

< `file` > is the path to the file containing the server certificate.

kesl-control --remove-katandr-server-certificate

This command removes an NDR server certificate.

Command syntax

```
kesl-control [-R] --remove-katandr-server-certificate
```

kesl-control --query-katandr-server-certificate

This command outputs information about an NDR server certificate.

Command syntax

```
kesl-control [-R] --query-katandr-server-certificate
```

kesl-control --add-katandr-client-certificate

This command adds or replaces a previously added client certificate used to secure the connection to an NDR server.

Command syntax

```
kesl-control [-R] --add-katandr-client-certificate <file>
```

Arguments and keys

`<file>` is the path to the crypto container (PFX archive) containing the client certificate and private key.

kesl-control --remove-katandr-client-certificate

This command deletes the client certificate used to secure the connection to an NDR server.

Command syntax

```
kesl-control [-R] --remove-katandr-client-certificate
```

kesl-control --query-katandr-client-certificate

The command outputs information about a client certificate.

Command syntax

```
kesl-control [-R] --query-katandr-client-certificate
```

Commands for managing device network isolation

The -R prefix indicates that the command belongs to the group of commands for managing the settings of integration with the Kaspersky Endpoint Detection and Response (KATA), Kaspersky Network Detection and Response (KATA), Kaspersky Endpoint Detection and Response Expert (on-premise), and Kaspersky Endpoint Detection and Response Optimum. Network isolation of devices is applied as a threat response action on threat detection when integrated with the specified Detection and Response solutions.

kesl-control --isolation-stat

This command outputs the current state of network isolation to the console: enabled or disabled.

Command syntax

```
kesl-control [-R] --isolation-stat
```

kesl-control --isolation-off

This command lets you disable network isolation of a device.

Command syntax

```
kesl-control [-R] --isolation-off
```

Commands for managing the KUMA integration settings

The -M prefix indicates that the command belongs to the group of commands for managing Kaspersky Unified Monitoring and Analysis Platform settings.

kesl-control --add-kuma-server-certificate

This command adds or replaces a previously added KUMA server certificate.

Command syntax

```
kesl-control [-M] --add-kuma-server-certificate <file path>
```

Arguments and keys

`<file path>` is the path to the file containing the server certificate.

kesl-control --remove-kuma-server-certificate

This command removes a KUMA server certificate.

Command syntax

```
kesl-control [-M] --remove-kuma-server-certificate
```

kesl-control --query-kuma-server-certificate

This command outputs information about a KUMA server certificate.

Command syntax

```
kesl-control [-M] --query-kuma-server-certificate
```

kesl-control --add-kuma-client-certificate

This command adds or replaces a previously added client certificate used to secure the connection to a KUMA server.

Command syntax

```
kesl-control [-M] --add-kuma-client-certificate <file path>
```

Arguments and keys

`<file path>` is the path to the cryptocontainer (PFX archive) containing the client certificate and private key.

kesl-control --remove-kuma-client-certificate

This command deletes the client certificate used to secure the connection to a KUMA server.

Command syntax

```
kesl-control [-M] --remove-kuma-client-certificate
```

kesl-control --query-kuma-client-certificate

The command outputs information about a client certificate.

Command syntax

```
kesl-control [-M] --query-kuma-client-certificate
```

Commands for managing the Sandbox integration settings

The -X prefix indicates that the command belongs to the group of commands for managing the Sandbox integration settings.

kesl-control --add-sandbox-server-certificate

This command adds or replaces a previously added certificate of the server responsible for interaction with Sandbox.

Command syntax

```
kesl-control [-X] --add-sandbox-server-certificate <file>
```

Arguments and keys

`<file>` is the path to the file containing the server certificate.

kesl-control --remove-sandbox-server-certificate

This command removes the certificate of the server responsible for interaction with Sandbox.

Command syntax

```
kesl-control [-X] --remove-sandbox-server-certificate
```

kesl-control --query-sandbox-server-certificate

This command displays information about the certificate of the server responsible for interaction with Sandbox.

Command syntax

```
kesl-control [-X] --query-sandbox-server-certificate
```

kesl-control --add-sandbox-client-certificate

This command adds or replaces a previously added client certificate used to secure the connection to the server responsible for interaction with Sandbox.

Command syntax

```
kesl-control [-X] --add-sandbox-client-certificate <file>
```

Arguments and keys

`<file>` is the path to the crypto container (PFX archive) containing the client certificate and private key.

kesl-control --remove-sandbox-client-certificate

This command removes a client certificate used to secure the connection to the server responsible for interaction with Sandbox.

Command syntax

```
kesl-control [-X] --remove-sandbox-client-certificate
```

kesl-control --query-sandbox-client-certificate

The command outputs information about a client certificate.

Command syntax

```
kesl-control [-X] --query-sandbox-client-certificate
```

kesl-control --sandbox

This command sends files for scanning to Sandbox.

Command syntax

```
kesl-control [-X] --sandbox <path 1> <path 2>
```

Arguments and keys

`<path>` is the path to the file or directory that you want to scan. You can specify multiple paths by separating them with a space.

Commands for managing IOC scans

The -T prefix indicates that the command belongs to the group of commands for managing application settings and tasks.

kesl-control --scan-ioc

The command starts a search for indicators of compromise on a device (IOC).

Command syntax

```
kesl-control [-T] --scan-ioc --path <path to directory or file> [--process on|off] [--hint <regular expression>] [--arpentry on|off] [--ports on|off] [--system on|off] [--files on|off] [--drives all|system|critical|custom] [--excludes <list of exclusions>] [--scope <list of directories>] [--action Skip|QuarantineFile|IsolateHost|ScanCriticalAreas]
```

Arguments and keys

`--path <path to directory or file>` is the path to IOC file or directory with IOC files with the .IOC or .XML extension, which should be used to perform the scan.

> You can specify multiple paths by separating them with a space. You can also specify both types of paths (path to a file and path to a directory).

`--process` – enable analysis of processes running on the device.

Possible arguments:

- `on` – enable analysis of processes running on the device (default value).
- `off` – disable analysis of processes running on the device.

If you do not specify the `--process` option, the application analyzes processes only if the used IOC file specifies the details of these processes (`ProcessItem`).

`--hint <regular expression>` is the regular expression that matches the full path to the file (`FileItem`) or executable file of the process (`ProcessItem`) to be analyzed.

You can use the following regular expression elements:

- meta characters: `. ^ $ |`
- character classes: digit, alpha, lower, upper, cntrl
- quantifiers: `* + ? {n} {n,} {n, m}`
- negation: `[^a-c]`
- escaped characters: `\a \e \f`, `\n \r \t \v \b`

`--arpentry` – enable analysis of entries in the ARP table (`ArpEntryItem`).

Possible arguments:

- `on` – enable analysis of entries in the ARP table (default value).
- `off` – disable analysis of entries in the ARP table.

If you do not specify the `--arpentry` option, the application analyzes the ARP table only if the used IOC file specifies the details of the ARP table (`ArpEntryItem`).

`--ports` – enable analysis of ports open for connection.

Possible arguments:

- `on` – enable analysis of ports open for connection and scan active connections on the device (default value).
- `off` – disable analysis of ports open for connection and do not scan active connections on the device.

If you do not specify the `--ports` option, the application only analyzes ports if the used IOC file specifies the details of these ports (`PortItem`).

`--system` – enable analysis of the system environment.

Possible arguments:

- `on` – enable analysis of the system environment (default value).
- `off` – disable analysis of the system environment.

If you do not specify the `--system` option, the application analyzes the system environment only if the used IOC file specifies details of the system environment (`SystemInfoItem`).

`--files` – enable file analysis.

Possible arguments:

- `on` – enable file analysis (default value).
- `off` – disable file analysis.

If you do not specify the `--files` option, the application analyzes files only if the used IOC file specifies the details of those files (`FileItem`).

`--drives` – areas to be scanned.

Possible arguments:

- `all` – check all available file areas.
- `system` – scan all files within the root file system.
- `critical` – scan files in user and system directories (default value).
- `custom` – scan only files in the areas you specify.

If you do not specify the `--drives` option, the application analyzes files in user and system directories.

`--excludes <list of exclusions>` is the list of paths excluded from scans.

The exclusions specified by this option are global and are valid regardless of the scope type or directory list. These exclusions take precedence over other command line options, including `--hint` and `--scope`.

Exclusions are specified as paths, but cannot contain recursive elements or wildcard characters (e.g. `*`).

If you do not specify the `--excludes` option, the scan is performed without exclusions.

You can specify multiple exclusions by separating them with a space.

`--scope <list of directories>` is the list of additional directories to be scanned.

This option is required if you specified the `--drives` argument for the `custom` option.

`--action` – action performed when indicators of compromise are detected.

Possible arguments:

- `Skip` – the application will not perform any actions with the detected object, but information about it will be saved in the task execution results (default value).
- `QuarantineFile` – the application will quarantine the detected object.

- `IsolateHost` – the application imposes network isolation on the device on which the object is detected.
- `ScanCriticalAreas` – the application will perform scan **critical areas**.
  - /lib/systemd
  - /lib/udev
  - /lib/dbus-1.0
  - /usr/local/lib/systemd/user
  - /usr/share/dbus-1
  - /usr/share/gdm/autostart
  - /usr/share/gnome/autostart
  - /var/spool/at
  - /var/spool/at/spool
  - /var/spool/anacron
  - /var/spool/cron
  - /boot
  - /bin
  - /sbin
  - /lib
  - /lib32
  - /lib64
  - /libx32
  - /usr/lib
  - /usr/lib32
  - /usr/lib64
  - /usr/libx32
  - ~/.config/autostart
  - ~/.config/autostart-scripts
  - ~/.config/plasma-workspace/env
  - ~/.config/plasma-workspace/shutdown

- ~/.config/lxsession
- ~/.fluxbox/startup
- ~/.kde/Autostart
- /etc

You can specify multiple actions by separating them with commas.

If you specify the `Skip` argument, do not add any other arguments. The `Skip` argument can only be used on its own.

Application commands in Light Agent mode for protecting virtual environments

The -V prefix indicates that the command belongs to the group of Kaspersky Endpoint Security commands used in Light Agent mode for protecting virtual environments (as part of Kaspersky Security for Virtualization Light Agent).

The commands can be executed only if Kaspersky Endpoint Security is used in Light Agent mode to protect virtual environments.

kesl-control --ksvla-info

This command outputs information about using the application in Light Agent mode for protecting virtual environments:

Command syntax

```
kesl-control --ksvla-info
```

kesl-control --viis-info

This command outputs information about the connection of Light Agent (Kaspersky Endpoint Security used as a Light Agent as part of Kaspersky Security for Virtualization Light Agent) to the Integration Server:

Command syntax

```
kesl-control --viis-info
```

kesl-control --svm-info

This command outputs information about the connection of Light Agent (Kaspersky Endpoint Security used as a Light Agent as part of Kaspersky Security for Virtualization Light Agent) to an SVM:

Command syntax

```
kesl-control --svm-info
```

Commands for managing system performance metrics

kesl-control --export-metrics

This command allows to configure the obtaining of operating system performance metrics.

Command syntax

```
kesl-control [-J] --export-metrics [--period <interval between exports in seconds>|--interactive]
```

Arguments and keys

`--period` enables periodic output of results.

`<interval in seconds between exports>` (in seconds) sets the output period.

`--interactive` enables interactive output (on the **Enter** key being pressed).

Appendix 2. Configuration files and default application settings

The following configuration files are used for managing Kaspersky Endpoint Security:

- Configuration files that contain the initial configuration settings of the application:
  - autoinstall.ini configuration file, used when installing the application via Kaspersky Security Center.
  - Configuration file used when installing the application via the command line.
- Preset configuration files generated automatically during the initial configuration of the application and containing the options set during the initial configuration. These settings are applied at run time.
- Configuration files that you can create with Kaspersky Endpoint Security management commands. These configuration files may contain task settings and other application settings. You can modify these files and import into the application to modify the corresponding options.

Rules for editing task configuration files

When editing a configuration file, adhere to the following rules:

- Specify all mandatory settings in the configuration file. You can specify individual task settings without a file using the command line.
- If a setting belongs to a certain section, specify it only in this section. You can specify the settings in any order within the one section.
- Enclose the names of sections in square brackets [ ].
- Specify the values of settings in the `< setting name >=< setting value >` format (spaces between the setting name and its value are not processed).

  Example:
  ```
  [ScanScope.item_0000]
  AreaDesc=Home
  AreaMask.item_0000=*doc
  Path=/home
  ```

  Space and tab characters are ignored before the first quotation mark and after the last quotation mark of a string value, and at the beginning and end of a string value that is not enclosed in quotation marks.
- If you need to specify several values for a setting, repeat the setting the same number of times as the number of values that you want to specify.

  Example:
  ```
  AreaMask.item_0000=*xml
  AreaMask.item_0001=*doc
  ```
- Be case-sensitive when entering values for the following types of settings:
  - Names (masks) of scanned objects and excluded objects.
  - Names (masks) of threats.

  The remaining setting values are not case-sensitive.
- Specify Boolean setting values as follows: `Yes / No`.
- Use quotation marks to enclose string values containing a space character (for example, names of files and directories and their paths, expressions containing the date and time in the format "YYYY-MM-DD HH:MM:SS").

  You can enter the remaining values with or without quotation marks.

  Example:
  ```
  AreaDesc=" Scanning of email databases "
  ```

  A single quotation mark in the beginning or end of a string is considered an error.

Preset configuration files

After the initial configuration, the application creates the following configuration files:

- /var/opt/kaspersky/kesl/common/agreements.ini

  The agreements.ini configuration file contains settings related to the License Agreement, Privacy Policy, and Kaspersky Security Network Statement.

- /var/opt/kaspersky/kesl/common/kesl.ini

  The kesl.ini configuration file contains the settings described in the following table.

If necessary, you can edit the values of the settings in these files.

The default values in these files should be changed only under the supervision of Technical Support specialists and in accordance with their instructions.

To apply the changes made to the configuration file, restart the Kaspersky Endpoint Security application.

If a parameter is absent in the file or an incorrect parameter value is specified, the application will use the default value.

Settings of the kesl.ini configuration file

Setting	Description	Values
The **[General]** section contains the following settings:		
`Locale`	The locale used for the application events that Kaspersky Endpoint Security sends to Kaspersky Security Center. The locale of the graphical interface and the application command line is taken from the `LANG` environment variable. If the application does not support this localization, it defaults to the English localization.	The locale in the format specified by RFC 3066. If the `Locale` setting is not specified, the operating system locale is used. If the application cannot detect the locale of the operating system or this locale is not supported, English (en_US.UTF-8 in RFC 3066 format) is used to localize events.
`PackageType`	Format of the installed application package. We do not recommend changing the value of this setting manually. This value is filled in automatically during initial application configuration.	`rpm` – an RPM package is installed. `deb` – a DEB package is installed.
`UseFanotify`	Using the fanotify technology to intercept file operations. We do not recommend changing the value of this setting manually. This setting is specified during the initial configuration of the application.	`true/yes` – the application uses the fanotify technology to intercept file operations. `false/no` – the fanotify technology is not used.

Setting	Description	Values
KsvlaMode	Using Kaspersky Endpoint Security in Light Agent mode. We do not recommend changing the value of this setting manually. This setting is specified during the initial configuration of the application.	true/yes – the application is used in Light Agent mode to protect virtual environments. false/no – the application is used in Standard mode.
EndpointAgentMode	Using Kaspersky Endpoint Security in Endpoint Detection and Response Agent mode	true/yes – the application is used in Endpoint Detection and Response Agent mode. false/no – the application is used in Standard mode.
KcsMode	Use Kaspersky Endpoint Security as part of the Kaspersky Container Security solution as the File Threat Protection component. We do not recommend changing the value of this setting manually. This setting is used only by the Kaspersky Container Security solution.	true/yes means the application is used as the File Threat Protection component in the Kaspersky Container Security solution. false/no (default) means the application is used in one of the Kaspersky Endpoint Security modes (standard mode, Endpoint Detection and Response Agent mode, Light Agent mode for virtualization).
StartupTraces	Enables generation of trace files at application startup.	true/yes – Create trace files at application startup. false/no (default value) – Do not create trace files at application startup.
RevealSensitiveInfoInTraces	Display information in trace files that may contain personal data (for example, passwords).	true/yes (default value) — display information in application trace files that may contain personal data. false/no (default value) — do not display information that may contain personal data in trace files.
AsyncTraces	Enables asynchronous tracing, in which information is logged to trace files in asynchronously.	true/yes – enable asynchronous tracing. false/no (default value) – do not enable asynchronous tracing.
CoreDumps	Enables the creation of a dump file when application failure occurs.	true/yes to create a dump file when the application crashes. false/no (default value) not to create a dump file when the application crashes.
CoreDumpsPath	Path to the directory where the dump files are stored.	Default value: /var/opt/kaspersky/kesl/common/dumps. Root privileges are required to access the default dump file directory.
MinFreeDiskSpace	The minimum amount of disk memory that will remain after writing a dump file, in megabytes.	Default value: 300.
ScanMemoryLimit	Limit on the application's use of memory in megabytes.	Default value: 8192. We recommend specifying a ScanMemoryLimit lower than the MaxMemory setting to avoid using up all available memory for scan tasks and causing an application restart.
MachineId	The user's unique device ID.	The value of the setting is filled in automatically during installation of the application.
SocketPath	Path to a socket for a remote connection to, say, a graphical interface and the kesl-control utility.	Default value: /var/run/bl4control.
MaxInotifyWatches	Limit on the number of subscriptions to changes in files and directories (user watches) in /proc/sys/fs/inotify/max_user_watches. If the setting in the operating system is less than the MaxInotifyWatches setting, the application changes the operating system setting to the MaxInotifyWatches value.	Default value: 299987.

Setting	Description	Values
`MaxInotifyInstances`	Limit on the number of subscriptions to changes in files and directories for one user set in /proc/sys/fs/inotify/max_user_instances. If the setting in the operating system is less than the `MaxInotifyInstances` setting, the application changes the operating system setting to the `MaxInotifyInstances` value.	Default value: 2047.
`ExecEnvMax`	The number of environment variables that the application captures from the command call.	Default value: 50.
`ExecArgMax`	Number of arguments that the application captures from the exec call.	Default value: 20.
`AdditionalDNSLookup`	Indicates use of a public DNS. If there are errors accessing servers through the system DNS, the application uses a public DNS. This is needed for updating application databases and maintaining device security. The application will use the following public DNSes in this order: 1. Google Public DNS™ (8.8.8.8). 2. Cloudflare® DNS (1.1.1.1). 3. Alibaba Cloud® DNS (223.6.6.6). 4. Quad9® DNS (9.9.9.9). 5. CleanBrowsing (185.228.168.168).	`true/yes` – Use a public DNS to access Kaspersky servers. `false/no` (default value) – Do not use a public DNS to access Kaspersky servers. The application's requests may contain domain addresses and the user's external IP address, since the application establishes a TCP/UDP connection with the DNS server. This information is necessary, for example, to check the certificate of a web resource when interacting via HTTPS. If the application is using a public DNS server, data processing rules are governed by the Privacy Policy of the corresponding service.
`PanicThreshold`	Maximum number of abnormal halts when using the updatable kernel module. When the specified value is reached, the application enters the "safe" mode, in which the updatable kernel module is not started.	Default value: 3.
`SafeMode`	Enabling the "safe" mode when using the updatable kernel module. In this mode, the application does not start the updatable kernel module. The "safe" mode is activated automatically if the application reaches the maximum number of abnormal halts specified in the `PanicThreshold` setting.	`true/yes` means the "safe" mode of the application is enabled. `false/no` (default) means the "safe" mode of the application is disabled, the application operating normally.
`GetContainerName`	The following information about the container in included in telemetry when integrating with Kaspersky Managed Detection and Response: • Indication of the event occurring in a container • ID of the container namespace • Container name The container name is transmitted only if you have a license to use the Container Scan task and if the container has a sufficient lifetime.	`true/yes` includes extended information about the container in telemetry when integrating with Kaspersky Managed Detection and Response. `false/no` does not include extended information about the container in telemetry when integrating with Kaspersky Managed Detection and Response.
The **[Network]** section contains the following settings:		

Setting	Description	Values
`WtpFwMark`	A mark in the iptables rules for forwarding traffic to the application for processing by Web Threat Protection component. You may need to change this mark if a device with the application runs other software that uses the ninth bit of the TCP packet mask, and a conflict occurs.	A decimal value or hexadecimal number with the prefix 0x. Default value: 0x100. To avoid cyclical traffic scanning when the application is running on nodes used as part of distributed systems, such as Kubernetes, you need to change the values of the network packet marks using the higher bits. For example: 0x1000 or 0x10000 (the mark is limited to a 32-bit integer).
`NtpFwMark`	A mark in the iptables rules for forwarding traffic to the application for processing by Network Threat Protection component. You may need to change this mark if a device with the application runs other software that uses the ninth bit of the TCP packet mask, and a conflict occurs.	A decimal value or hexadecimal number with the prefix 0x. Default value: 0x200. To avoid cyclical traffic scanning when the application is running on nodes used as part of distributed systems, such as Kubernetes, you need to change the values of the network packet marks using the higher bits. For example: 0x2000 or 0x20000 (the mark is limited to a 32-bit integer).
`BypassFwMark`	A mark used to indicate packets created or scanned by the application, so that the application does not scan them again.	A decimal value or hexadecimal number with the prefix 0x. Default value: 0x400. To avoid cyclical traffic scanning when the application is running on nodes used as part of distributed systems, such as Kubernetes, you need to change the values of the network packet marks using the higher bits. For example: 0x4000 or 0x40000 (the mark is limited to a 32-bit integer).
`BypassNFlogMark`	Mark for packages created or scanned by the application to prevent them from being logged by the iptable utility.	A decimal value or hexadecimal number with the prefix 0x. Default value: 0x800. To avoid cyclical traffic scanning when the application is running on nodes used as part of distributed systems, such as Kubernetes, you need to change the values of the network packet marks using the higher bits. For example: 0x8000 or 0x80000 (the mark is limited to a 32-bit integer).
`ProxyRouteTable`	Number of the routing table.	Default value: 101.
The **[ScannerImpactStats]** section contains the following settings:		
`CollectFileScanStatistics`	Enables the counting of file and process scanning statistics by the application.	`true/yes` (default value) enables the tallying of file and process scanning statistics. `false/no` disables the tallying of file and process scanning statistics.

Setting	Description	Values
`StatCollectionPeriod`	The time period during which the application collects statistics of scanned files and detected processes before saving the statistical information to the trace file and reports.	Default value: 10 minutes.
`StatCollectionCount`	The number of scanned files and detected processes counted by the application during the time interval specified by the `StatCollectionPeriod` parameter and that is included in the report and trace files.	Default value: 10.
`ReportStatAmount`	The number of records to be written to reports on the most frequently scanned files and processes for the day.	Default value: 20.
The **[Virtualization]** section contains the following settings:		
`ServerMode`	The role of the protected virtual machine on which Kaspersky Endpoint Security is used in Light Agent mode to protect virtual environments: server or workstation. We do not recommend changing the value of this setting manually. This setting is specified during the initial configuration of the application.	`true/yes` – the protected virtual machine is used as a server. `false/no` – the protected virtual machine is used as a workstation.
`VdiMode`	Enables VDI protection mode when using the application in Light Agent mode to protect virtual environments. We do not recommend changing the value of this setting manually. This setting is specified during the initial configuration of the application.	`true/yes` – VDI protection mode is enabled. `false/no` – VDI protection mode is disabled.
The **[Watchdog]** section contains the following settings:		
`TimeoutAfterHeadshot`	Maximum time to wait for the kesl process to complete from the moment the Watchdog server sends the HEADSHOT signal to the kesl process.	Default value: 2 minutes.
`StartupTimeout`	The maximum time to wait for the application to start (in minutes), after which the Watchdog server starts the procedure for restarting the kesl process.	Default value: 3 minutes.
`TimeoutAfterKill`	Maximum time to wait for the controlled kesl process to complete from the moment the Watchdog server sends the SIGKILL signal to the kesl process. If the kesl process does not finish before this time elapses, the action specified by the --failed-kill setting is performed.	Default value: 2 days.
`PingInterval`	The interval with which the application attempts to send a PONG message to the Watchdog server in response to a received PING message.	Default value: 2000 milliseconds.
`MaxRestartCount`	Maximum number of consecutive unsuccessful attempts to start the application.	Default value: 5.
`ActivityTimeout`	Maximum time interval during which the application should send a message to the Watchdog server. If a message is not received from the application within this time interval, the Watchdog server begins the procedure to restart the kesl process.	Default value: 2 minutes.

Setting	Description	Values
ConnectTimeout	The maximum timeout for the application's connection to the Watchdog server from the moment the kesl process starts. If the application does not establish a connection in this time interval, the Watchdog server begins the procedure to restart the kesl process.	Default value: 3 minutes.
RegisterTimeout	Maximum time from the moment the application connects to the Watchdog server to the moment the server receives a REGISTER message.	Default value: 500 milliseconds.
TimeoutAfterShutdown	Maximum time to wait for the kesl process to complete from the moment the Watchdog server sends the SHUTDOWN signal to the kesl process.	Default value: 2 minutes.
MaxMemory	Limit on the use of resident memory by the kesl process. If the kesl process uses more resident memory than this limit, the Watchdog server begins the procedure to restart the kesl process.	off – the resident set size is not limited. < value >% – a value between 1 and 100 percent of RAM. < value >MB – a value in megabytes. lowest/< value >%/< value >MB – the smaller of the percentage value and the absolute value in megabytes. highest/< value >%/< value >MB – the larger of the percentage value and the absolute value in megabytes. auto – up to 50% of available memory, but not less than 2GB and not more than 16GB. Default value: auto.
MaxVirtualMemory	Limit on the use of virtual memory by the kesl process. If the kesl process uses more virtual memory than this limit, the Watchdog server begins the procedure to restart the kesl process.	off (default value) – The virtual memory size is not limited. < value >MB – a value in megabytes.
MaxSwapMemory	Limit on the size of the swap file of the kesl process. If the swap file of the kesl process exceeds this limit, the Watchdog server begins the procedure to restart the kesl process.	off (default value) – The size of the swap file is not limited. < value >% – a value between 0 and 100 percent of RAM. < value >MB – a value in megabytes. lowest/< value >%/< value >MB – the smaller of the percentage value and the absolute value in megabytes. highest/< value >%/< value >MB – the larger of the percentage value and the absolute value in megabytes.
TrackProductCrashes	Enable the sending of device status from Kaspersky Endpoint Security to Kaspersky Security Center when the application is unstable.	true/yes enables the sending of device status information from Kaspersky Endpoint Security to Kaspersky Security Center. false/no (default) disables the sending of device status from Kaspersky Endpoint Security to Kaspersky Security Center.
ProductHealthLogFile	The path to the file used for application stability monitoring.	Default value: /var/opt/kaspersky/kesl/private/kesl_health.log.
WarnThreshold	Time interval (in seconds) in which the application must experience the specified number of abnormal halts before displaying a notification about unstable operation.	Default value: 3600 seconds.
WarnAfter_#_crash	The maximum number of abnormal halts of the application after which a notification about the unstable operation of the application is displayed.	Default value: 10. If the value is 0, an unstable application notification is not displayed.
WarnRemovingThreshold	Time interval (in seconds) after which the application's unstable status will be cleared.	Default value: 86400 seconds.

Setting	Description	Values
`SyscallHangProbePeriod`	The period with which the Watchdog server calls the open and execve system functions and increments the success counters for these functions.	Default value: 3 seconds.
`SyscallHangCheckPeriod`	The period with which the Watchdog server checks the success counters for the open and execve functions. If the value of the counters is unchanged after this time, the Watchdog server starts the procedure for restarting the kesl process.	Default value: 32 seconds.
`DumpSuspendPeriod`	The maximum time to wait for the creation of an application dump file, during which the Watchdog server suspends the checking of application activity. If the dump creation has not completed after this time, the Watchdog server starts the procedure for restarting the kesl process.	Possible values: 1–30 minutes. Default value: 2 minutes.
`TimeoutAfterCoredump`	The maximum duration for which the Watchdog server suspends the sending of other signals to the kesl process after sending the SIGTRAP signal as part of the abnormal process termination procedure.	Default value: 2 minutes. We recommend setting a `TimeoutAfterCoredump` greater than or equal to the `DumpSuspendPeriod`. You can use the following units to specify this setting: • `<n> day|days|d` for days • `<n> hour|hours|hr|h` for hours • `<n> minute|minutes|min|m` for minutes • `<n> second|seconds|sec|s` for seconds • `<n> [msec|ms]` for milliseconds If no unit is specified, the application interprets the value as milliseconds.
By default, the **[Environment]** section is absent from the configuration file.		
`ExperimentalContainerdSupport`	Enabling support for the containerd environment when the Container Monitor component is running (ContainerScan, Container Monitoring). By default, this section is absent from the configuration file. If you want to use the containerd environment when the Container Monitoring component is running, you need to manually add the `[Environment]` section to the configuration file and inside it, the `ExperimentalContainerdSupport` setting.	`true/yes` – enable support for the containerd environment in the operation of the Container Monitoring component. `false/no` – do not enable support for the containerd environment in the operation of the Container Monitoring component.
`ReduceSWMemoryConsumption`	Limiting the memory consumption by the Behavior Detection component for processing the event queue. Setting a memory limit negatively affects threat detection, including the quality of telemetry transmitted as part of integration with Detection and Response solutions. We recommend setting a limit only on highly loaded systems and after contacting Technical Support to get specific instructions, if there are no other options for solving the problem of high memory consumption.	1 – limit the memory usage by the Behavior Detection component for processing the event queue. 0 (default) – do not limit memory usage. The application must be restarted after this setting is changed.

Default settings for command line tasks

This section contains the default options for all predefined tasks that are provided for managing Kaspersky Endpoint Security via the command line.

> The `Rollback` and `License` tasks have no settings.

Default settings for the File_Threat_Protection task (ID:1)

```
ScanArchived=No

ScanSfxArchived=No

ScanMailBases=No

ScanPlainMail=No

SkipPlainTextFiles=No

SkipDatabaseJournals=No

TimeLimit=60

SizeLimit=0

ActionOnThreat=DisinfectDeleteIfNotPossible

UseExcludeMasks=No

UseExcludeThreats=No

ReportCleanObjects=No

ReportPackedObjects=No

ReportUnprocessedObjects=No

UseAnalyzer=Yes

HeuristicLevel=Recommended

UseIChecker=Yes

ScanByAccessType=SmartCheck

[ScanScope.item_0000]

AreaDesc=All objects
```

```
UseScanArea=Yes

Path=/

AreaMask.item_0000=*
```

Default settings for the Scan_My_Computer task (ID:2)

```
ScanFiles=Yes

ScanBootSectors=Yes

ScanComputerMemory=Yes

ScanStartupObjects=Yes

ScanArchived=Yes

ScanSfxArchived=Yes

ScanMailBases=No

ScanPlainMail=No

TimeLimit=0

SizeLimit=0

ActionOnThreat=DisinfectDeleteIfNotPossible

UseExcludeMasks=No

UseExcludeThreats=No

ReportCleanObjects=No

ReportPackedObjects=No

ReportUnprocessedObjects=No

UseAnalyzer=Yes

HeuristicLevel=Recommended

UseIChecker=Yes

UseGlobalExclusions=Yes

UseOASExclusions=Yes

DeviceNameMasks.item_0000=/**

[ScanScope.item_0000]
```

```
AreaDesc=All objects

UseScanArea=Yes

Path=/

AreaMask.item_0000=*
```

Default settings for the Scan_File task (ID:3)

```
ScanFiles=Yes

ScanBootSectors=No

ScanComputerMemory=No

ScanStartupObjects=No

ScanArchived=Yes

ScanSfxArchived=Yes

ScanMailBases=No

ScanPlainMail=No

TimeLimit=0

SizeLimit=0

ActionOnThreat=DisinfectDeleteIfNotPossible

UseExcludeMasks=No

UseExcludeThreats=No

ReportCleanObjects=No

ReportPackedObjects=No

ReportUnprocessedObjects=No

UseAnalyzer=Yes

HeuristicLevel=Recommended

UseIChecker=Yes

UseGlobalExclusions=Yes

UseOASExclusions=Yes

DeviceNameMasks.item_0000=/**
```

```
[ScanScope.item_0000]

AreaDesc=All objects

UseScanArea=Yes

Path=/

AreaMask.item_0000=*
```

Default settings for the Critical_Areas_Scan task (ID:4)

```
ScanFiles=No

ScanBootSectors=Yes

ScanComputerMemory=Yes

ScanStartupObjects=Yes

ScanArchived=Yes

ScanSfxArchived=Yes

ScanMailBases=No

ScanPlainMail=No

TimeLimit=0

SizeLimit=0

ActionOnThreat=DisinfectDeleteIfNotPossible

UseExcludeMasks=No

UseExcludeThreats=No

ReportCleanObjects=No

ReportPackedObjects=No

ReportUnprocessedObjects=No

UseAnalyzer=Yes

HeuristicLevel=Recommended

UseIChecker=Yes

UseGlobalExclusions=Yes

UseOASExclusions=Yes
```

```
DeviceNameMasks.item_0000=/**

[ScanScope.item_0000]

AreaDesc=All objects

UseScanArea=Yes

Path=/

AreaMask.item_0000=*
```

Default settings for the Update task (ID:6)

```
ConnectionTimeout=10

ApplicationUpdateMode=DownloadOnly

[Sources.item_0000]

Enabled=Yes

SourceType=KLServers

URL=
```

Default settings for the System_Integrity_Monitoring task (ID:11)

```
UseExcludeMasks=No

[ScanScope.item_0000]

AreaDesc=Kaspersky internal objects

UseScanArea=Yes

Path=/opt/kaspersky/kesl/

AreaMask.item_0000=*
```

Default settings for the Firewall_Management task (ID:12)

```
DefaultIncomingAction=Allow

DefaultIncomingPacketAction=Allow

OpenNagentPorts=Yes

[NetworkZonesTrusted]
```

```
[NetworkZonesLocal]

[NetworkZonesPublic]
```

Default settings for the Anti_Cryptor task (ID:13)

```
ActionOnDetect=Block

BlockTime=30

UseExcludeMasks=No

[ScanScope.item_0000]

AreaDesc=All shared directories

UseScanArea=Yes

Path=AllShared

AreaMask.item_0000=*
```

Default settings for the Web_Threat_Protection task (ID:14)

```
UseTrustedAddresses=Yes

ActionOnDetect=Block

CheckMalicious=Yes

CheckPhishing=Yes

UseHeuristicForPhishing=Yes

CheckAdware=No

CheckOther=No
```

Default settings for the Device_Control task (ID:15)

```
OperationMode=Block

AllowToRequestTemporaryAccess=No

[DeviceClass]

HardDrive=DependsOnBus

RemovableDrive=DependsOnBus
```

```
Printer=DependsOnBus

FloppyDrive=DependsOnBus

OpticalDrive=DependsOnBus

Modem=DependsOnBus

TapeDrive=DependsOnBus

MultifuncDevice=DependsOnBus

SmartCardReader=DependsOnBus

PortableDevice=DependsOnBus

WiFiAdapter=DependsOnBus

NetworkAdapter=DependsOnBus

BluetoothDevice=DependsOnBus

ImagingDevice=DependsOnBus

SerialPortDevice=DependsOnBus

ParallelPortDevice=DependsOnBus

InputDevice=DependsOnBus

SoundAdapter=DependsOnBus

[DeviceBus]

USB=Allow

FireWire=Allow

[Schedules.item_0000]

ScheduleName=Default

DaysHours=All

[HardDrivePrincipals.item_0000]

Principal=\Everyone

[HardDrivePrincipals.item_0000.AccessRules.item_0000]

UseRule=Yes

ScheduleName=Default
```

```
Access=Allow

[RemovableDrivePrincipals.item_0000]

Principal=\Everyone

[RemovableDrivePrincipals.item_0000.AccessRules.item_0000]

UseRule=Yes

ScheduleName=Default

Access=Allow

[FloppyDrivePrincipals.item_0000]

Principal=\Everyone

[FloppyDrivePrincipals.item_0000.AccessRules.item_0000]

UseRule=Yes

ScheduleName=Default

Access=Allow

[OpticalDrivePrincipals.item_0000]

Principal=\Everyone

[OpticalDrivePrincipals.item_0000.AccessRules.item_0000]

UseRule=Yes

ScheduleName=Default

Access=Allow
```

Default settings for the Removable_Drives_Scan task (ID:16)

```
ScanRemovableDrives=NoScan

ScanOpticalDrives=NoScan

BlockDuringScan=No
```

Default settings for the Network_Threat_Protection task (ID:17)

```
ActionOnDetect=Block

BlockAttackingHosts=Yes
```

```
BlockDurationMinutes=60

UseExcludeIPs=No
```

Default settings for Container_Scan (ID:18) and Custom_Container_Scan (ID:19) tasks

```
ScanArchived=Yes

ScanSfxArchived=Yes

ScanMailBases=No

ScanPlainMail=No

TimeLimit=0

SizeLimit=0

ActionOnThreat=DisinfectDeleteIfNotPossible

UseExcludeMasks=No

UseExcludeThreats=No

ReportCleanObjects=No

ReportPackedObjects=No

ReportUnprocessedObjects=No

UseAnalyzer=Yes

HeuristicLevel=Recommended

UseIChecker=Yes

ScanContainers=Yes

ContainerNameMask=*

ScanImages=Yes

ImageNameMask=*

DeepScan=No

ContainerScanAction=StopContainerIfFailed

ImageAction=Skip
```

```
UseGlobalExclusions=Yes
```

You can also use the option in this configuration file for the Custom Container Scan task.

Default settings for the Behavior_Detection task (ID:20)

```
UseTrustedPrograms=No

TaskMode=Block

UseAEP=No

AEPMode=Block

UseTelemetryMonopolyMode=Yes

TelemetrySource=Default
```

Default settings for the Application_Control task (ID:21)

```
AppControlMode=DenyList

AppControlRulesAction=ApplyRules
```

Default settings for the Inventory_Scan task (ID:22)

```
ScanScripts=Yes

ScanBinaries=Yes

ScanAllExecutable=Yes

GoldenImageAction=DoNothing

[ScanScope.item_0000]

AreaDesc=All objects

UseScanArea=Yes

Path=/usr/bin

AreaMask.item_0000=*
```

Default settings for KATAEDR task (ID:24)

```
Mode=EDRKATA
```

```
UseClientPinnedCertificate=No

SynchronizationPeriod=5

ConnectionTimeout=10

RequestTimeout=10

EnableTelemetry=Yes

[Endpoints.item_0000]

Address=127.0.0.1

Port=443

[EventTransferSettings]

MaximumDataTransferTime=30

UseRequestCountLimits=Yes

MaximumNumberOfEventsInHour=3000

EventLimitExceededPercentage=15

[TelemetrySettings]

UseClientPinnedCertificate=No

ConnectionTimeout=10

RequestTimeout=10

OnlyTaggedEvents=No

[TelemetrySettings.Endpoints.item_#]

Address=

Port=443

[TelemetrySettings.EventTransferSettings]

MaximumDataTransferTime=30

UseRequestCountLimits=Yes

MaximumNumberOfEventsInHour=3000

EventLimitExceededPercentage=15
```

Default settings for the Web_Control task (ID:26)

```
WebControlDefaultAction=Allow

ComplaintRecipient=
```

Default settings for the Standalone_Sandbox task (ID:29)

```
ConnectionTimeout=10

RequestTimeout=10

UseClientCertificate=No

SendingMode=AutoOnly

QuarantineFile=Yes

ScanCriticalAreas=Yes

CreateIocScanTask=Yes

QuarantineFileOnIocDetected=Yes

ScanCriticalAreasOnIocDetected=Yes

Drives=Critical

ScheduleMode=Manually

[Servers.item_0000]

Address=127.0.0.1

Port=443

[SandboxTransferSettings]

SandboxQueue=1024
```

Default settings for KATANDR task (ID:31)

```
UseClientPinnedCertificate=No

SynchronizationPeriod=5

ConnectionTimeout=10

RequestTimeout=10
```

```
[Endpoints.item_0000]

Address=127.0.0.1

Port=8081

[EventTransferSettings]

MaximumDataTransferTime=30

MaximumNumberOfEventsInPackage=1024

UseRequestCountLimits=Yes

MaximumNumberOfEventsInHour=3000

EventLimitExceededPercentage=15

PingPeriod=450
```

Default settings for the KUMA task (ID:33)

```
UseClientCertificate=No

UseTls=No

ConnectionTimeout=5

[Servers.item_0000]

Address=127.0.0.1

Port=443

Protocol=TCP

[SiemTransferSettings]

EventTransferTimeMax=30
```

Default settings of the Mail Threat Protection task (ID: 35)

```
CheckIncomingMessagesOnly=No

ActionOnThreat=DisinfectDeleteIfNotPossible

ScanFileArchive=Yes

ScanFileOffice=Yes

UseTimeLimit=No
```

```
TimeLimit=8

UseSizeLimit=No

SizeLimit=5

ExtensionFilter=Rename

UseAnalyzer=Yes

AnalyzerLevel=Medium

[ExtensionMasks.item_0000]

UseExtensionMask=Yes

ExtensionMask=*.txt

[ExtensionMasks.item_0001]

UseExtensionMask=Yes

ExtensionMask=*.run

[ExtensionMasks.item_0002]

UseExtensionMask=Yes

ExtensionMask=*.exe

[ExtensionMasks.item_0003]

UseExtensionMask=Yes

ExtensionMask=*.js

[ExtensionMasks.item_0004]

UseExtensionMask=Yes

ExtensionMask=*.jse

[ExtensionMasks.item_0005]

UseExtensionMask=Yes

ExtensionMask=*.msi

[ExtensionMasks.item_0006]

UseExtensionMask=Yes

ExtensionMask=*.scr
```

```
[ExtensionMasks.item_0007]

UseExtensionMask=Yes

ExtensionMask=*.vbe

[ExtensionMasks.item_0008]

UseExtensionMask=Yes

ExtensionMask=*.vbs

[ExtensionMasks.item_0009]

UseExtensionMask=Yes

ExtensionMask=*.sh
```

Default settings of the BadUSB Attack Prevention task (ID: 37)

```
MaxAuthAttempts=5

TimeoutAfterAttempts=5

ProhibitOnScreenKeyboard=No
```

General application settings

General application settings define the operation of the application as a whole and the operation of individual functions.

Setting	Description	Values
`SambaConfigPath`	Directory that stores the Samba configuration file. The Samba configuration file is required to ensure that the `AllShared` or `Shared:SMB` values can be used for the `Path` setting. The application must be restarted after this setting is changed.	The standard directory of the SAMBA configuration file on the computer is specified by default. Default value: /etc/samba/smb.conf.
`NfsExportPath`	The directory where the NFS configuration file is stored. The NFS configuration file is required to ensure that the `AllShared` or `Shared:NFS` values can be used for the `Path` setting. The application must be restarted after this setting is changed.	The standard directory of the NFS configuration file on the computer is specified by default. Default value: /etc/exports.
`TraceLevel`	Enable application tracing and the level of detail in the trace files.	`Detailed` – Generate a detailed trace file. `MediumDetailed` – Generate a trace file that contains informational messages and error messages. `NotDetailed` – Generate a trace file that contains error messages. `None` (default value) — Do not generate a trace file.
`TraceFolder`	The directory that stores the application trace files. The application must be restarted after this setting is changed.	Default value: /var/log/kaspersky/kesl. Root privileges are required to access the default trace files directory. If you specify a different directory, make sure that only the root has read and write permissions to this directory (`700` or `rwx--------` permissions).
`TraceMaxFileCount`	Maximum number of application trace files. The application must be restarted after this setting is changed.	1–10000 Default value: 10.
`TraceMaxFileSize`	Specifies the maximum size of an application trace file (in megabytes). The application must be restarted after this setting is changed.	1–1000 Default value: 500.

Setting	Description	Values
`BlockFilesGreaterMaxFileNamePath`	Blocks access to files for which the full path length exceeds the defined settings value specified in bytes. If the length of the full path to the scanned file exceeds the value of this setting, scan tasks skip this file during scanning. This setting only applies to operating systems that do not support fanotify. After changing the value of this setting, the File Threat Protection task needs to be restarted.	4096–33554432 Default value: 16384.
`DetectOtherObjects`	Enable detection of legitimate applications that intruders can use to compromise devices or data.	`Yes`: enable detection of legitimate applications that intruders can use to compromise devices or data. `No` (default): disable detection of legitimate applications that intruders can use to compromise devices or data.
`NamespaceMonitoring`	Enabling scanning of namespaces and containers (Container Scan, Container Monitoring). The application does not scan namespaces and containers unless components for working with containers and namespaces are installed in the operating system.	`Yes` (default value) — Enable scanning of namespaces and containers. `No` — Disable scanning of namespaces and containers.
`FileBlockDuringScan`	Enabling the file operation intercept mode with blocking access to files for the duration of the scan. The file operation interception mode affects the File Threat Protection and Device Control components.	`Yes` (default value) to block access to files for the duration of the scan. `No` to allow access to files during the scan. Requests to any file is allowed, scanning is done asynchronously. This file operation interception mode has less impact on the system performance, but there is a risk that a threat in a file will not be disinfected or deleted if the file can, for example, change its name during a scan before the application makes a decision on the status of the file. However, the File Threat Protection, Device Control, and Execution prevention components operate in notify mode, regardless of which mode is configured.
`UseKSN`	Configure Kaspersky Security Network for the application.	`Basic` — Enable use of Kaspersky Security Network in standard mode. `Extended` — Enable use of Kaspersky Security Network in extended mode. `No` (default value) — Do not use the Kaspersky Security Network.
`CloudMode`	Enable cloud mode. Cloud mode is available if use of KSN is enabled. If you plan to use cloud mode, make sure KSN is available on your device. This setting applies only if the application is used in standard mode.	`Yes` — enable the operating mode in which Kaspersky Endpoint Security uses a lightweight version of the malware databases. `No` (default value) – use the full version of the malware databases. Cloud mode is disabled automatically if use of KSN is disabled.

Setting	Description	Values
`UseMDR`	Enabling the Managed Detection and Response component for integration with Kaspersky Managed Detection and Response. If you enable the MDR component, and Kaspersky Security Network is disabled or used in Basic mode, an error message is displayed and the MDR component is not enabled. To enable the MDR component, you must enable KSN in Extended mode.	`Yes` to enable the Managed Detection and Response component. `No` (default value) – disable the Managed Detection and Response component.
`UseEdrOptimum`	Enabling the EDR Optimum component for integration with Kaspersky Endpoint Detection and Response Optimum.	`Yes` — Enable the EDR Optimum component. `No` (default) — Disable the EDR Optimum component.
`UseProxy`	Enables use of a proxy server by Kaspersky Endpoint Security components. The proxy server can be used for access to Kaspersky activation servers, to update sources for databases and application modules, to Kaspersky Security Network, and when verifying website certificates using the Web Threat Protection component. If Kaspersky Endpoint Security is used in Light Agent mode, the use of a proxy server for connecting to Kaspersky Security Network, the SVM, and the Integration Server is not supported.	`Yes`: enable the use of a proxy server. `No` (default) — Disable the use of a proxy server.
`ProxyServer`	Address of the proxy server used to connect to the Internet. When connecting via an HTTP proxy, we recommend to use a separate account that is not used to sign in to other systems. An HTTP proxy uses an insecure connection, and the account may be compromised.	Address of the proxy server in one of the following formats: • `[<connection protocol>://]<IP address of the proxy server>:<port>`, if no authentication is required to connect to the proxy server; • `[<connection protocol>://][<user name>:[<password>]@]<IP address of the proxy server>:<port>`, if authentication is required when connecting to the proxy server. Connecting to a proxy server over HTTPS is not supported.
`ProxyBypass`	List of addresses for which the proxy server is to be bypassed.	The address is specified in the `<address>[:<port number>]` format. To specify addresses, you can use masks (`*` symbols) and comments (after a \ symbol).
`ProxyBypassEdr`	Whether a proxy server is used when connecting to Kaspersky Endpoint Detection and Response Expert (on-premise) integration servers.	`Yes` – do not use a proxy server when connecting to Kaspersky Endpoint Detection and Response Expert (on-premise) integration servers. `No` (default value) – use a proxy server when connecting to Kaspersky Endpoint Detection and Response Expert (on-premise) integration servers.

Setting	Description	Values
`ProxyBypassNdr`	Whether a proxy server is used when connecting to Kaspersky Network Detection and Response (KATA) integration servers.	`Yes` – do not use a proxy server when connecting to Kaspersky Network Detection and Response (KATA) integration servers. `No` (default value) – use a proxy server when connecting to Kaspersky Network Detection and Response (KATA) integration servers.
`ProxyBypassSandbox`	Whether a proxy server is used when connecting to servers that provide interaction with Sandbox.	`Yes` to bypass the proxy server when connecting to servers that provide interaction with Sandbox. `No` (default value) to use the proxy server when connecting to servers that provide interaction with Sandbox.
`MaxEventsNumber`	The maximum number of events stored by the application. When the specified number of events is exceeded, the application deletes the oldest events.	Default value: 500000. If the value is 0, new events are not saved, and old events are deleted.
`LimitNumberOfScanFileTasks`	The maximum number of custom scan tasks that a non-privileged user can simultaneously start on the device. This setting does not limit the number of tasks that a user with root privileges can start.	0–100000 0 means a non-privileged user cannot start custom scan tasks. Default value: 5.
`UseSyslog`	Enables logging of application events to syslog. Root privileges are required to access syslog.	`Yes`: enable saving events to syslog. `No` (default): disable saving events to syslog.
`EventsStoragePath`	Path to the main file of the event log database. Root privileges are required to access the default event database.	Default value: /var/opt/kaspersky/kesl/private/storage/events.db.

Setting	Description	Values
`ExcludedMountPoint.item_#`	The mount point to exclude from the scan scope. The exclusion applies to the operation of the File Threat Protection, Anti-Cryptor, Container Monitoring (Container Scan, Container Monitoring) components and the Removable Drives Scan task, and is also configured in the operation of ODS and ContainerScan scan tasks. You can specify several mount points to be excluded from scans. Mount points must be specified in the same way as they are displayed in the `mount` command output. The `ExcludedMountPoint.item_#` setting is left unspecified by default.	`AllRemoteMounted` — Exclude all remote directories mounted on the device using SMB and NFS protocols from file operation interception. `Mounted:NFS` — Exclude all remote directories mounted on the device using the NFS protocol from file operation interception. `Mounted:SMB` — Exclude all remote directories mounted on the device using the SMB protocol from file operation interception. `Mounted:<file system type>` — Exclude all mounted directories with the specified file system type from file operation interception. `/mnt` — Exclude objects in the /mnt mount point (including subdirectories) from file operation interception. This directory is used as the temporary mount point for removable drives. `<path that contains the /mnt/user* or /mnt/**/user_share>` mask — Exclude objects in mount points whose names contain the specified **mask** from file operation interception. You can use the `*` (asterisk) character to create a file or directory name mask. You can indicate a single `*` character to represent any set of characters (including an empty set) preceding the `/` character in the file or directory name. For example, `/dir/*/file` or `/dir/*/*/file`. You can indicate two consecutive `*` characters to represent any set of characters (including an empty set and the `/` character) in the file or directory name. For example, `/dir/**/file*/` or `/dir/file**/`. The `**` mask can be used only once in a directory name. For example, `/dir/**/**/file` is an incorrect mask. To exclude the mount point `/dir`, you need to specifically indicate `/dir` (no asterisk). The mask `/dir/*` excludes all mount points at the level below `/dir` but not `/dir` itself. The `/dir/**` mask excludes all mount points below the level of `/dir` but not `/dir` itself. You can use a single `?` character to represent any one character in the file or directory name.
`MemScanExcludedProgramPath.item_#`	Exclude process memory from scans. The application does not scan the memory of the indicated process.	`<full path to process>` – Do not scan the process in the specified local directory. You can use **masks** to specify the path. You can use the `*` (asterisk) character to create a file or directory name mask. You can indicate a single `*` character to represent any set of characters (including an empty set) preceding the `/` character in the file or directory name. For example, `/dir/*/file` or `/dir/*/*/file`. You can indicate two consecutive `*` characters to represent any set of characters (including an empty set and the `/` character) in the file or directory name. For example, `/dir/**/file*/` or `/dir/file**/`. The `**` mask can be used only once in a directory name. For example, `/dir/**/**/file` is an incorrect mask. You can use a single `?` character to represent any one character in the file or directory name.
`UseOnDemandCPULimit`	Enables CPU usage limits for tasks of the following types: *ODS*, *ContainerScan*, and *InventoryScan*.	`Yes`: enable the CPU usage limit for *ODS*, *ContainerScan*, and *InventoryScan* tasks. `No` (default): disable CPU usage limits for tasks.

Setting	Description	Values
`OnDemandCPULimit`	Maximum utilization of all processor cores (as a percentage) for tasks of the following types: *ODS*, *ContainerScan*, and *InventoryScan*.	Integer value from 10 to 100. Default value: 100.
`BackupDaysToLive`	Time period for storing objects in the Backup storage (in days). After the specified time has elapsed, the application deletes the oldest backup copies of files. To remove the object retention limit, set 0.	0 to 10000 0–unlimited retention. Default value: 30.
`BackupSizeLimit`	Maximum Backup size in MB. When the maximum Backup storage size is reached, the application deletes the oldest backup copies of files. To remove the Backup size limit, set 0.	0 to 999999 0–unlimited size. Default value: 0.
`QuarantineBackupFolder`	The path to the directory where backup copies of files and quarantined files are stored. You can change the default directory. If the specified directory does not exist or is unavailable, the application uses the default directory.	Default value: /var/opt/kaspersky/kesl/common/objects-backup/ Root privileges are required for access to the default directory.
`QuarantineFillingNotification`	The percentage of Quarantine that must be full to generate an event about Quarantine being full. To disable generating events about Quarantine being full, enter 0.	0 to 100 0 – generating events about Quarantine being full is disabled. Default value: 90.
`QuarantineSizeLimit`	Maximum size of the Quarantine (in megabytes). When the maximum Quarantine size is reached, the application deletes the oldest files. To make the size of Quarantine unlimited, enter 0.	0 to 999999 0 means the Quarantine size is not limited. The default value is 200 if the application is being used in Basic mode, and 100 if the application is being used in Light Agent mode.
`ShowPopUpNotifications`	Enables displaying pop-up notifications in the graphical user interface.	`Yes` (default value) – show pop-up notifications in the graphical user interface. `No` – do not show pop-up notifications in the graphical user interface.
`PowerSaveMode`	Canceling scheduled tasks on a device running on battery power.	`Yes` (default value) skips scheduled tasks when the device is running on battery power. `No` runs scheduled tasks regardless of whether the device is running on battery power or not.
`InterceptorMode`	The system event interception mechanism used by Kaspersky Endpoint Security: This setting is applied only on devices running an operating system that supports the fanotify technology.	`UseFanotify` (default) – use the fanotify technology to intercept system events. `UseUpdatableKernelModule` – use an updatable kernel module to intercept system events.

Setting	Description	Values
`InterceptorFallbackStrategy`	What the application does if the updatable kernel module fails to start. This setting is applied only on devices running an operating system that supports the fanotify technology.	`FallbackToFanotify` (default) – switch to fanotify for system event interception. `FallbackToLimitedMode` – do not use system event interception. If the application does not use system event interception, real-time file scanning is not performed, and the protection level of the device is reduced.
`InterceptorApplyStrategy`	If the application switches to using the updatable kernel module, the application must be restarted to start the module. This setting lets you specify if you want the application to be restarted automatically or if you prefer to restart the application manually. This setting is applied only on devices running an operating system that supports the fanotify technology.	`RestartServiceAutomatically` automatically restarts the application to start the updatable kernel module. `RestartServiceManually` starts the updatable kernel module after the application is restarted manually by the user. We recommend automatically restarting the application to switch to using the updatable kernel module. Starting the updatable kernel module manually after restarting the application can lead to application errors.
`SystemEventsTransmission`	Enable logging of information about third-party application events to syslog Root privileges are required to access syslog.	`Yes` — Enable logging of information about third-party application events to syslog. `No` (default value) — Disable logging of information about third-party application events to syslog.

General Container Scan settings

The general Container Scan settings are used when scanning namespaces and containers in real time (Container Scan, Container Monitoring).

General container and namespace scan settings

Setting	Description	Values
`OnAccessContainerScanAction`	Action to be performed on a container when an infected object is detected. This setting is available when using the application under a license that supports this function. File Threat Protection task settings are used when scanning objects inside a container.	`StopContainerIfFailed` (default value) — Stop the container if an infected object cannot be disinfected or deleted. If this value is specified, the action performed on the container also depends on the `ActionOnThreat` setting of the File Threat Protection task. If `ActionOnThreat` is set to `DisinfectDeleteIfNotPossible` and the application cannot disinfect or delete the infected object while carrying out the action, the container is stopped. `StopContainer` — Stop the container when an infected object is detected. `Skip` — Do not perform any action on containers when an infected object is detected.

Setting	Description	Values
`UseDocker`	Using the Docker container management system. Integration with Docker 28.5.2 and earlier is supported.	`Yes` (default) enables the use of the Docker container management system. `No` disables the use of the Docker container management system.
`DockerSocket`	Docker socket path or URI (Universal Resource Identifier).	Default value: /var/run/docker.sock.
`UseCrio`	Use the CRI-O environment.	`Yes` (default value) — Use the CRI-O environment. `No` — Do not use the CRI-O environment.
`CrioConfigFilePath`	Path to the CRI-O configuration file.	Default value: /etc/crio/crio.conf.
`UsePodman`	Use the Podman utility.	`Yes` (default value) — Use the Podman utility. `No` — Do not use the Podman utility.
`PodmanBinaryPath`	Path to the Podman utility executable file.	Default value: /usr/bin/podman.
`PodmanRootFolder`	Path to the root directory of the container storage.	Default value: /var/lib/containers/storage.
`UseRunc`	Use the runc utility.	`Yes` (default value) — Use the runc utility. `No`: do not use the runc utility.
`RuncBinaryPath`	Path to the runc utility executable file.	Default value: /usr/bin/runc.
`RuncRootFolder`	Path to the root directory of the container state storage.	Default value: /run/runc.

Network traffic scan settings

Network traffic scan settings

Setting	Description	Values
`EncryptedConnectionsScan`	Enables or disables the scanning of encrypted connections. For the FTP protocol, encrypted connections scan is disabled by default.	`Yes` (default value) — Enable encrypted connection scans. `No` — Disable encrypted connection scans. The application does not decrypt the encrypted traffic.
`EncryptedConnectionsScanErrorAction`	Specifies the action to perform when an encrypted connection scan error occurs on a website.	`AddToAutoExclusions` (default value) — Add the domain where an error occurred to the list of domains with scan errors. The application will not monitor encrypted network traffic when this domain is visited. `Disconnect` — Block the network connection.
`CertificateVerificationPolicy`	Specifies the way Kaspersky Endpoint Security checks certificates. If a certificate is self-signed, the application does not perform the additional verification.	`FullCheck` (default value) — The application uses the Internet to check and download the missing chains that are required to verify a certificate. `LocalCheck` — The application does not use the Internet to verify a certificate.

Setting	Description	Values
`UntrustedCertificateAction`	The action to take when an unconfirmed certificate is detected.	`Allow` (default value) — Allow network connections established while visiting a domain with an untrusted certificate. `Block` — Block network connections established while visiting a domain with an untrusted certificate.
`ManageExclusions`	Using exclusions when scanning encrypted traffic.	`Yes` — Do not scan websites specified under `[Exclusions.item_#]` (see below). `No` (default value) — Scan all websites.
`MonitorNetworkPorts`	Specifies the way Kaspersky Endpoint Security monitors network ports.	`Selected` (default value) — Monitor only network ports specified in the `[NetworkPorts.item_#]` section (see below). `All` — Monitor all network ports. Specifying this value may significantly increase an operating system load.
`NetInterceptorMode`	Traffic interception mode by the Kaspersky Endpoint Security application.	`UseEBPF` — use the eBPF technology to intercept traffic. `UseIPTables` (default value) — use the iptables utility to intercept traffic. To change the traffic interception mode, you need to restart the application. Restarting breaks established network connections.
The **[Exclusions.item_#]** section contains domains excluded from scans. The application does not scan connections established when visiting specified domains.		
`DomainName`	Specifies the domain name.	You can use masks when specifying a domain.
The **[IncomingEndpointsExclusions.item_#]** section contains exclusions for incoming traffic.		
`RemoteIp`	IP address of the remote device, traffic from which is excluded from interception.	
`DestinationPort`	Port on the protected device, traffic to which from remote devices is excluded from interception.	
The **[OutgoingEndpointsExclusions.item_#]** section contains exclusions for outgoing traffic.		
`RemoteIp`	IP address of the remote device, traffic to which is excluded from interception.	
`DestinationPort`	Port on the remote device, traffic to which from the protected device is excluded from interception.	
The **[NetworkPorts.item_#]** section contains the network ports monitored by the application.		
`PortName`	Network port description.	
`Port`	Network port numbers to be monitored by the application.	`1 – 65535`. The default value is not defined.

Tasks schedule settings

The table below describes the task schedule settings that you can manage for all application tasks.

Task schedule settings

Setting	Description	Values
`RuleType`	Task launch schedule.	`Once`: run the task once. `Monthly`: run the task on the specified day and time every month. `Weekly`: run the task on the specified day and time every week. `Daily`: run the task regularly, at the specified interval in days. `Hourly`: run the task regularly, at the specified interval in hours, starting on the specified date and time. `Minutely`: run the task regularly, at the specified interval in minutes, starting at the specified time. `Manual` – start the task manually. `PS` – start the task after starting the application. `BR` – start the task after the application databases have been updated.
`StartTime`	Task start date and time. The `StartTime` option is required if the `RuleType` option is set to one of the following: Once, Monthly, Weekly, Daily, Hourly, or Minutely.	`[< year >/< month >/< day of the month >] [ hh ]:[ mm ]:[ ss ]; [< day of the month >| < day of the week >]; [< start periodicity >]`
`RandomInterval`	A time interval from 0 to the specified value (in minutes), which will be added to the task start time to avoid starting tasks at the same time.	Default value: 99 minutes.
`RunMissedStartRules`	Runs a missed task after the application is started.	`Yes` (default value) – enable running a missed task after the application is launched. `No`: does not enable running a missed task after the application starts.
`UseWorkingTimeout`	Stops the task upon reaching the maximum task execution time specified by the `WorkingTimeout` setting. The task will be stopped even if it is not completed. The next launch of the task will be performed according to the schedule.	`Yes` – Stop the task when the maximum task execution time has been reached. `No` (default value) – Do not stop the task when the maximum task execution time has been reached.
`WorkingTimeout`	The maximum task execution time (in minutes) after which the application stops executing the task if `UseWorkingTimeout=yes`.	Default value: 120 minutes.

Appendix 3. Command line return codes

Kaspersky Endpoint Security has the following command line return codes:

0 means command/task completed successfully

1 means general error in command syntax

2 – error in passed application settings.

64 means Kaspersky Endpoint Security is not running.

66 – application databases are not loaded (used only by the `kesl-control --app-info` command).

67 – activation 2.0 ended with an error due to network problems.

68 means the command cannot be executed because the application is managed by a policy.

69 – the application is located in the Amazon Paid Ami infrastructure.

70 – an attempt to start a running task, delete a running task, change the settings of a running task, stop a stopped task, pause a suspended task, or resume a running task.

71 – Kaspersky Security Network Statement has not been accepted.

72 means threats were detected during execution of the Custom Scan or Custom Container Scan task.

73 – attempt to set Application Control task settings that affect the operation of the application without confirming them using the `--accept` option.

74 means Kaspersky Endpoint Security must be restarted after an update.

75 means the device must be restarted.

76 — connection prohibited, as only users with root rights should have write access to the specified path.

77 — the specified license key is already in use on the device.

78 means the command/task cannot be run because the application is being used in Light Agent mode.

79 means the command cannot be run because the application is being used in standard mode.

80 – the update download operation failed due to network problems.

128 means unknown error.

65 – all other errors.

Appendix 4. Configuring interaction with Kaspersky Anti-Virus for Linux Mail Server

To configure joint operation of Kaspersky Endpoint Security and Kaspersky Anti-Virus for Linux Mail Server:

1. Save the File Threat Protection task settings in the configuration file using the following command:

   ```
   kesl-control --get-settings 1 --file <full path to file>
   ```

2. Open the created configuration file for editing.

3. Add the following section to the created file:

   ```
   [ExcludedFromScanScope.item_<item number>]
   Path=/var/opt/kaspersky/klms
   ```

4. Repeat the section specified above for all mail agents integrated with Kaspersky Anti-Virus for Linux Mail Server.

5. To exclude the temporary directory of filters and services of Kaspersky Anti-Virus for Linux Mail Server from scanning, add the following section to the created file:

   ```
   [ExcludedFromScanScope.item_<item number>]
   ```

```
Path=/tmp/klmstmp
```

6. Save the changes in the configuration file.

7. Import settings from the configuration file to the File Threat Protection task by using the following command:

```
kesl-control --set-settings 1 --file <full path to file>
```

Appendix 5. Application settings in the Web Console policy

This section describes the policy settings in the Web Console on **the Application Settings** tab.

Host Threat Protection

File Threat Protection

for Windows, macOS, and Linux

The File Threat Protection component lets you prevent infection of a computer file system. By default, the File Threat Protection component resides permanently in the computer's RAM and scans all files that are opened, saved, or run, in real time. This component scans files on all computer drives, including connected drives. The component provides computer protection with the help of anti-virus databases, the Kaspersky Security Network cloud service, and heuristic analysis.

The component scans the files accessed by a user or application. If a malicious file is detected, Kaspersky Endpoint Security blocks the file operation. The application then disinfects or deletes the malicious file, depending on the settings of the File Threat Protection component.

When attempting to access a file whose contents reside in OneDrive cloud storage, Kaspersky Endpoint Security downloads and scans the file contents.

`Linux` For Linux devices, the component is affected by the mode of blocking access to files during scans, which you can select in general application settings. By default, access to the file is blocked for the duration of the scan.

File Anti-Virus settings

Settings	OS	Description
Scan exclusions	`Windows` `macOS` `Linux`	A *scan exclusion* is a set of conditions that must be fulfilled so that Kaspersky Endpoint Security will not scan a particular object for viruses and other threats. Scan exclusions let you work with legitimate applications that intruders can use to compromise the computer or user data. Such applications do not necessarily have a malicious purpose, but can be exploited by hackers. For detailed information about legitimate applications that intruders can use to compromise the computer or user data, please visit the Kaspersky Encyclopedia website. Kaspersky Endpoint Security supports environment variables and the `*` and `?` characters when entering a mask.

Settings	OS	Description
Action on threat detection	`Windows` `macOS` `Linux`	**Disinfect, delete if disinfection fails**. If this option is selected, the application automatically attempts to disinfect infected file that is detected. If disinfection fails, the application deletes the file. **Disinfect, block if disinfection fails (depends on OS)**. `Windows` `Linux` If this option is selected, the application automatically attempts to disinfect infected file that is detected. If disinfection fails, the application blocks this file. **Block or prompt for action (depends on OS)**. `Windows` `Linux` If this option is selected, the application automatically blocks the infected file without attempting to disinfect or delete it. `macOS` Kaspersky Endpoint Security displays a notification window with information about the type of malicious object that has infected the file and prompts the user to choose the action to be taken by Kaspersky Endpoint Security. The available actions may vary depending on the status of the object. Before disinfecting or deleting an infected file, the application creates a backup copy of the file in case it needs to be restored later or disinfection becomes possible.
Protection scope	`Windows` `macOS` `Linux`	Contains objects that are scanned by the File Threat Protection component. A scan object may be a hard drive, removable drive, network drive, folder, file, or multiple files defined by a mask. By default, the File Threat Protection component scans files that are started on any hard drives, removable drives, or network drives. The protection scope for these objects cannot be changed or deleted. You can only exclude an object (such as removable drives) from scans. `Linux` For Linux devices, you can modify or remove scan scopes using the File Threat Protection component. Specify at least one protection scope for the component to work.
File types	`macOS`	**Scan all files**. If this setting is enabled, Kaspersky Endpoint Security checks all files without exception (all formats and extensions). **Scan applications and documents by content**. If this setting is enabled, the application scans infectable files only. Before scanning a file for malicious code, the internal header of the file is analyzed to determine the format of the file (for example, .txt, .doc, or .exe). The scan also looks for files with particular file extensions. **Scan applications and documents by extension**. If this setting is enabled, the application scans infectable files only. The file format is then determined based on the file's extension.
Scan optimization	`Windows` `macOS`	Under **Scan optimization**, you can configure Kaspersky Endpoint Security for greater performance while scanning files. • `Windows` `macOS` **Scan only new and modified files**. Scans only new files and those files that have been modified since the last time they were scanned. This helps reduce the duration of a scan. This mode applies both to simple and to compound files. • `Windows` **Stop container if disinfection fails**. The application may not have sufficient read and write rights for the detected object. In that case, disinfecting or deleting the detected object is impossible. If this check box is selected, the application blocks the detected object and stops the container. If this check box is cleared, the application only blocks the detected object. • `macOS` **Skip scanning of read-only system volume**. If the check box is selected, the application does not scan the read-only system volume. This significantly reduces scan time. • `Windows` **Do not scan file operations executed in Windows containers**. If this check box is selected, the application scans the container only when the container is started. If the check box is cleared, the application scans the container continuously in real time.
Scan of compound files	`Windows` `macOS` `Linux`	A common technique of concealing viruses and other malware is to implant them in compound files, such as archives or databases. To detect viruses and other threats concealed in this way, the compound file must be unpacked, which can slow down the scan. You can limit the types of compound files to be scanned and thereby speed up scanning. • **Archives**. This includes the scanning of ZIP, GZIP, BZIP, RAR, TAR, ARJ, CAB, LHA, JAR, ICE and other types of archives. The application identifies archives not just by extension, but also by format. When scanning archives, the application performs recursive unpacking. This makes it possible to detect threats in nested archives (archive inside an archive). • **Distribution packages and self-extracting archives**. Scanning installation packages of third-party applications and self-extracting archives. Self-extracting archives are archives that contain an executable extraction module. To have self-extracting archives scanned, you need to select the **Scan archives** check box. • `Windows` `macOS` **Office format files and embedded OLE objects**. Scanning Microsoft Office files (for example, DOC, DOCX, XLS, PPT) and OLE objects embedded in files (for example, Excel tables, macros, email attachments). • `Windows` `Linux` **Scan email databases**. Scanning email databases of Microsoft Outlook, Outlook Express, The Bat!, and other mail clients. • `Linux` **Scan email format files**. Scanning email message files in plain text format.

Settings	OS	Description
Allow background unpacking of archives larger than (MB)	`Windows` `macOS`	If the check box is selected, the application provides access to compound files that are larger than the specified value before these files are scanned. In this case, Kaspersky Endpoint Security unpacks and scans compound files in the background. The application provides access to compound files that are smaller than this value only after unpacking and scanning these files. If the check box is not selected, the application provides access to compound files only after unpacking and scanning files of any size.
Do not scan archives larger than (MB)	`Windows` `macOS` `Linux`	If this check box is selected, the application does not scan compound files if their size exceeds the specified value. If this check box is cleared, the application scans compound files of all sizes. The application scans large files that are extracted from archives regardless of whether the check box is selected or not.
Skip file that is scanned for longer than (sec)	`Linux`	If the check box is selected, the application stops scanning compound files after the specified time elapses. If the value is set to `0`, the scan time is unlimited.
Background Scan	`Windows`	*Background Scan* is a scan mode of Kaspersky Endpoint Security that does not display notifications for the user. Background Scan requires fewer computer resources than other types of scans (such as a full scan). In this mode, Kaspersky Endpoint Security scans startup objects, the boot sector, system memory, and the system partition.
Scan from Context Menu	`Windows`	Kaspersky Endpoint Security lets you run a scan of individual files for viruses and other malware from the context menu. When performing a scan from the context menu, Kaspersky Endpoint Security does not scan files whose contents are located in OneDrive cloud storage.

BadUSB Attack Prevention

for Windows and Linux

Some viruses modify the firmware of USB devices to trick the operating system into detecting the USB device as a keyboard. As a result, the virus may execute commands under your user account to download malware, for example.

The BadUSB Attack Prevention component prevents infected USB devices emulating a keyboard from connecting to the computer.

When a USB device is connected to a computer and identified as a keyboard by the operating system, the application prompts the user to enter a numerical code generated by the application from this keyboard or by using On-Screen Keyboard if available (see the figure below). This procedure is known as keyboard authorization.

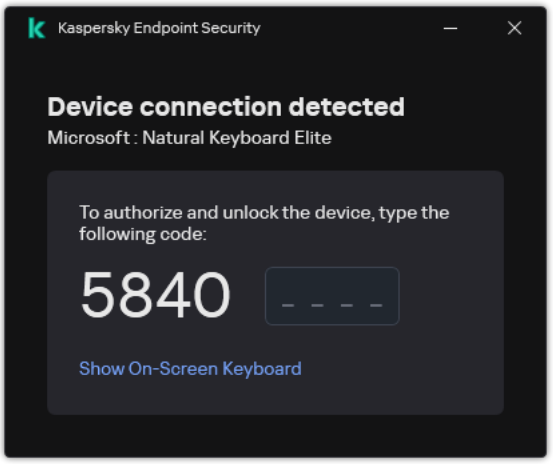
If the code has been entered correctly, the application saves the identification parameters—VID/PID of the keyboard and the number of the port to which it has been connected—in the list of authorized keyboards. Keyboard authorization does not need to be repeated when the keyboard is reconnected or after the operating system is restarted.

When the authorized keyboard is connected to a different USB port of the computer, the application shows a prompt for re-authorization of this keyboard.

If the numeric code is entered incorrectly, the application generates a new code. You can configure the number of attempts for entering the numerical code. If the numerical code is entered incorrectly several times or the keyboard authorization window is closed (see figure below), the application blocks input from this keyboard. When the USB device blocking time elapses or the operating system is restarted, the application prompts the user to perform keyboard authorization again.

The application allows use of an authorized keyboard and blocks a keyboard that has not been authorized.

The BadUSB Attack Prevention component is not installed by default. If you need the BadUSB Attack Prevention component, you can add the component in the properties of the installation package before installing the application or change the available application components after installing the application.



Keyboard authorization

BadUSB Attack Prevention settings

Settings	OS	Description
Maximum number of USB device authorization attempts	`Windows` `Linux`	Automatically block the USB device if the authorization code is entered incorrectly the specified number of times. Valid values are 1 to 10. For example, if you allow five attempts to enter the authorization code, the application blocks the USB device after the fifth unsuccessful attempt. Kaspersky Endpoint Security displays the time for which the USB device is blocked. After this time elapses, you will once again have five attempts to enter the authorization code.
Timeout when reaching the maximum number of attempts (min)	`Windows` `Linux`	USB device block duration after the specified number of unsuccessful attempts to enter the authorization code. Possible values: 1 to 180 (minutes)
Prohibit use of On-Screen Keyboard for authorization of USB devices	`Windows` `Linux`	If the toggle button is switched on, the application blocks use of On-Screen Keyboard for authorization of a USB device from which an authorization code cannot be entered.
Prohibit use of a barcode for authorization of USB devices	`Windows` `Linux`	If the toggle switch is enabled, Kaspersky Endpoint Security does not display a barcode in the notification for barcode scanner authentication.

Removable drives scan

for Windows, macOS, and Linux

Kaspersky Endpoint Security scans all files that you run or copy, even if the file is located on a removable drive (the File Threat Protection component). To prevent the spread of viruses and other malware, you can configure automatic scans of removable drives when they are connected to the computer. Kaspersky Endpoint Security automatically attempts to disinfect all infected files that are detected. If disinfection fails, Kaspersky Endpoint Security deletes the files. The component keeps a computer secure by running scans that implement machine learning, heuristic analysis (high level), and signature analysis. Kaspersky Endpoint Security also uses iSwift and iChecker scan optimization technologies. The technologies are always on and cannot be disabled.

Removable Drives Scan settings

Settings	OS	Description
Scan type	`Windows` `Linux`	**Quick Scan**. If this option is selected, after a removable drive is connected, Kaspersky Endpoint Security scans only the files of specific formats that are most vulnerable to infection, and does not unpack compound objects. **Detailed Scan**. If this option is selected, Kaspersky Endpoint Security scans all files when a removable drive is connected, including files nested in compound objects, archives, distribution packages, and files in Office formats. Kaspersky Endpoint Security does not scan files in mail formats or password-protected archives.
Prevent users from stopping the scan	`Windows`	If this check box is selected, then for the removable drives scan task in the local interface of Kaspersky Endpoint Security, the **Stop** button in the **Tasks** section and the **Stop** button in the removable drives scan window are not available.
Block access to the removable drive while scanning	`Linux`	If the check box is selected, Kaspersky Endpoint Security blocks access to files on the connected drive while performing a scan.
Hide scan progress bar	`Windows`	If this check box is selected, Kaspersky Endpoint Security hides the Removable Drives Scan progress bar. The application performs the scan in the background. If the check box is cleared, Kaspersky Endpoint Security displays the progress of removable drives scan in a separate window and in the **Tasks** section.
Do not scan removable drives larger than	`Windows`	If this check box is selected, Kaspersky Endpoint Security performs the selected action on removable drives with a size not more than the specified maximum drive size. If the size of the removable drive exceeds the configured value, Kaspersky Endpoint Security skips the scan. If the check box is cleared, Kaspersky Endpoint Security performs the selected action on removable drives of any size.

Behavior Detection

for Windows, macOS, and Linux

The Behavior Detection component receives data on the actions of applications on your computer and provides this information to other protection components, to improve their performance. The Behavior Detection component utilizes Behavior Stream Signatures (BSS) for applications. If application activity matches a behavior stream signature, Kaspersky Endpoint Security performs the selected responsive action. The Kaspersky Endpoint Security functionality is based on behavior stream signatures and provides proactive defense for the computer.

The Behavior Detection component additionally monitors network ports for application processes that may threaten the security of the computer. The application gets information about such processes with anti-virus databases.

For optimal performance of the Behavior Detection component, we recommend enabling the Web Threat Protection component.

Behavior Detection settings

Settings	OS	Description
Trusted applications	`Windows` `macOS` `Linux`	The *list of trusted applications* is a list of applications whose file and network activity (including malicious activity) and access to the system registry are not monitored by Kaspersky Endpoint Security. By default, Kaspersky Endpoint Security monitors objects that are opened, executed, or saved by any application process, and controls the activity of all applications and network traffic that is generated by them. After an application is added to the list of trusted applications, Kaspersky Endpoint Security stops monitoring the application's activity. Kaspersky Endpoint Security supports environment variables and the `*` and `?` characters when entering a mask.
Scan exclusions	`Windows` `macOS` `Linux`	A *scan exclusion* is a set of conditions that must be fulfilled so that Kaspersky Endpoint Security will not scan a particular object for viruses and other threats. Scan exclusions let you work with legitimate applications that intruders can use to compromise the computer or user data. Such applications do not necessarily have a malicious purpose, but can be exploited by hackers. For detailed information about legitimate applications that intruders can use to compromise the computer or user data, please visit the Kaspersky Encyclopedia website. Kaspersky Endpoint Security supports environment variables and the `*` and `?` characters when entering a mask.

Settings	OS	Description
Action on threat detection	`Windows` `macOS` `Linux`	**Delete file or block (depends on OS)**. `Windows` `macOS` If this option is selected, when malicious activity is detected, Kaspersky Endpoint Security deletes the executable file of the malicious application and creates a copy of the file in Backup. `Linux` If malicious activity is detected, Kaspersky Endpoint Security blocks the application that is carrying out the malicious activity and logs information about the detected malicious activity. **Inform**. `Windows` `Linux` If this option is selected, when malicious activity of an application is detected, Kaspersky Endpoint Security does not terminate this application but adds information about the malicious activity of this application to the list of active threats. `macOS` If malicious activity is detected, Kaspersky Endpoint Security prompts the user to select the action to be performed when malicious activity is detected. The available actions may vary depending on the status of the object. **Block**. If this option is selected, on detecting malicious activity Kaspersky Endpoint Security terminates this application.

Anti-Cryptor

for Windows, macOS, and Linux

`Windows` For Windows devices, the component monitors operations only for files that are at the NTFS file system level and are not encrypted by the EFS system.

`Linux` For Linux devices, the component analyzes files in local directories with network access over SMB/NFS.

`macOS` For macOS devices, the component monitors SMB shares.

The Anti-Cryptor component protects from remote encryption by analyzing activity in network shares. If this activity matches a behavior stream signature that is typical for external encryption, Kaspersky Endpoint Security performs the selected action.

`Linux` Before enabling the component on Linux devices, make sure to read and understand the information about Anti-Cryptor.

Anti-Cryptor settings

Settings	OS	Description
Scan exclusions	`Windows` `Linux`	A *scan exclusion* is a set of conditions that must be fulfilled so that Kaspersky Endpoint Security will not scan a particular object for viruses and other threats. Scan exclusions let you work with legitimate applications that intruders can use to compromise the computer or user data. Such applications do not necessarily have a malicious purpose, but can be exploited by hackers. For detailed information about legitimate applications that intruders can use to compromise the computer or user data, please visit the Kaspersky Encyclopedia website. Kaspersky Endpoint Security supports environment variables and the `*` and `?` characters when entering a mask.
Exclusions by name or IP address	`Windows`	**Anti-Cryptor exclusions**. List of computers from which attempts to encrypt shared folders will not be monitored. **Exclusions by mask**. Protection scope exclusions. Excluding a folder from the protection scope can reduce the amount of false positives if your organization uses data encryption when exchanging files using shared folders. Use **masks**. • The `*` (asterisk) character, which takes the place of any set of characters, except the `\` and `/` characters (delimiters of the names of files and folders in paths to files and folders). For example, the mask `C:\*\*.txt` will include all paths to files with the TXT extension located in folders on the C: drive, but not in subfolders. • Two consecutive `*` characters take the place of any set of characters (including an empty set) in the file or folder name, including the `\` and `/` characters (delimiters of the names of files and folders in paths to files and folders). For example, the mask `C:\Folder\**\*.txt` will include all paths to files with the TXT extension located in folders nested within the `Folder`, except the `Folder` itself. The mask must include at least one nesting level. The mask `C:\**\*.txt` is not a valid mask. • The `?` (question mark) character, which takes the place of any single character, except the `\` and `/` characters (delimiters of the names of files and folders in paths to files and folders). For example, the mask `C:\Folder\???.txt` will include paths to all files residing in the folder named `Folder` that have the TXT extension and a name consisting of three characters.
Action on threat detection	`Windows` `macOS` `Linux`	**Inform**. If this option is selected, on detecting an attempt to modify files in shared folders, Kaspersky Endpoint Security adds information about this attempt to the list of active threats, and adds an entry to the report. **Block connection for (min)**. `Windows` If this option is selected, when Kaspersky Endpoint Security detects an attempt to modify files in shared folders, it blocks access to file modification for the session that initiated the malicious activity and creates backup copies of the modified files. `macOS` `Linux` When Kaspersky Endpoint Security detects an attempt to modify files in shared folders, it blocks network traffic from the device that is engaged in malicious activity. The application creates an *Encryption detected* event that contains information about the compromised device.
Protection scope	`Windows` `macOS` `Linux`	The *protection scope* is a list of paths to shared folders in which Kaspersky Endpoint Security monitors file activity. Kaspersky Endpoint Security supports environment variables and the `*` and `?` characters when entering a mask. By default, the application automatically identifies shared folders and monitors file activity in all folders. `macOS` Kaspersky Endpoint Security protects all shared folders for macOS device. It is not possible to change the protection scope. `Windows` `Linux` You can select the protection scope: **All shared network folders on the protected device**. The application will monitor file activity in all shared folders. **Only specified shared folders**. The application will monitor encryption attempts only in the specified shared folders.

Exploit Prevention

for Windows, macOS, and Linux

The Exploit Prevention component detects program code that takes advantage of vulnerabilities on a computer to exploit administrator privileges or to perform malicious activities. For example, exploits can utilize a buffer overflow attack. To do so, the exploit sends a large amount of data to a vulnerable application. When processing this data, the vulnerable application executes malicious code. As a result of this attack, the exploit can start an unauthorized installation of malware. When there is an attempt to run an executable file from a vulnerable application that was not performed by the user, Kaspersky Endpoint Security blocks this file from running or notifies the user.

The Exploit Prevention component additionally monitors network ports for application processes that may threaten the security of the computer. The application gets information about such processes with anti-virus databases.

For the Exploit Prevention component to work, the Behavior Detection component must be enabled. For optimal performance of the Exploit Prevention component, we recommend also enabling the Web Threat Protection component.

`Linux` For Linux devices, the updatable kernel module for system event interception must be enabled as well.

Exploit Prevention settings

Settings	OS	Description
Action on threat detection	`Windows` `macOS` `Linux`	**Inform**. If this item is selected, when Kaspersky Endpoint Security detects an exploit, it logs an entry containing information about the exploit and adds information about this exploit to the list of active threats. **Block**. If this item is selected, on detecting an exploit, Kaspersky Endpoint Security blocks the operations of this exploit and makes a log entry with information about this exploit.
System process memory protection	`Windows`	If this toggle button is switched on, Kaspersky Endpoint Security blocks external processes that attempt to access system process memory.

Communication & Web Protection

Mail Threat Protection

for Windows, macOS, and Linux

The Mail Threat Protection component scans the attachments of incoming and outgoing email messages for viruses and other threatening applications. The component provides computer protection with the help of anti-virus databases, the Kaspersky Security Network cloud service, and heuristic analysis.

Mail Threat Protection can scan incoming as well as outgoing messages. The application supports the POP3, SMTP, IMAP, NNTP protocols.

`Linux` The application for Linux devices does not support the NNTP protocol.

Supported mail clients

- `Windows`, `macOS` Microsoft Office Outlook
- `Windows`, `macOS` Mozilla Thunderbird
- `Windows` Windows Mail
- `Windows`, `Linux` MyOffice Mail
- `Windows`, `Linux` R7-Office Organizer
- `macOS` Apple Mail

- macOS Canary Mail
- macOS Spark
- macOS Mimestream
- macOS Airmail
- macOS Post Box
- macOS Boxy Suite 2
- macOS Twobird
- macOS Shift
- macOS Clean Email
- macOS eM Client
- macOS Superhuman
- macOS Polymail
- macOS HEY
- macOS Mail+ for Gmail
- macOS Spike mail

Windows Mail Threat Protection may not always be able to gain protocol-level access to messages (for example, when using the Microsoft Exchange solution). For this reason, Mail Anti-Virus includes an extension Kaspersky ASAP Outlook Plugin for Microsoft Office Outlook. The extension allows scanning messages at the level of the mail client. Kaspersky ASAP Outlook Plugin supports operations with Outlook 2010, 2013, 2016, 2019, and 2021.

The Mail Threat Protection component does not scan messages if the mail client is open in a browser.

When a malicious file is detected in an attachment, Kaspersky Endpoint Security adds information about the performed action to the message subject, for example, *[Message has been processed] <message subject>*.

Mail Anti-Virus settings

Settings	OS	Description
Scan exclusions	Windows macOS Linux	A *scan exclusion* is a set of conditions that must be fulfilled so that Kaspersky Endpoint Security will not scan a particular object for viruses and other threats. Scan exclusions let you work with legitimate applications that intruders can use to compromise the computer or user data. Such applications do not necessarily have a malicious purpose, but can be exploited by hackers. For detailed information about legitimate applications that intruders can use to compromise the computer or user data, please visit the Kaspersky Encyclopedia website. Kaspersky Endpoint Security supports environment variables and the * and ? characters when entering a mask.

Settings	OS	Description
Action on threat detection	`Windows` `macOS` `Linux`	**Disinfect, delete if disinfection fails**. When an infected object is detected in an inbound or outbound message, the application attempts to disinfect the detected object. The message with the safe attachment is then made available to the user. If disinfection fails, the application deletes the infected object. The application adds information about the performed action to the message subject, for example, *[The message has been processed] <message subject>*. `Windows` `Linux` **Disinfect, block if disinfection fails**. When an infected object is detected in an incoming message, the application attempts to disinfect the detected object. The message with the safe attachment is then made available to the user. If disinfection fails, the application adds a warning to the subject of the message. The message with the original attachment is then made available to the user. When an infected object is detected in an outbound message, the application attempts to disinfect the detected object. If the object cannot be disinfected, the application blocks transmission of the message, and the mail client shows an error. **Block**. If an infected object is detected in an incoming message, the application adds a warning to the message subject. The message with the original attachment is then made available to the user. If an infected object is detected in an outgoing message, the application blocks the message, and the mail client displays an error. `Linux` For Linux devices, the Mail Threat Protection component does not attempt to disinfect an infected object in outgoing messages, but immediately blocks the transmission of the message.
Scan POP3, SMTP, NNTP, and IMAP traffic	`Windows`	Scanning by the Mail Threat Protection component of traffic that is transferred via the POP3, SMTP, NNTP, and IMAP protocols.
Connect Microsoft Outlook extension	`Windows`	If the check box is selected, scanning of email messages transmitted via the POP3, SMTP, NNTP, IMAP protocols is enabled on the side of the extension integrated into Microsoft Outlook. The application can scan incoming and outgoing messages from Microsoft Outlook at different stages: • **Scan when receiving**. If this check box is selected, the application uses Mail Threat Protection when receiving messages via Microsoft Outlook. • **Scan when reading**. • **Scan when sending**. If mail is scanned using the extension for Microsoft Outlook, it is recommended to use Cached Exchange Mode. For more detailed information about Cached Exchange Mode and recommendations on its use, refer to the Microsoft Knowledge Base.
Scan attached archives	`Windows` `Linux`	This includes the scanning of ZIP, GZIP, BZIP, RAR, TAR, ARJ, CAB, LHA, JAR, ICE and other types of archives. The application identifies archives not just by extension, but also by format. When scanning archives, the application performs recursive unpacking. This makes it possible to detect threats in nested archives (archive inside an archive).
Scan attached files of Office formats	`Windows` `Linux`	Scans Microsoft Office files (DOC, DOCX, XLS, PPT and other Microsoft extensions). Office format files include OLE objects as well. The application scans office-format attachments smaller than 1 MB regardless of the state of whether this check box is selected or not.
Do not scan archives larger than (MB)	`Windows` `macOS` `Linux`	If this check box is selected, Mail Threat Protection excludes from scanning any attached archives that are larger than the specified limit. If this check box is cleared, Mail Threat Protection scans attached archives of any size.
Skip file that is scanned for longer than (sec)	`Windows` `macOS` `Linux`	If this check box is selected, the scan duration for archives attached to email messages is limited.
Attachment filter	`Windows` `Linux`	The attachment filter determines the action that Mail Threat Protection applies to files attached to email messages. The attachment filter is not applied to outgoing email messages. • **Do not modify attachments**. If this option is selected, Mail Threat Protection does not filter files attached to email messages. • **Rename attachments of selected types**. If this option is selected, Mail Threat Protection replaces the last character of the extension with an underscore character for specified file types (for example, attachment.doc_). Thus, to open the file, the user needs to rename the file. • **Delete attachments of selected types**. If this option is selected, Mail Threat Protection deletes attachments of the specified types from email messages. You can specify the types of attachments to rename or delete from email messages in the list of file masks.

Web Threat Protection

for Windows, macOS, and Linux

The Web Threat Protection component prevents downloads of malicious files from the internet, and also blocks malicious and phishing websites. The component provides computer protection with the help of anti-virus databases, the Kaspersky Security Network cloud service, and heuristic analysis.

The Web Threat Protection component scans inbound HTTP, HTTPS, and FTP traffic, websites, and IP addresses.

`Linux` Web Threat Protection is disabled by default. Enabling Web Anti-Virus may reduce the performance of installed third-party applications and the operating system. For details on configuring the application to enable Web Anti-Virus on Linux devices, see the Technical Support Knowledge Base.

Web Anti-Virus settings

Settings	OS	Description
Trusted web addresses	`Windows` `macOS` `Linux`	List of web addresses that the Web Threat Protection considers trusted. The component does not scan incoming and outgoing traffic from these addresses for threats. The list of trusted addresses can be used, for example, if the Web Threat Protection component interferes with downloading a file from a known website. You can add both the specific address and the address mask of a web page / website to the list of trusted web addresses. Kaspersky Endpoint Security supports the `*` and `?` characters when entering a mask.
Scan exclusions	`Windows`	A *scan exclusion* is a set of conditions that must be fulfilled so that Kaspersky Endpoint Security will not scan a particular object for viruses and other threats. Scan exclusions let you work with legitimate applications that intruders can use to compromise the computer or user data. Such applications do not necessarily have a malicious purpose, but can be exploited by hackers. For detailed information about legitimate applications that intruders can use to compromise the computer or user data, please visit the Kaspersky Encyclopedia website. Kaspersky Endpoint Security supports the `*` and `?` characters when entering a mask.
Action on threat detection	`Windows` `macOS` `Linux`	**Block**. If this option is selected and an infected object is detected in web traffic, the Web Threat Protection component blocks access to the object and displays a message in the browser. **Allow, inform, or prompt for action (depends on OS)**. `Windows` If this option is selected and an infected object is detected in web traffic, Kaspersky Endpoint Security allows this object to be downloaded to the computer, but adds information about the infected object to the list of active threats. `macOS` Kaspersky Endpoint Security displays a notification with information about the type of malware that has infected the web traffic object and prompts the user to choose the action to be taken by Kaspersky Endpoint Security on this object. The available actions may vary depending on the status of the object. `Linux` Kaspersky Endpoint Security informs the user about the detection of an infected object in web traffic. Web Threat Protection allows this object to be downloaded to the device. At that, the application logs the information about the infected object and adds it to the list of active threats.

Network Threat Protection

for Windows, macOS, and Linux

The *Network Threat Protection* component (also called Intrusion Detection System, IDS) monitors inbound network traffic for activity characteristic of network attacks. When the application detects an attempted network attack on a user's computer, it blocks the network connection with the attacking computer. Descriptions of currently known types of network attacks and ways to counteract them are provided in the application databases. The list of network attacks that the Network Threat Protection component detects is updated during database and application module updates.

`Linux` Network Threat Protection is disabled by default. Enabling Network Threat Protection may reduce the performance of installed third-party applications and the operating system. For details on configuring the application to enable Network Threat Protection on Linux devices, see the Technical Support Knowledge Base.

Network Threat Protection settings

Settings	OS	Description
Trusted IP addresses	`Windows` `Linux`	List of IP addresses of trusted devices. The Network Threat Protection component does not block network activity from these addresses. `Windows` You can add an IP address with port or port ranges and protocol specified. `Linux` You can add only an IP address to the list of exclusions. The application also does not log information on network attacks from the IP addresses that are in the list of exclusions.
Action on threat detection	`Windows` `macOS` `Linux`	**Block**. When a threat is detected, Network Threat Protection blocks the attack. **Block attack and attacking device for (min)**. If this option is enabled, the Network Threat Protection component adds the attacking computer to the blocked list. This means that the Network Threat Protection component blocks the network connection with the attacking computer after the first network attack attempt for the specified amount of time. This block automatically protects the user's computer against possible future network attacks from the same address. The minimum time an attacking computer must spend in the block list is one minute. The maximum time is 999 minutes. Kaspersky Endpoint Security clears the block list when the application is restarted and when the Network Threat Protection settings are changed.
Treat port scanning and network flooding as attacks	`Windows`	A *Port Scanning* attack consists of scanning UDP ports, TCP ports, and network services on the computer. This attack allows the attacker to identify the degree of vulnerability of the computer before conducting more dangerous types of network attacks. Port Scanning also enables the attacker to identify the operating system on the computer and select the appropriate network attacks for this operating system. *Network Flooding* is an attack on network resources of an organization (such as web servers). This attack consists of sending a large number of requests to overload the bandwidth of network resources. When this happens, users are unable to access the network resources of the organization. If this check box is selected, Kaspersky Endpoint Security monitors network traffic to detect these attacks. If an attack is detected, the application notifies the user and sends the corresponding event to Kaspersky Security Center. The application provides information about the attacking computer, which is required for timely threat response actions. You can disable detection of these types of attacks in case some of your allowed applications perform operations that are typical for these types of attacks. This will help avoid false alarms.
MAC Spoofing Protection	`Windows`	A *MAC spoofing attack* consists of changing the MAC address of a network device (network card). As a result, an attacker can redirect data sent to a device to another device and gain access to this data. Kaspersky Endpoint Security lets you block MAC Spoofing attacks and receive notifications about the attacks.

Firewall

for Windows, macOS, and Linux

The Firewall component blocks unauthorized connections to a computer while working on the internet or a local network. Firewall also controls the network activity of applications on the computer. This allows you to protect your corporate LAN from identity theft and other attacks. The component provides computer protection with the help of anti-virus databases, the Kaspersky Security Network cloud service, and predefined *network rules*.

`Linux` For Linux devices, the application uses Firewall Management component. The component manages settings and rules of the operating system firewall.

Firewall settings

Settings	OS	Description
Network packet rules	`Windows` `macOS` `Linux`	Table with a list of network packet rules. Network packet rules serve to impose restrictions on network packets, regardless of the application. Such rules restrict inbound and outbound network traffic through specific ports of the selected data protocol. The table lists pre-configured network packet rules that are recommended by Kaspersky for optimum protection of the network traffic of computers that run on Microsoft Windows and Linux operating systems. Firewall sets the execution priority of each network packet rule. Firewall processes network packet rules in the order in which they appear in the list of network packet rules, from top to bottom. Firewall locates the topmost network packet rule that is suitable for the network connection and applies it by either allowing or blocking network activity. Firewall then ignores all subsequent network packet rules for the specific network connection. Network packet rules have a higher priority than network rules for applications.
Available networks	`Windows` `macOS` `Linux`	This table contains information about network connections that Firewall detects on the computer. The **Public network** type is assigned to the internet by default. You cannot change the type of the Internet. The following network connection types are available: • **Public network**. The network is not protected by antivirus applications, firewalls, or filters (such as Wi-Fi in a cafe). When the user operates a computer that is connected to such a network, the firewall blocks access to files and printers of this computer. External users are also unable to access data through shared folders and remote access to the desktop of this computer. Firewall filters the network activity of each application according to the network rules that are set for it. • **Local network**. Network for users with restricted access to files and printers on this computer (such as for a corporate LAN or home network). • **Trusted network**. Safe network in which a computer is not exposed to attacks or unauthorized data access attempts. The firewall permits any network activity within networks with this status.
Always add allowing rules for Network Agent ports	`macOS` `Linux`	This check box enables or disables the automatic adding of allowing rules for Network Agent ports.
Application rights and protected resources	`Windows`	**Application**. Table of applications that are controlled by the Firewall component. Applications are assigned to trust groups. A trust group defines the rights used by Kaspersky Endpoint Security when controlling network activity of applications. You can select an application from a single list of all applications installed on computers under the influence of a policy and add the application to a trust group. **Network rules**. Table of network rules for applications that are part of a trust group. In accordance with these rules, Firewall regulates the network activity of applications. The table displays the predefined network rules that are recommended by Kaspersky experts. These network rules have been added to optimally protect the network traffic of computers running Windows operating systems. It is not possible to delete the predefined network rules.

Security Controls

Device Control

for Windows, macOS, and Linux

Device Control manages user access to devices that are installed on or connected to a computer (for example, hard drives, cameras, or Wi-Fi modules). This lets you protect the computer from infection when such devices are connected, and prevent data loss or data leaks.

Device Control allows or blocks access to devices on the following levels:

- **Device type**. For example, printers, removable drives, and CD/DVD drives.
- **Connection bus**. A *connection bus* is an interface used for connecting devices to a device (for example, USB or FireWire). If the **Depends on bus** mode is selected for the device type, the application controls access to the device in accordance with the mode for the bus to which the device connects (for example, USB).
- **Trusted devices**. *Trusted devices* are devices to which specified users or user groups have full access at all times.

  You can add trusted devices based on the following data:

  - `Windows` `macOS` **Model**. Each device has a vendor ID (VID) and a product ID (PID). You can view the IDs in the device properties by using operating system tools. Template for entering the VID and PID: `VID_1234&PID_5678`. Adding devices by model is convenient if you use devices of a certain model in your organization. This way, you can add all devices of this model.
  - **ID**. Each device has a unique identifier (Hardware ID, or HWID). You can view the ID in the device properties by using operating system tools. Example of a device ID: `SCSI\CDROM&VEN_NECVMWAR&PROD_VMWARE_SATA_CD00\5&354AE4D7&0&000000`. Adding devices by ID is convenient if you want to add several specific devices.
  - `Windows` `macOS` **Devices by model mask**. If you are using multiple devices with similar VIDs or PIDs (for example, devices from the same manufacturer), you can add devices to the trusted list by using masks. The `*` character replaces any set of characters. The `?` character replaces any single character. For example, `VID_05AC&PID_*`.
  - **Devices by ID mask**. If you are using multiple devices with similar IDs, you can add devices to the trusted list by using masks. The `*` character replaces any set of characters. The `?` character replaces any single character. For example, `WDC_C*`.

`Linux` For Linux devices, the action performed by the component depends on the file operations interception mode selected in the General settings section, the Detection settings subsection.

Device Control settings

Settings	OS	Description
Trusted devices	`Windows` `macOS` `Linux`	List of trusted devices and users who are granted access to these devices. Kaspersky Endpoint Security supports the `*` and `?` characters when entering a mask.
Message templates	`Windows` `Linux`	**Message to user**. Template of the message that appears when a user attempts to access a blocked device. This message also appears when a user attempts to perform an operation on the device contents that was blocked for this user. **Message to administrator**. A template of the message that is sent to the LAN administrator when the user believes that access to the device is blocked or an operation with device content is forbidden by mistake.

Settings	OS	Description
Allow requests for temporary access	`Windows` `Linux`	If the check box is selected, the **Request access** button is available through the local interface of Kaspersky Endpoint Security. Using this button, the user can request temporary access to a blocked device.
Operating mode	`Linux`	Kaspersky Endpoint Security performs the selected action when an attempt is made to gain access to the device to which access is blocked in accordance with Device Control settings. • **Inform**. If you select this option, Kaspersky Endpoint Security tests the selected access mode and generates an event for the detected attempt to access a device. • **Block**. If you select this option, Kaspersky Endpoint Security applies the access mode set for the device or bus.
Devices and Wi-Fi networks	`Windows` `macOS` `Linux`	A list of all available device types according to the Device Control component's classification, including their respective access statuses.
Connection buses	`Windows` `Linux`	A list of all available connection buses according to the Device Control component's classification, including their respective access statuses. Kaspersky Endpoint Security allows or denies access to devices depending on the type of connection bus if **Depends on connection bus** mode is selected.
Anti-Bridging	`Windows`	Anti-Bridging inhibits the creation of network bridges by preventing the simultaneous establishment of multiple network connections for a computer. This lets you protect a corporate network from attacks over unprotected, unauthorized networks. Anti-Bridging blocks the establishment of multiple connections according to the priorities of devices. The higher a device is on the list, the higher its priority. If an active connection and a new connection are both of the same type (for example, Wi-Fi), Kaspersky Endpoint Security blocks the active connection and allows establishment of the new connection. If an active connection and a new connection are of different types (for example, a network adapter and Wi-Fi), Kaspersky Endpoint Security blocks the connection with the lower priority and allows the connection with the higher priority. Anti-Bridging supports operation with the following types of devices: network adapter, Wi-Fi, and modem.

Web Control

for Windows, macOS, and Linux

Web Control manages user access to web resources. This allows you to reduce traffic consumption and reduce inappropriate use of work time. If a user tries to open a website to which access is restricted by Web Control, Kaspersky Endpoint Security blocks access or displays a warning.

Website access rules

Web Control manages users' access to websites by using *access rules*. You can configure access to websites for the following scan areas:

- **Website category**. Websites are categorized according to the Kaspersky Security Network cloud service, heuristic analysis, and the database of known websites (included in application databases). You can restrict user access to certain categories, for example, the *Social networks* category or other categories.
- `Windows` **Data type**. You can restrict user access to data on a website, and hide images, for example. Kaspersky Endpoint Security determines the data type based on the file format and not based on its extension.

  Kaspersky Endpoint Security does not scan files within archives. For example, if image files were placed in an archive, Kaspersky Endpoint Security identifies the *Archives* data type and not *Graphic files*.

- **Individual address**. You can enter a web address or use masks.

You can simultaneously use multiple methods for regulating access to websites. For example, you can restrict access to the *Office files* data type just for the *Web-based email* website category.

Web Control also lets you configure the following advanced settings for website access rules:

- **User or group to which the Application Control rule applies**.

  For example, you can restrict Internet access through a browser for all users of the company except the IT department.

- **Device Access schedule**.

  For example, you can restrict Internet access through a browser during working hours only.

Web Control settings

Settings	OS	Description
Message templates	`Windows` `Linux`	**Warning**. The input field contains the template for the message that appears when a rule is triggered that warns about an attempt to access an undesirable web resource. **Message about blocking**. The entry field contains the template of the message that appears if a rule that blocks access to a web resource is triggered. **Message to administrator**. Template of the message to be sent to the administrator of the corporate local network. Used if the user believes that access to the web resource was blocked by mistake. Special variables are provided for managing the message templates (for example, `%USER_NAME%`). Variables allow a single message template to be used for different computers.
Rules list	`Windows` `macOS` `Linux`	List containing web resource access rules. Each rule has a priority. The higher the rule is on the list, the higher its priority. If a website has been added to multiple rules, Web Control regulates access to the website based on the rule with the highest priority.
Default action	`Windows` `macOS` `Linux`	The access rule for web resources that are not covered by any other rule. The following options are available: • **Allow all except the rules list**. • **Block all except the rules list**.
Terminate active user browser sessions after the rule is applied	`Windows`	If the check box is selected, Web Control terminates the connection to blocked web resources immediately after the policy is applied. The browser immediately stops downloading data from the web page. When you refresh the web page or go to another prohibited web page, the application displays a warning. Web Control allows immediately disconnecting web resources only in web browsers. For other applications, Web Control only restricts new connections. If the check box is cleared, Web Control restricts only new connections to prohibited web resources. Web Control does not terminate active connections.
Web session monitoring	`Windows`	Kaspersky Endpoint Security logs data on visits to all websites, including allowed websites. Kaspersky Endpoint Security sends events to Kaspersky Security Center, the Windows Event Log and a report. To monitor user internet activity, you need to configure the settings for saving events. Browsers that support the monitoring function: Microsoft Edge, Microsoft Internet Explorer, Google Chrome, Yandex Browser, Mozilla Firefox. User activity monitoring does not work in other browsers. Monitoring user Internet activity may require more computer resources when decrypting HTTPS traffic.

Application Control

for Windows and Linux

Application Control manages the startup of applications on users' computers. This allows you to implement a corporate security policy when using applications. Application Control also reduces the risk of computer infection by restricting access to applications.

The Application Control component uses rules to regulate the launch of applications on protected devices. A rule contains conditions and actions that the Application Control component performs when a rule triggers. For example, the category which an application belongs to. An *application category* is a group of applications that have something in common. For example, a category that includes executable files of installed applications or a category that includes the standard set of applications used in the organization. Each category can only be used in one rule.

The administrator can create many rules. One application may match the criteria of multiple rules. The priority of a block rule is higher than the priority of an allow rule. Kaspersky Endpoint Security checks if an application matches a rule each time it is started. Kaspersky Endpoint Security sequentially matches the application against all Application Control rules.

Application Control settings

Settings	OS	Description
Message templates	`Windows`	**Message to user**. Template of the message that is displayed when an Application Control rule that blocks an application from starting is triggered. **Message to administrator**. Template of the message that a user can send to the corporate LAN administrator if the user believes that an application was blocked by mistake.
Operating mode	`Windows` `Linux`	You can choose one of the following options: • **Allow all except the rules list**. If this option is selected, Application Control allows all users to start any application except applications prohibited by Application Control block rules. • **Block all except the rules list**. If this option is selected, Application Control blocks all users from starting any application except applications permitted by Application Control allow rules.
Action on starting applications	`Windows` `Linux`	• **Apply rules**. Kaspersky Endpoint Security manages the startup of applications according to the selected mode. • **Inform**. Kaspersky Endpoint Security informs about the attempt to run an application.
Add policy rules to local rules	`Linux`	If this item is selected, the application applies rules configured in the policy together with local rules configured on the protected device.
Use strict digital signature verification	`Windows`	You can select a certificate as a triggering condition for an Application Control rule. If this check box is selected, Kaspersky Endpoint Security applies rules to applications signed with certificates only from the trusted system certificate store. Applications signed with such a certificate are also considered trusted by the protection components, for example, the *Malware Scan* task. However, if you specify a certificate from a different store in an Application Control rule, Kaspersky Endpoint Security does not apply such a rule. If the check box is cleared, Kaspersky Endpoint Security applies rules to applications signed by a certificate from the Windows Trusted Root Certificate Store. Such applications are not part of the trusted zone. Protection components monitor the activity of such applications.
Monitor loading of DLL modules	`Windows`	If the check box is selected, Kaspersky Endpoint Security controls the loading of DLL modules when users attempt to start applications. Information about the DLL module and the application that loaded this DLL module is logged in the report. When enabling control over the loading of DLL modules and drivers, make sure that one of the following rules is enabled in the Application Control settings: the default **Golden Image** rule or another rule that contains the "**Golden Image\Trusted Certificates**" KL category and ensures that trusted DLL modules and drivers are loaded before Kaspersky Endpoint Security is started. Enabling control of the loading of DLL modules and drivers when the **Golden Image** rule is disabled may cause instability in the operating system. Kaspersky Endpoint Security monitors only the DLL modules and drivers that have been loaded since the check box was selected. After selecting the check box, it is recommended to restart the computer to ensure that the application monitors all DLL modules and drivers, including those loaded before Kaspersky Endpoint Security starts.

Settings	OS	Description
Rules	`Windows` `Linux`	Application Control rules that Kaspersky Endpoint Security uses to control application launch on protected devices. For each Application Control mode, you can add up to five rules.
Trusted Updaters	`Windows`	If this check box is selected, Kaspersky Endpoint Security considers the applications included in the rule as Trusted Updaters. Kaspersky Endpoint Security allows creating and running new executable files to such applications.

System Integrity Monitoring

for Windows and Linux

This component is available if Kaspersky Endpoint Security is installed on a computer that runs on Windows for servers. This component is unavailable if Kaspersky Endpoint Security is installed on a computer that runs on Windows for workstations.

The System Integrity Monitoring component monitors changes in the operating system that may indicate computer security breaches. When such changes are detected, Kaspersky Endpoint Security generates corresponding events and alerts the administrator. System Integrity Monitoring can operate in real-time mode and can also perform system integrity checks on demand.

Kaspersky Endpoint Security scans objects in the specified scopes, in the order they appear in the list of scopes. If necessary, place the subdirectory higher in the list than its parent directory, to configure security settings for a subdirectory that are different from the security settings of the parent directory.

`Linux` The technical limitations of the Linux operating system prevent the application from identifying the user or process that made the changes to the file.

System Integrity Monitoring settings

Settings	OS	Description
Real-Time System Integrity Monitoring	`Windows`	In real-time mode, System Integrity Monitoring tracks changes in objects that you included in the component's scope (the *monitoring scope*). System Integrity Monitoring also allows blocking unauthorized access to such objects in real time.
Action on system changes detection	`Windows`	**Apply rules**. In this mode, System Integrity Monitoring blocks actions with files and registry keys from the monitoring scope, and generates a corresponding event. **Test rules (Inform)**. In this mode, System Integrity Monitoring allows actions with files and registry keys from the monitoring scope, and generates a corresponding event.
Monitor files and the registry	`Windows`	System Integrity Monitoring monitors changes to files, folders, and registry.
Monitor devices	`Windows`	System Integrity Monitoring monitors connection and disconnection of external devices.
System Integrity Check	`Windows`	On-Demand System Integrity Check is a task that you can run manually or on a schedule. To run the *System Integrity Check* task, you must configure the scope of the component (the *monitoring scope*) and create a baseline. A *baseline* is a recorded state of objects in the system, which the application uses as reference when comparing to the current state.
Monitoring scopes	`Linux`	The table contains monitoring scopes of the System Integrity Monitoring component. The application monitors files and directories located in the paths specified in the table. By default, the table contains the **Kaspersky internal objects** monitoring scope.

Settings	OS	Description
Exclusions scopes	`Linux`	This table contains scan exclusion scopes. The application does not scan files and directories located at the paths specified in the table. By default, the table is empty.
Exclusions by mask	`Linux`	You can configure scan exclusions for objects by name mask. The application will not scan files whose names contain the specified mask. By default, the list of masks is empty.

Trusted zone

for Windows, macOS, and Linux

A *trusted zone* is a system administrator-configured list of objects and applications that Kaspersky Endpoint Security does not monitor when active.

The administrator forms the trusted zone independently, taking into account the features of the objects that are handled and the applications that are installed on the computer. It may be necessary to include objects and applications in the trusted zone when Kaspersky Endpoint Security blocks access to a certain object or application, if you are sure that the object or application is harmless.

Kaspersky Endpoint Security supports specifying file or folder names using masks. You can use the following wildcard characters in a mask:

- The `*` (asterisk) character, which takes the place of any set of characters, except the `\` and `/` characters (delimiters of the names of files and folders in paths to files and folders). For example, the mask `C:\*\*.txt` will include all paths to files with the TXT extension located in folders on the C: drive, but not in subfolders.

- The `?` (question mark) character, which takes the place of any single character, except the `\` and `/` characters (delimiters of the names of files and folders in paths to files and folders). For example, the mask `C:\Folder\???.txt` will include paths to all files residing in the folder named `Folder` that have the TXT extension and a name consisting of three characters.

Trusted zone settings

Settings	OS	Description
Web addresses	`Windows` `macOS` `Linux`	List of web addresses that the Web Threat Protection considers trusted. The component does not scan incoming and outgoing traffic from these addresses for threats. The list of trusted addresses can be used, for example, if the Web Threat Protection component interferes with downloading a file from a known website. You can add both the specific address and the address mask of a web page / website to the list of trusted web addresses.
IP addresses	`Windows` `Linux`	List of IP addresses of trusted devices. The Network Threat Protection component does not block network activity from these addresses. `Windows` You can add an IP address with port or port ranges and protocol specified. `Linux` You can add only an IP address to the list of exclusions. The application also does not log information on network attacks from the IP addresses that are in the list of exclusions.
Network ports	`Windows` `macOS` `Linux`	List of known and registered ports on which the Web Control, File Threat Protection, Web Threat Protection, Mail Threat Protection, Exploit Prevention, and Behavior Detection components monitor data streams. If this toggle switch is enabled, the port is considered trusted, and data passing through such a port on user devices are not monitored.
Root certificates	`Windows` `macOS` `Linux`	List of root certificates that Kaspersky Endpoint Security considers trusted. The list of trusted root certificates is used when scanning encrypted connections.
Anti-Cryptor exclusions	`Windows`	List of host names and IP addresses that the Behavior Detection component considers trusted. Kaspersky Endpoint Security does not scan the specified devices for viruses and other threatening applications.

Settings	OS	Description
Domains	`Windows` `Linux`	List of trusted domains. The Web Threat Protection, Web Control, and Cloud Discovery components (only for Windows device) do not monitor encrypted connections with these domains. Connections to domains in this list will be blocked on Windows devices if accessed via SSL/TLS and the "Block SSL/TLS connections" option is enabled.
Mount points	`Linux`	List of trusted mount points. These are excluded from scans by the File Threat Protection, Anti-Cryptor, Application Control, and Behavior Detection components. Mount points must be specified in the same way as they are displayed in the `mount` command output.
Traffic interception exclusions	`Linux`	List of network connections that Kaspersky Endpoint Security excludes from traffic interception. Traffic interception exclusions affect the Web Threat Protection, Network Threat Protection, and Web Control components. An excluded connection is defined by the following parameters: • Traffic direction, inbound or outgoing. • IP address of the remote device, that is, the IP address whose inbound and outbound traffic is excluded from interception (depending on traffic direction). • Destination port, that is, a port on the protected device (in an inbound traffic interception exclusion) or a port on the remote device (in an outbound traffic interception exclusion). Traffic interception exclusions are applied only to TCP connections and do not affect network packet rules.
Wi-Fi networks	`macOS`	List of trusted Wi-Fi networks. You can specify the following settings: • Wi-Fi network name. • Encryption type. • Authentication type.
Applications	`Windows` `macOS` `Linux`	The *list of trusted applications* is a list of applications whose file and network activity (including malicious activity) and access to the system registry are not monitored by Kaspersky Endpoint Security. By default, Kaspersky Endpoint Security monitors objects that are opened, executed, or saved by any application process, and controls the activity of all applications and network traffic that is generated by them. After an application is added to the list of trusted applications, Kaspersky Endpoint Security stops monitoring the application's activity.
Malware Scan exclusions	`Windows` `macOS` `Linux`	A *scan exclusion* is a set of conditions that must be fulfilled so that Kaspersky Endpoint Security will not scan a particular object for viruses and other threats. Scan exclusions let you work with legitimate applications that intruders can use to compromise the computer or user data. Such applications do not necessarily have a malicious purpose, but can be exploited by hackers. For detailed information about legitimate applications that intruders can use to compromise the computer or user data, please visit the Kaspersky Encyclopedia website.
Devices	`Windows` `Linux`	*Trusted devices* are devices to which users that are specified in the trusted device settings have full access at all times. To work with trusted devices, you can grant access to an individual user, to a group of users, or to all users of the organization.

General settings

Detection settings

for Windows, macOS, and Linux

This section describes how to configure detection settings according to your needs. The effectiveness of threat detection and prevention depends on the correct configuration settings.

Detection settings

Settings	OS	Description
Detection of other types of objects	`Windows` `macOS` `Linux`	Regardless of the configured application settings, Kaspersky Endpoint Security always detects and blocks viruses, worms, Trojans, and malicious tools. They can cause significant harm to a computer. You can additionally enable the detection of the following types of objects: • **Legitimate software that can be used by intruders to damage your computer or personal data**. Such applications do not necessarily have a malicious purpose, but can be exploited by hackers. For detailed information about legitimate applications that intruders can use to compromise the computer or user data, please visit the Kaspersky Encyclopedia website. • `Windows` **Adware**. Adware programs display banner ads in the interfaces of other programs and redirect search queries to advertising web pages. • `Windows` **Auto-dialers**. Auto-dialers can surreptitiously establish phone connections using a modem. Such applications are also legitimate software that can be used by hackers to compromise the device or user data. • `Windows` **Packers**. To hide malware from detection by an anti-virus, hackers pack it using special packers. Kaspersky experts have identified packers that are the most popular amongst hackers.
Advanced Disinfection Technology	`Windows`	Typically, Kaspersky Endpoint Security terminate detected malware before the computer becomes infected. The Advanced Disinfection Technology protects the computer from already active malware (active infection), thus minimizing the risk of data loss and the threat spreading. If this technology is enabled, when malicious activity is detected, Kaspersky Endpoint Security displays a pop-up notification. In its notification, Kaspersky Endpoint Security offers the user the option to perform Advanced Disinfection of the computer. After the user approves this procedure, Kaspersky Endpoint Security neutralizes the threat and then restarts the computer. The advanced disinfection technology uses considerable computing resources, which may slow down other applications. When the application is in process of detecting an active infection, some operating system functionality can be unavailable. The availability of the operating system is restored when Advanced Disinfection is complete and the computer is restarted. If Kaspersky Endpoint Security is installed on a computer running Windows for Servers, Kaspersky Endpoint Security does not show the notification. Therefore, you cannot select an action to disinfect an active threat. To disinfect a threat, you need to enable Advanced Disinfection technology in the application settings and enable immediate Advanced Disinfection in the *Malware Scan* task settings. Then you need to start a *Malware Scan* task.
Block access to files during scans	`Linux`	If this check box is selected, the application blocks access to files while they are being scanned by the File Threat Protection and Device Control components, the Execution prevention action, and the Removable Drives Scan task. If the check box is cleared, access to any file is allowed for the duration of the scan, and the scan runs in asynchronous mode.
Object logging settings	`Linux`	**Log clean objects**. If this check box is selected, the application logs the *ObjectProcessed* event for all scanned objects. **Log unprocessed objects**. If this check box is selected, the application logs an *ObjectNotProcessed* event. **Log packed objects**. If this check box is selected, the application logs a *PackedObjectDetected* event.

Kaspersky Security Network

for Windows, macOS, and Linux

To protect your computer more effectively, Kaspersky Endpoint Security uses data that is received from users around the globe. Kaspersky Security Network is designed for obtaining this data.

The KSN functionality may not be available in the application in the territory of the USA.

Kaspersky Security Network (KSN) is an infrastructure of cloud services that provides access to the Kaspersky online knowledge base, which contains information about the reputation of files, web resources, and software. The use of data from Kaspersky Security Network ensures faster responses by Kaspersky Endpoint Security to new threats, improves the performance of some protection components, and reduces the likelihood of false positives. If you are participating in Kaspersky Security Network, KSN services provide Kaspersky Endpoint Security with information about the reputation of scanned web addresses, as well as information about the category and reputation of scanned files. For more details on KSN configuration, refer to the Kaspersky Security Center Help.

Use of Kaspersky Security Network is voluntary. The application prompts you to use KSN during initial configuration of the application. Users can begin or discontinue participation in KSN at any time.

Detailed information about the storage, and destruction, and/or submission to Kaspersky of statistical information generated during participation in KSN is available in the Kaspersky Security Network Statement and on Kaspersky's website. The ksn_<language ID>.txt file with the text of the Kaspersky Security Network Statement is included in the application distribution kit.

The infrastructure of Kaspersky reputation databases

Kaspersky Endpoint Security supports the following infrastructure solutions to work with Kaspersky reputation databases:

- *Kaspersky Security Network (KSN)* is the solution that is used by most Kaspersky applications. KSN participants receive information from Kaspersky and send Kaspersky information about objects detected on the user's computer to be analyzed additionally by Kaspersky analysts and to be included in the reputation and statistical databases.

- *Kaspersky Private Security Network (KPSN)* is a solution that enables users of computers hosting Kaspersky Endpoint Security or other Kaspersky applications to obtain access to Kaspersky reputation databases, and to other statistical data without sending data to Kaspersky from their own computers. KPSN is designed for corporate customers who are unable to participate in Kaspersky Security Network for any of the following reasons:

  - Local workstations are not connected to the Internet.

  - Legal prohibition or corporate security restrictions on sending any data outside the country or the organization's local network

Kaspersky Security Network settings

Settings	OS	Description
Use extended KSN mode	`Windows` `macOS` `Linux`	*Extended KSN mode* is a mode in which Kaspersky Endpoint Security sends additional data to Kaspersky. Kaspersky Endpoint Security uses KSN to detect threats regardless of the toggle position. `Linux` For Linux devices, this option is hidden when using the *Kaspersky Private Security Network (KPSN)* solution.

Settings	OS	Description
Use cloud mode	`Windows` `macOS` `Linux`	*Cloud mode* refers to the application operating mode in which Kaspersky Endpoint Security uses a light version of anti-virus databases. Kaspersky Security Network supports the operation of the application when light anti-virus databases are being used. The light version of anti-virus databases lets you use approximately half of the computer RAM that would otherwise be used with the usual databases. If you do not participate in Kaspersky Security Network or if cloud mode is disabled, Kaspersky Endpoint Security downloads the full version of anti-virus databases from Kaspersky servers. If the check box is selected, Kaspersky Endpoint Security uses the light version of anti-virus databases, which reduces the load on operating system resources. Kaspersky Endpoint Security downloads the light version of anti-virus databases during the next update after the check box was selected. If the check box is cleared, Kaspersky Endpoint Security uses the full version of anti-virus databases. Kaspersky Endpoint Security downloads the full version of anti-virus databases during the next update after the check box was cleared.
Computer status when KSN servers are unavailable	`Windows`	The items in this drop-down list determine the status of a computer in Kaspersky Security Center when KSN servers are unavailable.
Use Administration Server as a KSN proxy server	`Windows` `macOS` `Linux`	If the check box is selected, Kaspersky Endpoint Security uses the KSN Proxy service. You can configure the KSN Proxy service settings in the Administration Server properties.
Use Kaspersky Security Network servers if the KSN proxy server is unavailable	`Windows` `macOS` `Linux`	If the check box is selected, Kaspersky Endpoint Security uses KSN servers when the KSN Proxy service is unavailable. KSN servers may be located both on the side of Kaspersky and on the side of third parties (when Kaspersky Private Security Network is used).

User interaction

for Windows, macOS, and Linux

This section describes how to configure the application interface settings as well as the user interaction settings.

Application interface settings

Settings	OS	Description
Start Kaspersky Endpoint Security on computer startup (recommended)	`Windows` `macOS`	If this functionality is enabled, Kaspersky Endpoint Security is started after the operating system loads to protect the computer during the entire session. If this functionality is disabled, Kaspersky Endpoint Security is not started after the operating system loads until the user starts it manually. Computer protection is disabled and user data may be exposed to threats.
Display user interface	`Windows` `macOS`	The client computer has an application icon in the notification area. In the context menu of the icon, the user can perform operations with Kaspersky Endpoint Security. Kaspersky Endpoint Security also displays notifications above the application icon.
Do not display application interface for users	`Windows` `macOS`	If this check box is selected, Kaspersky Endpoint Security does not allow the user to open the main window of the application and hides the application interface on a remote computer. If this check box is cleared, the user can open the main window of Kaspersky Endpoint Security and use the application interface on a remote computer.
Hide Application Activity Monitor section	`Windows`	If this check box is selected, the **Application Activity Monitor** button is not available in the main window of Kaspersky Endpoint Security on the client computer. *Application Activity Monitor* is a tool designed for viewing information about the activity of applications on a user's computer in real time.

Settings	OS	Description
Manage updates locally	macOS	If this check box is selected, the user can locally manage Kaspersky Endpoint Security updates on a remote computer. If this check box is cleared, you can manage Kaspersky Endpoint Security updates on a remote computer only using the Kaspersky Endpoint Security plug-in in Kaspersky Security Center.
Manage keys locally	macOS	If this check box is selected, the user can locally manage Kaspersky Endpoint Security keys on a remote computer. If this check box is cleared, you can manage Kaspersky Endpoint Security keys on a remote computer only using the Kaspersky Endpoint Security plug-in in Kaspersky Security Center.
Quit the application	macOS	If this check box is selected, the **Exit** command is present in the context menu of the application icon. The user of a remote computer can stop Kaspersky Endpoint Security on the remote computer. If this check box is cleared, the **Exit** command is not present in the context menu of the application icon. The user of a remote computer cannot stop Kaspersky Endpoint Security on the remote computer.
Access to local tasks	Windows Linux	If the check box is selected, local tasks are displayed in the Kaspersky Endpoint Security local interface. When there are no additional policy restrictions, the user can configure and run tasks. However, configuring task run schedule remains unavailable for the user. The user can run tasks only manually. If the check box is cleared, use of local tasks is stopped. In this mode, local tasks do not run according to schedule. Tasks cannot be started or configured in the local interface of Kaspersky Endpoint Security, or when working with the command line. A user can still start a scan of a file or folder by selecting the **Scan for viruses** option in the context menu of the file or folder. The scan task is started with the default values of settings for the custom scan task.
View group tasks	Windows	If the check box is selected, group tasks are displayed in the Kaspersky Endpoint Security local interface. The user can view the list of all tasks in the application interface. If the check box is cleared, Kaspersky Endpoint Security displays an empty task list.
Manage group tasks	Windows Linux	If the check box is selected, users can start and stop group tasks specified in the Kaspersky Endpoint Security console. Users can start and stop tasks in the application interface or in the simplified application interface. If the check box is cleared, Kaspersky Endpoint Security starts scheduled tasks automatically, or the administrator starts tasks manually in the Kaspersky Endpoint Security console.
Computer status	Windows	Settings for displaying the statuses of client computers with Kaspersky Endpoint Security installed in the Web Console when errors occur while applying a policy or executing a task. The following statuses are available *OK*, *Warning* and *Critical*.
Application status notifications	Windows	Settings of application event notifications in the system tray. Select the check boxes opposite those categories of events about which you want to see notifications in the notification area. • **Active threats**. • **Computer restart required**. • **Problems with anti-malware database**. • **Problems with protection level**. • **License issues**. • **Updates available**. When events associated with the selected categories occur, the application icon in the notification area will change to or depending on the severity of the warning.
Local anti-malware database status notifications	Windows	Settings of notifications about outdated anti-virus databases used by the application. You can specify the number of days after which Kaspersky Endpoint Security sends the "Databases are out of date" and "Databases are extremely out of date" to the user.
Application startup settings	Linux	Application launch settings: • **Maximum consecutive unsuccessful attempts to start the application**. • **Maximum time to wait for application start (min)**. After the specified waiting period expires, the kesl process is restarted.

Settings	OS	Description
Install application updates without restart	`Windows`	Upgrading the application without a restart provides uninterrupted server operation when the application version is updated. Upgrading the application without a restart has the following limitations: • You can upgrade the application without a restart starting with version 11.10.0. To upgrade an earlier version of the application, you must restart the computer. • You can install patches without a restart starting with version 11.11.0. To install patches for earlier versions of the application, a computer restart may be required. • Upgrading the application without a restart is not available on computers with enabled data encryption (Kaspersky encryption (FDE), BitLocker, File Level Encryption (FLE)). To upgrade the application on computers with enabled data encryption, the computer must be restarted. • The application cannot be upgraded on a virtual machine without a restart. To upgrade the application on a virtual machine, you must restart the virtual machine. After upgrading Kaspersky Endpoint Security to version 11.10.0 or later without a restart, the computer will have two Kaspersky Endpoint Security applications installed. Do not manually remove the previous version of the application. The previous version will be removed automatically when the computer is restarted. The default value of the parameter varies depending on the type of the operating system. If the application is installed on a workstation, the upgrading the application without a restart option is disabled. If the application is installed on a server, the upgrading the application without a restart option is enabled.
Compatibility with remote administration software	`Windows`	If using Kaspersky Endpoint Security alongside Remote Administration Tools (RAT) causes problems, you can enable the compatibility mode. The problems may be related to the incompatibility of RATs with the Secure Desktop functionality of the application. The purpose of this functionality is to confirm actions that can potentially lower the security level of the computer. This functionality lets an application display a confirmation dialog that is isolated from other processes. This functionality uses elevated rights to secure the request. In this way, only the user can confirm the action and not the malware. RAT compatibility mode can reduce the security level of the computer. We do not recommend enabling the compatibility mode if Kaspersky Endpoint Security is not causing problems with your RAT. The function is disabled by default. Example: When using the browser in RemoteApp mode, Kaspersky Endpoint Security may not display a confirmation window when visiting a website with an untrusted certificate because RemoteApp does not support the Secure Desktop functionality of the application. This can cause the browser to become unresponsive. For the browser to work correctly in RemoteApp mode, you must enable the compatibility mode. You can also try enabling the compatibility mode if you encounter problems with the Secure Desktop functionality when using other third-party software.

Performance

for Windows, macOS, and Linux

Kaspersky Endpoint Security performance refers to energy consumption and the use of computer resources.

Settings	OS	Description
Yield resources to other applications	`Windows`	Consumption of computer resources by Kaspersky Endpoint Security when scanning a computer may increase the load on the CPU and hard drive subsystems. This may slow down other applications. To optimize the performance, Kaspersky Endpoint Security provides a *mode for transferring resources to other applications*. In this mode, the operating system can decrease the priority of Kaspersky Endpoint Security scan task threads when the CPU load is high. This allows redistributing operating system resources to other applications. Thus, scan tasks will receive less CPU time. As a result, Kaspersky Endpoint Security will take longer to scan the computer. By default, the application is configured to concede resources to other applications.
Postpone or skip scheduled tasks while running on battery power	`Windows` `macOS` `Linux`	If this functionality is enabled, Kaspersky Endpoint Security switches to power-saving mode. `Windows` Kaspersky Endpoint Security *postpones* scheduled tasks. You can start a scan and update tasks manually, if necessary. `macOS` `Linux` Kaspersky Endpoint Security *cancels* scheduled tasks. You can start a scan and update tasks manually, if necessary. When power-saving mode is enabled and a computer is running on battery power, the following tasks are not run, even if scheduled: • *Malware Scan* • *Anti-malware database update* • *Application Integrity Check* • *IOC Scan*.
Limit CPU usage for scan tasks	`Windows` `macOS` `Linux`	To optimize Kaspersky Endpoint Security performance, you can limit CPU usage scan tasks. Depending on the used operating system, tasks for which the CPU usage is limited may vary: • `Windows` `Linux` Malware Scan • `macOS` `Linux` Critical Areas Scan • `Linux` Inventory • `Linux` Container scan If this functionality is enabled, the average load on all CPU cores from the scan task approaches the specified value.
Memory usage limit for scan tasks (MB)	`Linux`	You can configure the memory usage limit for scan tasks (*Malware Scan*, *Critical Areas Scan*, *Inventory*, and *Container Scan*).
Configure exclusion of process memory from scans	`Linux`	You can configure scan exclusions for process memory. The application does not scan the memory of the specified processes. Specify the path to the processes that the application will exclude from process memory scanning. You can use masks to specify the path. By default, the list is empty.
Limit application memory usage	`Linux`	You can configure the resident memory usage limit for the application. By default, the limit is set automatically. **Limit calculation method**: • **Unlimited**. If this option is selected, resident memory usage is not limited. • **Set an exact value (%)**. • **Set an exact value (MB)**. • **Use the lowest of the two values (% or MB)**. • **Use the highest of the two values (% or MB)**. • **Limit automatically (recommended)**. If this option is selected, resident memory usage is limited automatically.
Enable application stability monitoring	`Linux`	You can enable or disable Kaspersky Endpoint Security application stability monitoring, which tracks the number of abnormal application halts and notifies the administrator of unstable application performance. If the check box is selected, the application monitors the operation of Kaspersky Endpoint Security. To apply the setting, restart the application. If the application is unstable, the following message is displayed in the properties of the device with the installed application: *<Number> abnormal halts of the application since <date and time>*.

Network settings

for Windows, macOS, and Linux

You can configure the proxy server used for connecting to the internet, select the network port monitoring mode, and set up an encrypted connections scan.

Settings	OS	Description
Trusted root certificates	`Windows` `macOS` `Linux`	List of trusted root certificates. Kaspersky Endpoint Security lets you install trusted root certificates on user computers if, for example, you need to deploy a new certification center. The application lets you add a certificate to a special Kaspersky Endpoint Security certificate store. In this case, the certificate is considered trusted only for the Kaspersky Endpoint Security application. In other words, the user can gain access to a website with the new certificate in the browser. If another application tries to gain access to the website, you can get a connection error because of a certificate issue. To add to the system certificate store, you can use Active Directory group policies.
Proxy server	`Windows` `macOS` `Linux`	Settings of the proxy server used for internet access of users of client computers. Kaspersky Endpoint Security uses these settings for certain protection components, including for updating databases and application modules.
Use proxy server authentication	`Windows` `macOS` `Linux`	If this check box is selected, the application uses authentication with a user name and password when connecting to the proxy server. `Windows` For Windows devices, you need to select an authentication type: • **NTLM authentication**. NTLM authentication with the current user account (default). • **NTLM authentication with user name and password**. NTLM authentication with manually specified credentials. • **User name and password**. Authentication with manually specified credentials. • **Automatic authentication**. • **Kerberos authentication**. Kerberos authentication with the current user account. • **Kerberos authentication with user name and password**. Kerberos authentication with manually specified credentials.
Bypass a proxy server for local addresses	`Windows` `macOS`	If the check box is selected, Kaspersky Endpoint Security does not use a proxy server when performing an update from a shared folder.
Do not use proxy server for components	`Linux`	Select the check boxes next to those application components that you do not want to use the proxy server: • **Endpoint Detection and Response Expert (on-premises)** – do not use a proxy server when connecting to KATA servers. • **KATA Sandbox** – do not use a proxy server when connecting to Central Node servers responsible for the interaction with KATA Sandbox. • **Network Detection and Response (KATA)** – do not use a proxy server when connecting to Network Detection and Response servers.
Do not use proxy server for the specified IP addresses and DNS names	`Linux`	The table contains a list of IP addresses and DNS names for which the proxy server must not be used. You can use masks (`*` and `?` characters) to specify addresses. You can add, edit, or delete addresses in the table.
Encrypted Connections Scan	`Windows` `macOS` `Linux`	This feature allows the Web Threat Protection, Mail Threat Protection, Web Control, and Cloud Discovery components to monitor and handle encrypted (HTTPS) connections. `Linux` For Linux devices, the **Certificate verification policy** is available, which determines how the application validates certificates: • **Local check** means the application does not use the internet to validate certificates. • **Full check** (default) means the application uses the internet to validate and download missing chains needed to validate a certificate.
Trusted domains	`Windows` `Linux`	This uses a list of web addresses for which Kaspersky Endpoint Security does not scan network connections. In this case, Kaspersky Endpoint Security does not scan the HTTPS traffic of trusted web addresses when the Web Threat Protection, Mail Threat Protection, and Web Control components are doing their work. You can enter a domain name or an IP address. Kaspersky Endpoint Security supports the `*` character for entering a mask in the domain name.
Limit traffic on a metered connection	`Windows`	If this check box is selected, the application limits its own network traffic when the Internet connection is limited. Kaspersky Endpoint Security identifies a high-speed mobile Internet connection as a limited connection and identifies a Wi-Fi connection as an unlimited connection. Cost-Aware Networking works on computers running Windows 8 or later.
Inject script into web traffic to interact with web pages	`Windows`	If the check box is selected, Kaspersky Endpoint Security injects a web page interaction script into web traffic. This script ensures that the Web Control component can work correctly. The script enables registration of Web Control events. Kaspersky experts recommend injecting this web page interaction script into traffic to ensure correct operation of Web Control.

Settings	OS	Description
Check encrypted connections with websites that use EV certificates	`Windows`	EV certificates (Extended Validation Certificate) confirm the authenticity of websites and enhance the security of the connection. Browsers use a lock icon in their address bar to indicate that a website has an EV certificate. Browsers may also fully or partially color the address bar in green. If this toggle switch is enabled, the application decrypts and monitors encrypted connections with websites that use an EV certificate. If the toggle button is switched off, the application does not have access to the contents of HTTPS traffic. For this reason, the application monitors HTTPS traffic only based on the website address, for example, `https://bing.com`. If you are opening a website with an EV certificate for the first time, the encrypted connection will be decrypted regardless of whether or not the check box is selected.
Block SSL 2.0 connections	`Windows`	If the check box is selected, the application monitors and blocks network connections established over the SSL 2.0 protocol. If the check box is cleared, the application does not block network connections established over the SSL 2.0 protocol. However, the application does not monitor network traffic over this protocol.
Block TLS 1.0 connections	`Windows`	If the check box is selected, the application blocks network connections established over the TLS 1.0 protocol. If the check box is cleared, the application does not block network connections established over the TLS 1.0 protocol. The application monitors network traffic over this protocol. All components of the application work without restrictions.
Block SSL 3.0 connections	`Windows`	If the check box is selected, the application blocks network connections established over the SSL 3.0 protocol. If the check box is cleared, the application does not block network connections established over the SSL 3.0 protocol. The application monitors network traffic over this protocol. All components of the application work without restrictions.

Monitored ports	`Windows`
	`macOS`
	`Linux`
		Monitor all network ports. In this network port monitoring mode, the protection components (File Threat Protection, Web Threat Protection, and Mail Threat Protection) monitor data streams that are transmitted via any open network ports of the computer.
		Monitor selected network ports only. In this network port monitoring mode, the protection components monitor the selected ports of the computer and the network activity of the selected applications. The list of network ports that are normally used for transmission of email and network traffic is configured according to the recommendations of Kaspersky experts.
		
		For Mac devices, only the selected ports can be monitored.

Monitored applications	`Windows`	The list of applications for which all traffic on all ports is monitored regardless of the port scan settings.
Select the certificate store for Firefox to use	`macOS`	**System Roots keychain (recommended)**. If you select this option, Kaspersky Endpoint Security uses a root certificate from the System Roots keyring to scan encrypted HTTPS traffic in the Mozilla Firefox browser. This option is selected by default. **Certificate store from Mozilla Firefox browser settings**. If this option is selected, Kaspersky Endpoint Security uses the certificate from the browser's certificate store. In this case, you need to manually add the Kaspersky Endpoint Security certificate to the certificate store of Mozilla Firefox. For more information, see the article on How to add the Kaspersky certificate to the Mozilla Firefox certificate store.
Traffic interception mode	`Linux`	**iptables**. Kaspersky Endpoint Security uses the iptables utility for traffic interception. **eBPF**. The application uses the eBPF technology to intercept traffic.

Container Scan

for Linux

The application scans running containers and namespaces in real time. The application supports integration with the Docker container management system, the CRI-O environment, and the Podman and runc utilities.

Container Scan requires the File Threat Protection component to be enabled. File Threat Protection settings are applied when scanning containers and namespaces.

The application does not scan namespaces and containers unless components for working with containers and namespaces are installed in the operating system.

Container Scan settings

Settings	OS	Description
Action on threat detection	`Linux`	**Skip container**. When an infected object is detected, the application does not perform any actions with the container. **Stop container**. When an infected object is detected, the application stops the container. **Stop container if disinfection fails**. If an infected object could not be disinfected, the application stops the container.
Use Docker	`Linux`	Using the Docker environment. To use the environment, enter a path or URI (universal resource ID) of the Docker socket.
Use CRI-O	`Linux`	Use the CRI-O environment. To use this environment, enter the path to the CRI-O configuration file.
Use Podman	`Linux`	Use the Podman utility. To use this utility, enter the path to the executable file of the utility and the path to the root directory of the container storage.
Use runc	`Linux`	Use the runc utility. To use this utility, enter the path to the executable file of the utility and the path to the root directory of the container state storage.

Technical Support

for Windows and Linux

To troubleshoot possible malfunctions of Kaspersky Endpoint Security on computers, Technical Support staff may require information about the system and the events that occurred during the application's operation. This information is stored in dump files and trace files.

A *dump file* contains all information about the working memory of Kaspersky Endpoint Security processes at the moment when the dump file was created.

The *trace file* allows tracing the process of performing application commands step by step and determining the stage of application operation at which an error occurs.

Dump files and trace files may contain sensitive data. To control access to data, you must independently ensure the security of these files.

Dump files and trace files are stored on a computer as long as the application is in use, and are deleted permanently when the application is removed.

After applying the security profile on the computers, the application starts writing dump files. After a malfunction, the next time the application is launched, a window opens to load information for Technical Support. In this window, you can review information about the created dump files and approve sending them to Kaspersky.

Technical Support settings

Settings	OS	Description
Dump writing ENABLED	`Windows` `Linux`	If dump writing is enabled, Kaspersky Endpoint Security creates dump files if the application crashes. `Linux` Dump files use considerable free disk space. If there is less than 4 GB of free space on the hard drive, enabling dumping may lead to insufficient disk space.
Dump and trace files protection ENABLED	`Windows`	If protection of dump files and trace files is enabled, the files can be accessed by the following users: • Dump files can be accessed by the system administrator and local administrator, and by the user that enabled the writing of dump files and trace files. • Trace files can be accessed only by the system administrator and local administrator.
Code dump path	`Windows` `Linux`	Dump files are stored in the following folders: • `Windows`: `%ProgramData%\Kaspersky Lab\KES.[AppVersion]\Traces` You cannot set a different folder for dump files. • `Linux`: `var/opt/kaspersky/kesl/common/dumps` and `var/opt/kaspersky/kesl/common/dumps-user` If you specify a different directory, make sure that the user running Kaspersky Endpoint Security has read and write permissions for that directory. Root privileges are required for access to the dump file directory.
Trace folder path	`Windows` `Linux`	Trace files are stored in the following folders: • `Windows`: `%ProgramData%\Kaspersky Lab\KES.[AppVersion]\Traces` You cannot set a different folder for trace files. • `Linux`: `var/log/kaspersky/kesl` If you specify a different directory, make sure that the user running Kaspersky Endpoint Security has read and write permissions for that directory. Root privileges are required for access to the trace file directory.
Maximum trace file size (MB)	`Linux`	In this field, you can enter the maximum size of an application trace file (in megabytes).
Maximum number of trace files	`Linux`	In this field, you can enter the maximum number of application trace files.
Custom Technical Support web resources	`Windows`	Table with contact information that users can use to contact Technical Support in case of Kaspersky Endpoint Security malfunctioning. You can also configure message templates for users with instructions on how to get help. By default, the application displays links to the Kaspersky website.

Reports and Storage

for Windows, macOS, and Linux

This section lets you manage the settings for the creation and retention of reports about events encountered by Kaspersky Endpoint Security, as well as configure the storage of objects in Backup and Quarantine.

Reports

Information about the operation of each Kaspersky Endpoint Security component, data encryption events, the performance of each scan task, the update task and integrity check task, and the overall operation of the application is recorded in *reports*.

`Windows` Reports are stored in the folder `C:\ProgramData\Kaspersky Lab\KES.12.4.0\Report`.

Backup

Backup stores backup copies of files that were deleted or modified during disinfection. A *backup copy* is a file copy created before the file was disinfected or deleted. Backup copies of files are stored in a special format and do not pose a threat.

Backup copies of files are stored in the folder:

- `Windows`: `C:\ProgramData\Kaspersky Lab\KES.12.4.0\QB`
- `Linux`: `/var/opt/kaspersky/kesl/common/objects-backup/`

Users in the Administrators group are granted full permission to access this folder. Limited access rights to this folder are granted to the user whose account was used to install Kaspersky Endpoint Security.

Quarantine

Quarantine is a special local storage on the computer. The user can quarantine files that the user considers dangerous for the computer. Quarantined files are stored in an encrypted form and do not threaten the security of the device.

Reports and Storage settings

Settings	OS	Description
Delete reports after (days)	`Windows` `macOS`	If the check box is selected, the maximum report storage term is limited to the defined time interval. After that period of time, Kaspersky Endpoint Security automatically deletes the oldest entries from the report file.
Limit the size of report file to (MB)	`Windows`	If the check box is selected, the maximum report file size is limited to the defined value. To avoid exceeding the maximum report file size, Kaspersky Endpoint Security automatically deletes the oldest entries from the report file when the maximum report file size is reached.
Keep only recent events	`macOS`	If this check box is selected, every time the task is started, Kaspersky Endpoint Security deletes information about non-critical events that have occurred since the previous start of the task, but retains important notes in the report (for example, information about detected malicious objects).
Log non-critical events	`macOS`	If this check box is selected, Kaspersky Endpoint Security records non-critical events (for example, informational events) in the report. Non-critical events do not affect protection.
Delete objects after (days)	`Windows` `macOS` `Linux`	If the check box is selected, the maximum file storage term is limited to the defined time interval. After expiration of the maximum storage term, Kaspersky Endpoint Security deletes the oldest files from Backup.
Limit the size of Backup to (MB)	`Windows` `Linux`	If the check box is selected, the maximum storage size is limited to the defined value. To avoid exceeding the maximum storage size, Kaspersky Endpoint Security automatically deletes the oldest files from storage when the maximum storage size is reached.
Limit the size of Quarantine	`Windows` `Linux`	**Maximum size of Quarantine (MB)**. If the check box is selected, the maximum Quarantine size is limited to the defined value. When Quarantine reaches maximum size, Kaspersky Endpoint Security sends the *Not enough space in Quarantine storage* event to Kaspersky Security Center and creates an event in the operating system event log. Meanwhile the application stops quarantining new objects. You must empty the Quarantine manually. **Notify when the Quarantine storage reaches (%)**. Threshold value of the Quarantine. For example, you can set the Quarantine threshold to 50%. When Quarantine reaches the threshold, the application sends the corresponding event to Kaspersky Security Center and logs the event. Meanwhile the application continues quarantining new objects.

Integration with KSC

This section describes how to configure the integration of Kaspersky Endpoint Security with Kaspersky Security Center.

Kaspersky Security Center integration settings

Settings	OS	Description
Use Kaspersky Security Center as proxy server for activation	`Windows` `macOS` `Linux`	If this check box is selected, the application uses the Kaspersky Security Center Administration Server as a proxy server for connecting to activation servers. This is necessary when activating the application in an isolated network segment without internet access using an activation code. If you are activating the application with a key file, internet access is not necessary. Not applicable if the application is being used in Light Agent mode.
Data transfer to Administration Server	`Windows` `macOS` `Linux`	Categories of events on client computers whose information must be relayed to the Administration Server. You can disable the transfer of some data to optimize disk space on the Administration Server. The application sends events of the following categories: • `Windows` **About a threat development chain**. • `Windows` `macOS` `Linux` **About Quarantine files**. • `Windows` `Linux` **About files in Backup**. • `Windows` `Linux` **About unprocessed files**. • `Windows` `macOS` `Linux` **About installed devices**. • `Windows` `Linux` **About started applications**. • `Windows` **About file encryption errors**. • `Windows` **Report on Adaptive Anomaly Control rules state**. • `Windows` **Report on triggered Adaptive Anomaly Control rules**.

OS interaction settings

for Linux

To function properly, the application must intercept system events, that is, file operations and the starting of processes. If the application does not use system event interception, real-time file scanning is not performed, and the protection level of the device is reduced.

OS interaction settings

Settings	OS	Description
Interception mechanism	`Linux`	The system event interception mechanism used by the application: • **Fanotify technology**. If this option is selected, the application uses the fanotify technology for system event interception. • **Updatable kernel module**. If this option is selected, the application uses the updatable kernel module for system event interception.
If the updatable kernel module fails to start	`Linux`	Action that the application performs if the updatable kernel module fails to start: • **Use fanotify**. If this option is selected, the application switches to the fanotify technology for system event interception. • **Disable system event interception (lower protection level)**. If the application does not use system event interception, real-time file scanning is not performed, and the protection level of the device is reduced. This setting is available if the **Updatable kernel module** interception mechanism is selected.
Telemetry source	`Linux`	The source Kaspersky Endpoint Security uses for telemetry collection: • **Use eBPF only**. Only eBPF technology is used. • **Default**. Both eBPF technology and the auditd service are used.

Settings	OS	Description
Operating mode for auditd	`Linux`	In this mode, the auditd service records audit events for subsequent transmission to Detection and Response solutions: • **Exclusive**. If this option is selected, Kaspersky Endpoint Security uses the auditd service exclusively. Third-party applications cannot connect to the audit stream. • **Non-exclusive**. If this option is selected, the auditd service can accept multiple connections from different processes that use system audit.

Event settings

for Windows, macOS, and Linux

This section lets you configure notifications about events on managed devices and general events. The notifications can be sent to email addresses of users in this workspace.

While the application is running, various *events* occur. The events may be informational or may contain important data. For example, the application can use an event to notify about a successful database update or point out an error of a component that needs to be fixed.

Kaspersky Endpoint Security events can fall into the following severity classes:

- *Critical events* pose a serious threat to the security of the computer (detection of malicious objects, vulnerabilities, Kaspersky Endpoint Security problems). Critical events require your immediate attention. We recommend not to disable critical event notifications.
- *Functional failures* are events that occur when Kaspersky Endpoint Security malfunctions (processing error, task settings error). Such events do not directly threaten the security of the computer, but they require your intervention to make sure Kaspersky Endpoint Security is working correctly and protecting your devices.
- *Warnings* do not require immediate action on your part, but may indicate future threats to the security of the computer.
- *Informational messages*.

Regardless of whether notifications are enabled or disabled, Kaspersky Endpoint Security records information about all application events in the application reports.

For each Kaspersky Endpoint Security event, you can configure how you want to get notifications:

- `Windows` **Notify by email**.
- `Windows` **Save in local report**.
- `Windows` `macOS` **Notify on screen**.
- `Windows` `Linux` **Save to system event log**.

Telemetry settings

for Windows, macOS, and Linux

This section lets you configure telemetry sending from managed devices to telemetry collection servers. *Telemetry* is a list of events that have occurred on the protected computer. Kaspersky Endpoint Security analyzes telemetry and sends it to Kaspersky Anti Targeted Attack Platform or to telemetry collection servers during synchronization. Telemetry events arrive on the server almost continuously. Kaspersky Endpoint Security initiates synchronization with the server when any of the following conditions are satisfied:

- Synchronization interval has run out.
- The number of events in the buffer exceeds the upper limit.

If there is no connection between Kaspersky Endpoint Security and the server, the application queues new events. When the connection is restored, Kaspersky Endpoint Security sends queued events to the server in proper order. To avoid overloading the server, Kaspersky Endpoint Security may skip some events.

You can manage synchronization settings for each Built-in Agent in the "Built-in agents" section and select optimal values depending on your network load.

In this section, you can configure:

- Telemetry inclusion and exclusion rules.
- Collection of telemetry to be sent to KATA servers, telemetry collection servers, or response servers.

EDR Expert (on-premise) telemetry

for Windows, macOS, and Linux

EDR Expert (on-premise) telemetry settings

Settings	OS	Description
EDR Expert (on-premises) telemetry	`Windows` `macOS` `Linux`	**Import** and **Export**. You can export EDR Expert (on-premise) telemetry settings to a JSON file. Then you can modify the file to, for example, add a large number of event IDs. You can also use the export/import function to back up the settings of sent events or to migrate the list to another policy.
General exclusions	`Windows` `macOS` `Linux`	To optimize the transmitted data, you can configure exclusion rules for certain event types. Kaspersky Endpoint Security does not collect telemetry that falls under such a rule. This lets you reduce traffic and avoid processing events from trusted objects and processes. **Rule name**. **Action**: • **Do not collect**. If you select this option, Kaspersky Endpoint Security does not collect telemetry that satisfies the conditions of the rule. • **Exclude IOA**. If you select this option, Kaspersky Endpoint Security does not collect telemetry based on an IOA rule triggering. *Indicator of Attack (IOA)* is a rule that contains a description of suspicious behavior in the system that may indicate a targeted attack. **Condition**. Rule-triggering condition. Specify a telemetry parameter, a conditional operator, and the value of the parameter. By default, Kaspersky Endpoint Security combines rule triggering criteria with a logical AND. You can add multiple conditions or condition groups using the AND and OR logical operators.
All event types	`Windows` `macOS` `Linux`	List of event types for which telemetry collection is defined by default by Kaspersky. You can manually enable or disable telemetry for each event type and configure telemetry exclusion and inclusion rules.

EDR (KATA) / NDR (KATA) telemetry

for Windows and Linux

To improve performance and optimize data transmission to telemetry collection server, you can configure telemetry exclusions. For example, you can choose not to send network communications data for individual applications.

Settings	OS	Description
Excluded processes	`Windows` `Linux`	Kaspersky Endpoint Security does not process data related to processes from the list. **Optimize the telemetry size to send**. Kaspersky Endpoint Security allows optimizing the amount of transmitted data and excluding events with certain codes from telemetry: code 102 (basic communications) and 8 (network activity of the process) for the Microsoft SMB protocol, the WinRM service, and the klnagent.exe process of the Network Agent, as well as extended information about the types of network packets for all types of network protocols. Kaspersky Endpoint Security combines rule triggering criteria with a logical AND. **Process** and **Parent process**: • **Full path**. Full path to the file including its name and extension. Kaspersky Endpoint Security supports environment variables and the `*` and `?` characters when entering a mask. • **Command line text**. Command used to run the file. • **Description**. Value of the FileDescription parameter from a RT_VERSION (VersionInfo) resource. • **Original file name**. Value of the OriginalFilename parameter from a RT_VERSION (VersionInfo) resource. • **Version**. Value of the FileVersion parameter from a RT_VERSION (VersionInfo) resource. • **File checksums**. MD5 and SHA256. You can also select a file manually, and the application will automatically fill out the fields from the selected file. In 64-bit operating systems, you must manually enter the parameters of the 64-bit version of the executable file of a process from the `C:\windows\system32` folder because the application populates the executable file parameter fields with data from the properties of the 32-bit version of the same executable file in the `C:\windows\syswow64` folder. For example, if you select `C:\windows\system32\cmd.exe`, the plug-in displays the parameters of `C:\windows\syswow64\cmd.exe`. Such behavior is dictated by peculiarities of the operating system. **Use for the following event types**: • **File modification**. • **Network events**. • **Process: console interactive input**. • **Module loaded**. • **Registry modified**. • **DNS logs**. • **Process access**. • **Code injection**. • `Windows` **WMI query**. • **Pipe**. • **LDAP**. • `Windows` **AMSI**.
Excluded network communications	`Windows` `Linux`	Kaspersky Endpoint Security does not process data related to network communications from the list. In the exclusion rule you can specify: **Rule name**. **Direction**. **Protocol**. **Raw socket**. **Protocol number**. **Local address**. The network address of the computer for which Kaspersky Endpoint Security is excluding telemetry from network traffic. **Local port or range**. **Remote address**. The network address of the computer for which Kaspersky Endpoint Security is excluding telemetry from network traffic. **Remote port or range**. Only the IPv4 format is supported for IP addresses. **Apply the rule to the selected applications**. If this check box is selected Kaspersky Endpoint Security excludes EDR telemetry from the network traffic for executable files of applications from the list.

Settings	OS	Description
Excluded file operations	`Windows` `Linux`	Kaspersky Endpoint Security does not process file operations from the list. In the exclusion rule you can specify: **Rule name**. **File name or mask**. The file name or mask to which Kaspersky Endpoint Security applies the exclusion rule when the file is accessed. Kaspersky Endpoint Security supports the `*` and `?` characters when entering a mask. **Select file operation**. Type of file operation to which the rule will apply. **Previous path**. Kaspersky Endpoint Security combines rule triggering criteria with a logical AND. **Process** and **Parent process**: • **Full path**. Full path to the file including its name and extension. Kaspersky Endpoint Security supports environment variables and the `*` and `?` characters when entering a mask. • **Command line text**. Command used to run the file. • **Description**. Value of the FileDescription parameter from a RT_VERSION (VersionInfo) resource. • **Original file name**. Value of the OriginalFilename parameter from a RT_VERSION (VersionInfo) resource. • **Version**. Value of the FileVersion parameter from a RT_VERSION (VersionInfo) resource. • **File checksums**. MD5 and SHA256. You can also select a file manually, and the application will automatically fill out the fields from the selected file. In 64-bit operating systems, you must manually enter the parameters of the 64-bit version of the executable file of a process from the `C:\windows\system32` folder because the application populates the executable file parameter fields with data from the properties of the 32-bit version of the same executable file in the `C:\windows\syswow64` folder. For example, if you select `C:\windows\system32\cmd.exe`, the plug-in displays the parameters of `C:\windows\syswow64\cmd.exe`. Such behavior is dictated by peculiarities of the operating system.
Excluded DNS operations	`Windows` `Linux`	Kaspersky Endpoint Security does not process DNS operations from the list. In the exclusion rule you can specify: **Rule name**. Kaspersky Endpoint Security combines rule triggering criteria with a logical AND. **Process** and **Parent process**: • **Full path**. Full path to the file including its name and extension. Kaspersky Endpoint Security supports environment variables and the `*` and `?` characters when entering a mask. • **Command line text**. Command used to run the file. • **Description**. Value of the FileDescription parameter from a RT_VERSION (VersionInfo) resource. • **Original file name**. Value of the OriginalFilename parameter from a RT_VERSION (VersionInfo) resource. • **Version**. Value of the FileVersion parameter from a RT_VERSION (VersionInfo) resource. • **File checksums**. MD5 and SHA256. You can also select a file manually, and the application will automatically fill out the fields from the selected file. In 64-bit operating systems, you must manually enter the parameters of the 64-bit version of the executable file of a process from the `C:\windows\system32` folder because the application populates the executable file parameter fields with data from the properties of the 32-bit version of the same executable file in the `C:\windows\syswow64` folder. For example, if you select `C:\windows\system32\cmd.exe`, the plug-in displays the parameters of `C:\windows\syswow64\cmd.exe`. Such behavior is dictated by peculiarities of the operating system. **DNS operation**: • **DNS server IP address**. • **Query options**. • **Status**. • **Domain name**. • **Settings type ID**. • **Response data**. Content of the DNS response to the query.

Settings	OS	Description
Excluded LDAP operations	`Windows`	Kaspersky Endpoint Security does not process LDAP operations from the list. In the exclusion rule you can specify: **Rule name**. Kaspersky Endpoint Security combines rule triggering criteria with a logical AND. **Process** and **Parent process**: • **Full path**. Full path to the file including its name and extension. Kaspersky Endpoint Security supports environment variables and the `*` and `?` characters when entering a mask. • **Command line text**. Command used to run the file. • **Description**. Value of the FileDescription parameter from a RT_VERSION (VersionInfo) resource. • **Original file name**. Value of the OriginalFilename parameter from a RT_VERSION (VersionInfo) resource. • **Version**. Value of the FileVersion parameter from a RT_VERSION (VersionInfo) resource. • **File checksums**. MD5 and SHA256. You can also select a file manually, and the application will automatically fill out the fields from the selected file. In 64-bit operating systems, you must manually enter the parameters of the 64-bit version of the executable file of a process from the `C:\windows\system32` folder because the application populates the executable file parameter fields with data from the properties of the 32-bit version of the same executable file in the `C:\windows\syswow64` folder. For example, if you select `C:\windows\system32\cmd.exe`, the plug-in displays the parameters of `C:\windows\syswow64\cmd.exe`. Such behavior is dictated by peculiarities of the operating system. **LDAP operation**: • **LDAP search scope**. LDAP search scope. Can have one of the following values: ADS_SCOPE_BASE, ADS_SCOPE_ONELEVEL, ADS_SCOPE_SUBTREE. • **Filter**. • **Distinguished name for LDAP objects search**. Name of the record in the LDAP directory. • **Object attributes used for LDAP operations search**. Attributes set in the query as return values.
Excluded process access queries	`Windows`	Kaspersky Endpoint Security does not process access requests to processes from the list. In the exclusion rule you can specify: **Rule name**. Kaspersky Endpoint Security combines rule triggering criteria with a logical AND. **Process**, **Parent process**, **File of the target process**, **Handle to the source process** and **Handle to the target process**. • **Full path**. Full path to the file including its name and extension. Kaspersky Endpoint Security supports environment variables and the `*` and `?` characters when entering a mask. • **Command line text**. Command used to run the file. • **Original file name**. Value of the OriginalFilename parameter from a RT_VERSION (VersionInfo) resource. • **Version**. Value of the FileVersion parameter from a RT_VERSION (VersionInfo) resource. • **File checksums**. MD5 and SHA256. You can also select a file manually, and the application will automatically fill out the fields from the selected file. In 64-bit operating systems, you must manually enter the parameters of the 64-bit version of the executable file of a process from the `C:\windows\system32` folder because the application populates the executable file parameter fields with data from the properties of the 32-bit version of the same executable file in the `C:\windows\syswow64` folder. For example, if you select `C:\windows\system32\cmd.exe`, the plug-in displays the parameters of `C:\windows\syswow64\cmd.exe`. Such behavior is dictated by peculiarities of the operating system. **Process access queries**: • **Operation type**. • **Requested access to the process**. • **Call stack trace**.

Settings	OS	Description
Excluded code injections	`Windows`	Kaspersky Endpoint Security does not process code injections from the list. In the exclusion rule you can specify: **Rule name**. Kaspersky Endpoint Security combines rule triggering criteria with a logical AND. **Process** and **Parent process**: • **Full path**. Full path to the file including its name and extension. Kaspersky Endpoint Security supports environment variables and the `*` and `?` characters when entering a mask. • **Command line text**. Command used to run the file. • **Description**. Value of the FileDescription parameter from a RT_VERSION (VersionInfo) resource. • **Original file name**. Value of the OriginalFilename parameter from a RT_VERSION (VersionInfo) resource. • **Version**. Value of the FileVersion parameter from a RT_VERSION (VersionInfo) resource. • **File checksums**. MD5 and SHA256. You can also select a file manually, and the application will automatically fill out the fields from the selected file. In 64-bit operating systems, you must manually enter the parameters of the 64-bit version of the executable file of a process from the `C:\windows\system32` folder because the application populates the executable file parameter fields with data from the properties of the 32-bit version of the same executable file in the `C:\windows\syswow64` folder. For example, if you select `C:\windows\system32\cmd.exe`, the plug-in displays the parameters of `C:\windows\syswow64\cmd.exe`. Such behavior is dictated by peculiarities of the operating system. **Code injections**: • **Access method**. • **Call stack**. The API call stack at the moment of interception of the function related to the code injection • **Modified command line**. • **Injection address**. Address in the address space of the target process at which the remotely run code was placed. This field is left empty if the code injection was achieved using the SET_WINDOWS_HOOK and ARG_SPOOFING methods. • **Modified command line**. • **Injected DLL name**. Name of the DLL containing the interceptor routine and name of the function to which control is passed after the injection. This field is filled if the code injection was achieved using the SET_WINDOWS_HOOK method. • **Injected DLL path**. Path to the DLL containing the interceptor routine. This field is filled if the code injection was achieved using the SET_WINDOWS_HOOK method.

Settings	OS	Description
Excluded WMI queries	`Windows`	Kaspersky Endpoint Security does not process WMI requests from the list. In the exclusion rule you can specify: **Rule name**. Kaspersky Endpoint Security combines rule triggering criteria with a logical AND. **Process** and **Parent process**: • **Full path**. Full path to the file including its name and extension. Kaspersky Endpoint Security supports environment variables and the `*` and `?` characters when entering a mask. • **Command line text**. Command used to run the file. • **Description**. Value of the FileDescription parameter from a RT_VERSION (VersionInfo) resource. • **Original file name**. Value of the OriginalFilename parameter from a RT_VERSION (VersionInfo) resource. • **Version**. Value of the FileVersion parameter from a RT_VERSION (VersionInfo) resource. • **File checksums**. MD5 and SHA256. You can also select a file manually, and the application will automatically fill out the fields from the selected file. In 64-bit operating systems, you must manually enter the parameters of the 64-bit version of the executable file of a process from the `C:\windows\system32` folder because the application populates the executable file parameter fields with data from the properties of the 32-bit version of the same executable file in the `C:\windows\syswow64` folder. For example, if you select `C:\windows\system32\cmd.exe`, the plug-in displays the parameters of `C:\windows\syswow64\cmd.exe`. Such behavior is dictated by peculiarities of the operating system. **WMI queries**: • **WMI operation type**. • **Remote query**. • **Name of a computer that executed a WMI command**. • **WMI user account**. • **Executed WMI command**. • **WMI namespace**. • **WMI event consumer filter**. • **Name of the created WMI event consumer**. • **Source code of a WMI event consumer**.
Excluded pipe operations	`Windows`	Kaspersky Endpoint Security does not process pipe operations from the list. In the exclusion rule you can specify: **Rule name**. Kaspersky Endpoint Security combines rule triggering criteria with a logical AND. **Process** and **Parent process**: • **Full path**. Full path to the file including its name and extension. Kaspersky Endpoint Security supports environment variables and the `*` and `?` characters when entering a mask. • **Command line text**. Command used to run the file. • **Description**. Value of the FileDescription parameter from a RT_VERSION (VersionInfo) resource. • **Original file name**. Value of the OriginalFilename parameter from a RT_VERSION (VersionInfo) resource. • **Version**. Value of the FileVersion parameter from a RT_VERSION (VersionInfo) resource. • **File checksums**. MD5 and SHA256. You can also select a file manually, and the application will automatically fill out the fields from the selected file. In 64-bit operating systems, you must manually enter the parameters of the 64-bit version of the executable file of a process from the `C:\windows\system32` folder because the application populates the executable file parameter fields with data from the properties of the 32-bit version of the same executable file in the `C:\windows\syswow64` folder. For example, if you select `C:\windows\system32\cmd.exe`, the plug-in displays the parameters of `C:\windows\syswow64\cmd.exe`. Such behavior is dictated by peculiarities of the operating system. **Pipe operations**: • **Pipe name**. • **Operation type**.

Settings	OS	Description
Excluded registry changes	`Windows`	Kaspersky Endpoint Security does not process registry modifications from the list. In the exclusion rule you can specify: **Rule name**. Kaspersky Endpoint Security combines rule triggering criteria with a logical AND. **Process** and **Parent process**: • **Full path**. Full path to the file including its name and extension. Kaspersky Endpoint Security supports environment variables and the `*` and `?` characters when entering a mask. • **Command line text**. Command used to run the file. • **Description**. Value of the FileDescription parameter from a RT_VERSION (VersionInfo) resource. • **Original file name**. Value of the OriginalFilename parameter from a RT_VERSION (VersionInfo) resource. • **Version**. Value of the FileVersion parameter from a RT_VERSION (VersionInfo) resource. • **File checksums**. MD5 and SHA256. You can also select a file manually, and the application will automatically fill out the fields from the selected file. In 64-bit operating systems, you must manually enter the parameters of the 64-bit version of the executable file of a process from the `C:\windows\system32` folder because the application populates the executable file parameter fields with data from the properties of the 32-bit version of the same executable file in the `C:\windows\syswow64` folder. For example, if you select `C:\windows\system32\cmd.exe`, the plug-in displays the parameters of `C:\windows\syswow64\cmd.exe`. Such behavior is dictated by peculiarities of the operating system. **Registry changes**: • **Operation type**. • **Path**. Path to the registry key in which the modification was made. • **Value name**. Name of the modified value, for example, RegistrySizeLimit. • **Value**. • **Full name of a registry file**.
Excluded operations with devices	`Windows`	Kaspersky Endpoint Security does not process operations related to USB devices from the list. In the exclusion rule you can specify: **Rule name**. **Device type**. **Device ID**. **Device name**.

KUMA telemetry

for Windows

By default, sending events to the KUMA server is disabled. To ensure KUMA works properly, you must enable telemetry sending. You can select an event source from among the standard logs: *Application*, *Security* or *System*. You can also specify the log of a third-party application. To improve performance and optimize data transmission to the KUMA server, you can manually add individual event logs.

KUMA telemetry settings

Settings	OS	Description
Windows Event Logs	`Windows`	Windows log events that the application sends to KUMA. You can add logs one by one manually or import a JSON file with settings. For each event log, you can select how you want it to be sent: • **Send all events**. In this mode, the application sends all events from the Windows log except events added to exclusion rules. • **Send only selected events**. In this mode, the application sends only events added in inclusion rules. You can also configure exclusion or inclusion rules for the relevant event sending mode. To add rules, you need to specify the ID of the event in the Windows event log. You can list multiple event IDs in a rule. When specify multiple event IDs, use commas as delimiters.

Built-in agents

Managed Detection and Response

for Windows, macOS, and Linux

Kaspersky Endpoint Security supports integration with the Managed Detection and Response solution. The *Kaspersky Managed Detection and Response (MDR)* solution automatically detects and analyzes security incidents in your infrastructure. To do so, MDR uses telemetry data received from endpoints and machine learning. MDR sends incident data to Kaspersky experts. The experts can then process the incident and, for example, add a new entry to Anti-Virus databases. Alternatively, the experts can issue recommendations on processing the incident and, for example, suggest isolating computer from the network. For detailed information about how the solution works, please refer to the Kaspersky Managed Detection and Response Help.

You must enable the following components for Managed Detection and Response to work:

- Kaspersky Security Network (extended mode)
- Behavior Detection

Enabling these components is non-optional. Otherwise Kaspersky Managed Detection and Response cannot function because it does not receive required telemetry data.

Managed Detection and Response component settings

Settings	OS	Description
MDR configuration file	`Windows` `macOS` `Linux`	The BLOB file contains the client ID and information about the license for Kaspersky Managed Detection and Response. The BLOB file is located inside the ZIP archive of the MDR configuration file. You can obtain the ZIP archive in the Kaspersky Managed Detection and Response Console. For detailed information about a BLOB file, please refer to the Kaspersky Managed Detection and Response Help.

Endpoint Detection and Response Optimum

for Windows, macOS, and Linux

Kaspersky Endpoint Security includes a built-in agent for the Kaspersky Endpoint Detection and Response Optimum solution (hereinafter also "EDR Optimum"). *Kaspersky Endpoint Detection and Response* is a range of solutions for protecting the corporate IT infrastructure from advanced cyber threats. The functionality of the solutions combines automatic detection of threats with the ability to react to these threats to counteract advanced attacks including new exploits, ransomware, fileless attacks, as well as methods using legitimate system tools.

Kaspersky Endpoint Detection and Response analyzes potentially dangerous activity on user devices and provides *Security officers* or the *Administrator* with information about the possible attack to take timely response actions or automatically applies configured response actions.

You must enable the following components for Endpoint Detection and Response to work:

- File Threat Protection
- Web Threat Protection
- Mail Threat Protection

- Exploit Prevention
- Behavior Detection
- Host Intrusion Prevention
- Remediation Engine
- Adaptive Anomaly Control

The list of components may differ for various platforms.

Endpoint Detection and Response component settings

Settings	OS	Description
Enable advanced system activity logging	`Windows` `macOS` `Linux`	This setting helps ensure the correctness of the **Retrospective IOC Scan** task. It is associated with significant computer resource usage.
Network Isolation	`Windows` `macOS` `Linux`	Automatic isolation of the computer from the network in response to detected threats. When network isolation is turned on, the application severs all active connections and blocks all new TCP/IP connections on the computer. The application leaves only the following connections active: • Connections listed in Network isolation exclusions. • Connections initiated by Kaspersky Endpoint Security services. • Connections initiated by the Kaspersky Security Center Network Agent.
Automatically unlock isolated device in (hours)	`Windows` `macOS` `Linux`	Network isolation can be turned off automatically after a specified time or manually.
Network isolation exclusions	`Windows` `macOS` `Linux`	List of rules for exclusions from network isolation. Network connections that match the rules are not blocked on computers when Network isolation is turned on. To configure Network isolation exclusions, you can use a list of *standard network profiles*. By default, exclusions include network profiles containing rules that ensure uninterrupted operation of devices with the DNS/DHCP server and DNS/DHCP client roles. You can also modify the settings of standard network profiles or define exclusions manually. Exclusions specified in policy properties are applied only if Network isolation is turned on automatically in response to a detected threat. Exclusions specified in computer properties are applied only if Network isolation is turned on manually in computer properties in the Kaspersky Security Center console or in alert details.
Execution Prevention	`Windows` `macOS` `Linux`	Control the execution of executable files and scripts and opening of office format files. For example, you can prevent the execution of applications that are considered insecure on the selected computer. Execution prevention supports a set of office file extensions and a set of script interpreters. To use Execution prevention component, you need to add execution prevention rules.
Action on execution or opening of forbidden object	`Windows` `macOS` `Linux`	**Block and add to event log**. In this mode, the application blocks the execution of objects or opening of documents that match prevention rule criteria. The application also publishes an event about attempts to execute objects or open documents to the system event log and Kaspersky Security Center. **Add to event log**. In this mode, Kaspersky Endpoint Security publishes an event about attempts to run executable objects or open documents that match prevention rule criteria to the system event log and Kaspersky Security Center, but does not block the attempt to run or open the object or document. This mode is selected by default.
Execution prevention rules	`Windows` `macOS` `Linux`	*Execution prevention rule* is a set of criteria that the application takes into account when reacting to an object execution, for example when blocking object execution. The application identifies files by their paths or checksums calculated using MD5 and SHA256 hashing algorithms.
Use case-sensitive path	`Linux`	If this check box is selected, the application will treat rule creation as case-sensitive when creating execution prevention rules.

Settings	OS	Description
Cloud Sandbox	`Windows` `macOS` `Linux`	*Cloud Sandbox* is a technology that lets you detect advanced threats on a computer. Kaspersky Endpoint Security automatically forwards detected files to Cloud Sandbox for analysis. Cloud Sandbox runs these files in an isolated environment to detect malicious activity and decides on the reputation of these files. Data on these files is then sent to Kaspersky Security Network. Therefore, if Cloud Sandbox has detected a malicious file, Kaspersky Endpoint Security will perform the appropriate action to eliminate this threat on all computers where this file is detected. A KSN connection is necessary to get information about the objects being analyzed.

Endpoint Detection and Response Expert (on-premise)

for Windows, macOS, and Linux

Endpoint Detection and Response Expert version 7.1 or earlier

Kaspersky Endpoint Security supports the Kaspersky Endpoint Detection and Response Expert component (version 7.1 and earlier, hereinafter also referred to as "EDR (KATA)") as part of the Kaspersky Anti Targeted Attack Platform solution. *Kaspersky Anti Targeted Attack Platform* is a solution designed for timely detection of sophisticated threats such as targeted attacks, advanced persistent threats (APT), zero-day attacks, and others. Kaspersky Anti Targeted Attack Platform includes three functional units:

- Kaspersky Anti Targeted Attack Platform (*KATA*)
- Kaspersky Endpoint Detection and Response (*EDR (KATA)*)
- Network Detection and Response (*NDR (KATA)*)

You can purchase all functional units or individual functional units separately. For details about the solution, please refer to the Kaspersky Anti Targeted Attack Platform Help.

Kaspersky Endpoint Security is installed on individual computers on the corporate IT infrastructure and continuously monitors processes, open network connections, and files being modified. Information about events on the computer (telemetry data) is sent to the Kaspersky Anti Targeted Attack Platform server. In this case, Kaspersky Endpoint Security also sends information to the Kaspersky Anti Targeted Attack Platform server about threats discovered by the application as well as information about processing results for these threats.

The EDR (KATA) and NDR (KATA) integration is configured in the Kaspersky Security Center console. The built-in agent is then managed using the Kaspersky Anti Targeted Attack Platform console, including running tasks, managing quarantined objects, viewing reports, and other actions.

Endpoint Detection and Response Expert version 8.0 or later

Kaspersky Endpoint Security supports Kaspersky solutions of the Endpoint Detection and Response Expert class (version 8.0 and later, hereinafter also referred to as "EDR Expert (on-premise)"). Such solutions include, for example, Kaspersky Symphony XDR. *Endpoint Detection and Response Expert (on-premise)* is an enterprise cybersecurity solution that allows an organization to defend against most types of cyber risks and cover the most important threat propagation scenarios.

EDR Expert (on-premise) looks at logs and telemetry received from the corporate infrastructure to automatically detect attacks and allows investigating incidents using a unified investigation graph which combines all events collected in EDR Expert (on-premise), including events from Kaspersky applications and third-party information security products.

Components that Endpoint Detection and Response Expert requires

You must enable the following components for Endpoint Detection and Response Expert to work:

- File Threat Protection
- Web Threat Protection
- Mail Threat Protection
- Exploit Prevention
- Behavior Detection
- Host Intrusion Prevention
- AMSI Protection
- Background scan
- Kaspersky Security Network

The list of components may differ for various platforms.

Endpoint Detection and Response Expert (on-premise) component settings

Settings	OS	Description
Endpoint Detection and Response Expert solution	`Windows` `macOS` `Linux`	Endpoint Detection and Response Expert solutions that Kaspersky Endpoint Security can integrate with. • **Endpoint Detection and Response Expert (version 7.1 or earlier)**. • **Endpoint Detection and Response Expert (version 8.0 or later)**.
Connection settings	`Windows` `macOS` `Linux`	Manage the following KATA or telemetry collection server connection settings: • **Server connection timeout**. Maximum Central Node server response timeout. When the timeout runs out, Kaspersky Endpoint Security tries to connect to a different Central Node server. • **Server certificate**. TLS certificate for establishing a trusted connection with the Central Node server. You can get a TLS certificate in the Kaspersky Anti Targeted Attack Platform console (see instructions in the Kaspersky Anti Targeted Attack Platform Help). • **Use two-way authentication**. Two-way authentication when establishing a secure connection between Kaspersky Endpoint Security and the Central Node server. To use two-way authentication, you need to enable two-way authentication in the Central Node server settings, then get a crypto-container and set a password to protect the crypto-container. A *crypto-container* is a PFX archive with a certificate and a private key. You can get a crypto-container in the Kaspersky Anti Targeted Attack Platform console (see instructions in the Kaspersky Anti Targeted Attack Platform Help). After configuring the Central Node settings, you need to also enable two-way authentication in Kaspersky Endpoint Security settings and load a password-protected crypto-container. The crypto-container must be password-protected. It is not possible to add a crypto-container with a blank password.

Settings	OS	Description
Send sync request to server every (min) *(available only for Endpoint Detection and Response Expert version 7.1 or earlier)*	`Windows` `macOS` `Linux`	Frequency of synchronization requests sent to the server. During synchronization, Kaspersky Endpoint Security sends information about modified application settings and tasks.
Connection to KATA servers / Connection to telemetry collection servers	`Windows` `macOS` `Linux`	Enter the IP address (IPv4 or IPv6) and port to connect to the Kaspersky Anti Targeted Attack Platform server or to the telemetry collection server. You can add multiple addresses for the Central Node server (KATA) or for the telemetry collection server. Kaspersky Endpoint Security attempts to connect to the server using the first IP address. If a connection cannot be established, Kaspersky Endpoint Security tries to connect using the second IP address in the list and so on. The EDR (KATA) and EDR Expert (on-premise) solutions have different architectures. To process telemetry, EDR Expert (on-premise) uses a telemetry collection server, EDR (KATA) uses a Central Node server. Therefore, if you are integrating the application with EDR Expert (on-premise), you need to add a telemetry collection server.
Send telemetry to KATA / Send telemetry to telemetry collection servers	`Windows` `macOS` `Linux`	This function allows completely preventing telemetry from being sent to the KATA server or telemetry collection server, depending on the selected solution. For example, if you are using Kaspersky Anti Targeted Attack Platform together with another solution which also uses telemetry, you can turn off telemetry sending for KATA (EDR). This lets you optimize server load for these solutions. If you have the Managed Detection and Response solution and KATA (EDR) deployed, you can use MDR telemetry and create Threat Response tasks in KATA (EDR).
Send telemetry with IOA only *(available only for Endpoint Detection and Response Expert version 8.0 or later)*	`Windows` `Linux`	This allows optimizing telemetry and sending only telemetry with IOA. *Indicator of Attack (IOA)* is a rule that contains a description of suspicious behavior in the system that may indicate a targeted attack. The application compares ongoing behavior in the system with these rules and logs events that are indicative of a targeted attack. The application uses the *streaming scan* technology, which allows real time tracking of such events.
Maximum event transmission delay (sec)	`Windows` `macOS` `Linux`	The application synchronizes with the server to send events after the synchronization interval expires.
Maximum number of event packages	`Windows`	The application synchronizes with the server when the buffer is filled with events.
Enable request throttling	`Windows` `macOS` `Linux`	This feature helps optimize the load on the server. If this functionality is enabled, the application restricts the transmitted events. If the number of events exceeds the configured limits, Kaspersky Endpoint Security stops sending events. **Maximum number of events per hour**. The application analyzes the telemetry data stream and restricts the sending of events if the event stream exceeds the configured events-per-hour limit. Kaspersky Endpoint Security resumes sending events after an hour. If the application is installed on a server, the telemetry data stream is higher. For servers, it is recommended to increase the value to 60,000 events per hour. **Percentage of event limit excess**. The application sorts events by type (for example, "changes in the registry" events) and restricts transmission of events if the ratio of events of the same type to the total number of events exceeds the configured limit in percent. Kaspersky Endpoint Security resumes sending events when the ratio of other events to the total number of events becomes big enough again.
Connection to response servers *(available only for Endpoint Detection and Response Expert version 8.0 or later)*	`Windows` `macOS` `Linux`	Connection to response servers settings. Enter the response server IP address (IPv4 or IPv6) and port to connect to the server. You can add multiple response server addresses. Kaspersky Endpoint Security attempts to connect to the server using the first IP address. If a connection cannot be established, Kaspersky Endpoint Security tries to connect using the second IP address in the list and so on.

Settings	OS	Description

Connection settings
(available only for Endpoint Detection and Response Expert version 8.0 or later)
	`Windows`
	`macOS`
	`Linux`
		Configure the following for the response server connection:
		• **Server connection timeout**. Maximum response server response timeout. When the timeout runs out, Kaspersky Endpoint Security tries to connect to a different response server.
		• **Server certificate**. TLS certificate for establishing a trusted connection with the response server.
		• **Use two-way authentication**. Two-way authentication when establishing a secure connection between Kaspersky Endpoint Security and the response server. To use two-way authentication, you need to enable two-way authentication in the response server settings, then get a crypto-container and set a password to protect the crypto-container. A *crypto-container* is a PFX archive with a certificate and a private key. You can get a crypto-container in the Kaspersky Anti Targeted Attack Platform console (see instructions in the Kaspersky Anti Targeted Attack Platform Help). After configuring the response server settings, you need to also enable two-way authentication in Kaspersky Endpoint Security settings and load a password-protected crypto-container.
		The crypto-container must be password-protected. It is not possible to add a crypto-container with a blank password.

Network Detection and Response (KATA)

for Windows and Linux

Kaspersky Endpoint Security supports working with the Kaspersky Network Detection and Response component as part of the Kaspersky Anti Targeted Attack Platform (EDR (KATA)) solution. *Kaspersky Anti Targeted Attack Platform* is a solution designed for timely detection of sophisticated threats such as targeted attacks, advanced persistent threats (APT), zero-day attacks, and others. Kaspersky Anti Targeted Attack Platform includes three functional units:

- Kaspersky Anti Targeted Attack Platform (*KATA*)
- Kaspersky Endpoint Detection and Response (*EDR (KATA)*)
- Network Detection and Response (*NDR (KATA)*)

You can purchase all functional units or individual functional units separately. For details about the solution, please refer to the Kaspersky Anti Targeted Attack Platform Help.

Kaspersky Endpoint Security is installed on individual computers on the corporate IT infrastructure and continuously monitors processes, open network connections, and files being modified. Information about events on the computer (telemetry data) is sent to the Kaspersky Anti Targeted Attack Platform server. In this case, Kaspersky Endpoint Security also sends information to the Kaspersky Anti Targeted Attack Platform server about threats discovered by the application as well as information about processing results for these threats.

The EDR (KATA) and NDR (KATA) integration is configured in the Kaspersky Security Center console. The built-in agent is then managed using the Kaspersky Anti Targeted Attack Platform console, including running tasks, managing quarantined objects, viewing reports, and other actions.

The following components must be enabled for Network Detection and Response (KATA) to work:

- File Threat Protection
- Web Threat Protection
- Mail Threat Protection
- Exploit Prevention

- Behavior Detection
- Host Intrusion Prevention
- AMSI Protection
- Background scan
- Kaspersky Security Network

The list of components may differ for various platforms.

Network Detection and Response (KATA) component settings

Settings	OS	Description
Connection settings to KATA servers	Windows Linux	**Server connection timeout**. Maximum Central Node server response timeout. When the timeout runs out, Kaspersky Endpoint Security tries to connect to a different Central Node server. **Server certificate**. TLS certificate for establishing a trusted connection with the Central Node server. You can get a TLS certificate in the Kaspersky Anti Targeted Attack Platform console (see instructions in the Kaspersky Anti Targeted Attack Platform Help). **Use two-way authentication**. Two-way authentication when establishing a secure connection between Kaspersky Endpoint Security and the Central Node server. To use two-way authentication, you need to enable two-way authentication in the Central Node server settings, then get a crypto-container and set a password to protect the crypto-container. A *crypto-container* is a PFX archive with a certificate and a private key. You can get a crypto-container in the Kaspersky Anti Targeted Attack Platform console (see instructions in the Kaspersky Anti Targeted Attack Platform Help). After configuring the Central Node settings, you need to also enable two-way authentication in Kaspersky Endpoint Security settings and load a password-protected crypto-container. The crypto-container must be password-protected. It is not possible to add a crypto-container with a blank password.
Connection to KATA servers	Windows Linux	Settings for connecting to Kaspersky Anti Targeted Attack Platform servers. Enter the IP address (IPv4 or IPv6) and port of the Central Node server to connect. You can add multiple Central Node server addresses. Kaspersky Endpoint Security attempts to connect to the server using the first IP address. If a connection cannot be established, Kaspersky Endpoint Security tries to connect using the second IP address in the list and so on.
Send sync request to KATA server every (min)	Windows Linux	Frequency of synchronization requests sent to the server. During synchronization, Kaspersky Endpoint Security sends information about modified application settings and tasks.
Maximum event transmission delay (sec)	Windows Linux	The application synchronizes with the server to send events after the synchronization interval expires.
Enable request throttling	Windows Linux	This feature helps optimize the load on the server. If this functionality is enabled, the application restricts the transmitted events. If the number of events exceeds the configured limits, Kaspersky Endpoint Security stops sending events. **Maximum number of events per hour**. The application analyzes the telemetry data stream and restricts the sending of events if the event stream exceeds the configured events-per-hour limit. Kaspersky Endpoint Security resumes sending events after an hour. If the application is installed on a server, the telemetry data stream is higher. For servers, it is recommended to increase the value to 60,000 events per hour. **Percentage of event limit excess (%)**. The application sorts events by type (for example, "changes in the registry" events) and restricts transmission of events if the ratio of events of the same type to the total number of events exceeds the configured limit in percent. Kaspersky Endpoint Security resumes sending events when the ratio of other events to the total number of events becomes big enough again.

Sandbox

for Windows and Linux

Kaspersky Endpoint Security supports integration with the Kaspersky Sandbox solution and the Sandbox component, which is part of the Kaspersky Anti Targeted Attack Platform solution. The *Sandbox* component detects and automatically blocks advanced threats on computers. Sandbox analyzes object behavior to detect malicious activity and activity characteristic of targeted attacks on the IT infrastructure of the organization. Sandbox analyzes and scans objects on special servers with deployed virtual images of Microsoft Windows operating systems (the Sandbox servers). For details about the solution, please refer to the Kaspersky Sandbox Help and Kaspersky Anti Targeted Attack Platform Help.

The KATA Sandbox component allows scanning files not only automatically, but also manually from the file context menu.

KATA Sandbox requires Kaspersky Anti Targeted Attack Platform 7.0 or later to be deployed.

Sandbox component settings

Settings	OS	Description
Integration mode	`Windows` `Linux`	**Kaspersky Sandbox**. Integration with Kaspersky Sandbox solution. The application sends files to be scanned in Kaspersky Sandbox only in automatic mode. **KATA Sandbox**. Integration with the Sandbox component of the Kaspersky Anti Targeted Attack Platform solution. You can select the file submission mode for scanning: • **Manually**. The user manually submits the file for scanning from the context menu (**Send to Sandbox**). • **Automatically**. The application automatically detects objects and submits them to Sandbox for scanning. • **Combined**. The application automatically sends objects for scanning to Sandbox. If necessary, the user can also submit individual files for scanning from the context menu.
Connection to Sandbox servers	`Windows` `Linux`	**Kaspersky Sandbox**. Sandbox server connection settings. The servers use deployed virtual images of Microsoft Windows operating systems to run objects that need to be scanned. Enter the Sandbox server IP address (IPv4, IPv6, or DNS) and port to connect to the server. **KATA Sandbox**. Central Node server connection settings. Central Node chooses optimal settings for scanning and balances load between Sandbox servers. Enter the Central Node server IP address (IPv4, IPv6, or DNS) and port to connect to the server.
Server connection settings	`Windows` `Linux`	**Server connection timeout**. Connection timeout for the Sandbox server (for Kaspersky Sandbox) or Central Node server (for KATA). After the configured timeout elapses, Kaspersky Endpoint Security sends a request to the next server. You can increase the connection timeout for the server if your connection speed is low or if the connection is unstable. The recommended request timeout is 0.5 seconds or less. **Request queue**. Size of the request queue folder. When sending multiple objects for scanning in Sandbox, Kaspersky Endpoint Security creates a request queue. By default, the size of the request queue folder is limited to 100 MB. After the maximum size is reached, Sandbox stops adding new requests to the queue and sends the corresponding event to Kaspersky Security Center. You can configure the size of the request queue folder depending on your server configuration. **Server TLS certificate**. To configure a trusted connection with the Sandbox server (for Kaspersky Sandbox) or Central Node server (for KATA), you must prepare a TLS certificate. You must then add the certificate to the computer by using a policy. You also need to add the certificate to the Sandbox server (for Kaspersky Sandbox) or Central Node server (for KATA). **Use two-way authentication** (only for KATA Sandbox). Two-way authentication when establishing a secure connection between Kaspersky Endpoint Security and the Central Node server. To use two-way authentication, you need to enable two-way authentication in the Central Node server settings, then get a crypto-container and set a password to protect the crypto-container. A *crypto-container* is a PFX archive with a certificate and a private key. You can get a crypto-container in the Kaspersky Anti Targeted Attack Platform console (see instructions in the Kaspersky Anti Targeted Attack Platform Help). After configuring the Central Node settings, you need to also enable two-way authentication in Kaspersky Endpoint Security settings and load a password-protected crypto-container.
Action on threat detection	`Windows` `Linux`	**Move copy to Quarantine, delete object**. If this option is selected, Kaspersky Endpoint Security deletes the malicious object found on the computer. Before deleting an object, Kaspersky Endpoint Security creates a backup copy of it in case you need to restore the object later. Kaspersky Endpoint Security moves the backup copy to Quarantine. **Run Critical Areas Scan**. If this option is selected, Kaspersky Endpoint Security runs the *Critical Areas Scan* task. By default, Kaspersky Endpoint Security scans the kernel memory, running processes, and boot sectors. **Create IOC Scan task**. If this option is selected, Kaspersky Endpoint Security automatically creates the *IOC Scan (autonomous IOC scan task)*. For this task, you can configure the run mode, scan scope, and action on IOC detection (*Move copy to Quarantine, delete object* or *Run Critical Areas Scan*). To modify other settings of the *IOC Scan* task, go to the task settings.

Settings	OS	Description
IOC Scan scope	`Windows` `Linux`	**Critical file areas**. If this option is selected, Kaspersky Endpoint Security scans for IOCs only in the important file areas of the computer, such as selected user profile directories and critical system objects. **File areas on system drive of the computer**. If this option is selected, Kaspersky Endpoint Security does an IOC scan on the system drive of the computer. The application also scans for IOCs in the file path where the threat was detected, regardless of the selected scan scope.
Run IOC Scan task	`Windows` `Linux`	**Manually**. Run mode in which you can start the *IOC Scan* task manually at a time when it is convenient for you. **Automatically**. Run mode in which Kaspersky Endpoint Security runs the *IOC Scan* task automatically whenever a threat is detected. `Windows` **Run only when the computer is idle**. Run mode in which Kaspersky Endpoint Security runs the *IOC Scan* task if the screensaver is active or the screen is locked. If the user unlocks the computer, Kaspersky Endpoint Security pauses the task. This means that the task can take several days to complete.

Integration with KUMA

for Windows and Linux

Kaspersky Endpoint Security supports the Kaspersky Unified Monitoring and Analysis Platform solution. *Kaspersky Unified Monitoring and Analysis Platform (KUMA)* is a security information and event management (SIEM) solution for the IT infrastructure of organizations. KUMA allows detecting, analyzing, and mitigating security threats before they can cause harm.

Kaspersky Endpoint Security is installed on individual computers on the corporate IT infrastructure and continuously monitors processes, open network connections, and files being modified. Information about events on the computer (telemetry) is sent to the Kaspersky Unified Monitoring and Analysis Platform (KUMA) server.

By default, sending events to the KUMA server is disabled. To ensure proper functioning of KUMA, first enable the sending of telemetry to KUMA in the General Settings → Telemetry Settings section.

Kaspersky Endpoint Security does not provide all functionality of an agent for KUMA. The application only sends events to KUMA without markup. To access all KUMA functionality, you need to purchase a license and deploy the solution in accordance with the KUMA Administrator's guide.

KUMA component settings

Settings	OS	Description
Server connection settings	`Windows` `Linux`	**Server connection timeout**. Maximum KUMA server response timeout. When the timeout runs out, Kaspersky Endpoint Security tries to connect to a different KUMA server. **Server certificate**. TLS certificate for establishing a trusted connection with the KUMA server. You can get a TLS certificate in the Kaspersky Unified Monitoring and Analysis Platform console (see instructions in Kaspersky Unified Monitoring and Analysis Platform). **Use two-way authentication**. Two-way authentication when establishing a secure connection between Kaspersky Endpoint Security and KUMA. To use two-way authentication, in the KUMA console, in tcp connector settings, you must select the **Custom PFX** TLS mode (see the settings for the tcp type connector in the Kaspersky Unified Monitoring and Analysis Platform Help). Then you must get a cryptocontainer and set a password to protect the cryptocontainer. A *crypto-container* is a PFX archive with a certificate and a private key. After configuring KUMA settings, you need to also enable two-way authentication in Kaspersky Endpoint Security settings and load a password-protected crypto-container. The crypto-container must be password-protected. It is not possible to add a crypto-container with a blank password.
Maximum delay when sending events (sec)	`Windows` `Linux`	The application synchronizes with the server to send events after the synchronization interval expires.

Settings	OS	Description
Use TLS encryption	`Windows` `Linux`	If this functionality is enabled, Kaspersky Endpoint Security uses a TLS certificate to establish a trusted connection with the KUMA server.
Connection to KUMA servers	`Windows` `Linux`	KUMA server connection settings. Specify an IP address (IPv4 or IPv6), connection protocol, and a port for the connection to the server. You can add multiple KUMA server addresses. Kaspersky Endpoint Security connects to the first KUMA server in the list. If the connection fails, Kaspersky Endpoint Security connects to the second KUMA server in the list and so on.

Light Agent mode

SVM discovery settings

for Windows and Linux

When you start Light Agent, it establishes and maintains a connection to the virtual machine SVM (Secure Virtual Machine). A Protection Server is deployed on the SVM. The *Protection Server* is the Kaspersky Security for Virtualization Light Agent solution component that scans files for viruses and other malware, updates anti-virus databases and manages license keys. Light Agent sends file fragments that need scanning to the SVM. Scan results are available for all virtual machines with Light Agent installed (the SharedCache technology). Thus, the SharedCache technology increases the solution efficiency and provides a faster response to threats.

The infrastructure of the organization may contain many virtual machines with Light Agent installed and many SVMs. The Integration Server component is intended for interaction between the solution components and the virtual infrastructure. The *Integration Server* is a component of the Kaspersky Security for Virtualization Light Agent solution that generates a list of available SVMs and transfers this data to Light Agents, participates in the discovery of SVMs by Light Agents, protects the connection between Light Agents and SVMs, and performs other functions.

SVM discovery settings

Settings	OS	Description
Use Integration Server	`Windows` `Linux`	An Integration Server is useful in large-scale virtual infrastructures because the Integration Server automatically balances load among SVMs. Enter the Integration Server connection settings: • IP address in IPv4 format or fully qualified domain name (FQDN) of the device on which the Integration Server is installed. • Port number for connecting to the Integration Server. By default, port 7271 is specified. • Password for the Integration Server administrator (admin account password).
Use a custom list of SVM addresses	`Windows` `Linux`	Create a list of SVMs that Light Agent can connect to. Specify the IP address in IPv4 format or the fully qualified domain name (FQDN) of SVM. You can enter several IP addresses or full domain names of the SVMs by typing them from a new line. In the list of SVM addresses, specify only full domain names (FQDN) that are matched by a single IP address. Using a fully qualified domain name that corresponds to multiple IP addresses can lead to errors in the solution.

Integration Server connection settings

for Windows and Linux

Integration Server is the solution component that enables the interaction of Kaspersky Security for Virtualization Light Agent with the virtual infrastructure. The Integration Server maintains a list of SVMs that can be connected to. Light Agent establishes a connection with the Integration Server and gets the list of SVM addresses.

An Integration Server is useful in large-scale virtual infrastructures because the Integration Server automatically balances load among SVMs. The Integration Server gets information about available SVMs, analyzes it and provides Light Agents with a list of Protection Servers (SVM) that are optimal for connection.

Integration Server connection settings

Settings	OS	Description
Address	`Windows` `Linux`	IP address in IPv4 format or fully qualified domain name (FQDN) of the Integration Server. If the address is specified as a NetBIOS name, localhost or 127.0.0.1, connection to the Integration Server completes with an error.
Port	`Windows` `Linux`	Port number for connecting to the Integration Server. By default, port 7271 is specified.
Authentication on the Integration Server	`Windows` `Linux`	Password for the Integration Server administrator (`admin` account password). After connecting to the Integration Server with administrator rights, the policy automatically receives the password of the `agent` account, which is used to connect Light Agents to the Integration Server.

SVM connection tag

for Windows and Linux

Multiple Light Agents can connect to an SVM. To balance the Light Agent connections, you can specify a separate list of SVMs in the SVM discovery settings section. If you are using an Integration server for SVM discovery, you can use *tags* to balance Light Agent connections to SVMs. That is, for a Light Agent, you can assign a list of SVMs for connecting using a tag. To do so, you must assign a tag to the Light Agent and specify this tag in SVM settings. For details about specifying tags in SVM settings, see the Kaspersky Security for Virtualization Light Agent Help.

Example: The Kaspersky Endpoint Detection and Response Optimum solution is deployed in your infrastructure for designated virtual machine hosts. In this case, you can assign the `[EDROptimum]` tag to the Light Agent to make it connect to the SVMs that has the EDR Optimum (EDR Optimum Add-on) license key added. As a result, you can use EDR Optimum functionality on the virtual machine with the Light Agent. When connecting the Light Agent to an SVM without an EDR Optimum license key, Kaspersky Endpoint Detection and Response Optimum functionality is unavailable.

Select the **Use connection tag** check box to connect Light Agents to SVMs using tags. Enter SVM connection tag. For a tag, you can enter a text string up to 255 characters long. You can use any character except the `;` character.

SVM selection algorithm

for Windows and Linux

The infrastructure of the organization may have multiple deployed SVMs to which Light Agents can connect. To balance the load on the network and resources of the virtual infrastructure, you need to distribute the Light Agents among the SVMs.

SVM selection algorithm settings

Settings	OS	Description
Use the standard SVM selection algorithm	`Windows` `Linux`	If this algorithm is used, after installation and startup, the Light Agent on the virtual machine chooses to connect to an SVM that is *local* with respect to the Light Agent. To identify an SVM as local, Light Agent mainly uses the location of the SVM in the virtual infrastructure. If SVMs are located in the same hypervisor as the Light Agent, Light Agent considers such SVMs local. In some virtual infrastructures, you must manually specify local SVMs using a configuration file. If no local SVMs suitable for connection are to be found, the Light Agent selects an SVM to which the least number of Light Agents is connected, regardless of the position of the SVM in the virtual infrastructure.
Use the extended SVM selection algorithm	`Windows` `Linux`	The extended algorithm lets you manually specify local SVM selection criteria or disable local SVM discovery. To do so, you need to select the SVM path in the virtual infrastructure: Hypervisor, Cluster, or Data center. That is, you must select the scope in which the local SVMs is to be discovered. If the Light Agent cannot connect to a local SVM in the configured discovery scope, it stops trying to connect. The extended algorithm also allows disabling local SVMs discovery for the Light Agent. In this case, Light Agent selects SVMs with the least number of connected Light Agents in the entire virtual infrastructure.

Protecting the connection

for Windows and Linux

You can configure encryption of the connection between Light Agents and Protection Server. To do this, you need to enable the encryption of the data channel between Light Agent and the Protection Server in the Protection Server settings on the SVM and in the Light Agent settings.

A Light Agent for which connection protection is enabled can only connect to SVMs for which encryption of the data channel between the Light Agent and the Protection Server is enabled. A Light Agent for which connection protection is disabled can only connect to SVMs for which channel encryption is disabled or an insecure connection between the Protection Server and the Light Agent is allowed.

For details about configuring connection protection on the Protection Server, see the Kaspersky Security for Virtualization Light Agent Help.

Protecting the connection using encryption may impact the performance of Kaspersky Security for Virtualization Light Agent.

Appendix 6. Settings for interaction with external services

Kaspersky Endpoint Security uses the following network settings and encryption settings for interaction with external services.

Settings for interaction with external services

Network address of the service and protocol	Description
`activation-v2.kaspersky.com/activationservice/activationservice.svc` Protocol: `HTTPS` Port: `443`	Application activation.

Network address of the service and protocol	Description
s00.upd.kaspersky.com s01.upd.kaspersky.com s02.upd.kaspersky.com s03.upd.kaspersky.com s04.upd.kaspersky.com s05.upd.kaspersky.com s06.upd.kaspersky.com s07.upd.kaspersky.com s08.upd.kaspersky.com s09.upd.kaspersky.com s10.upd.kaspersky.com s11.upd.kaspersky.com s12.upd.kaspersky.com s13.upd.kaspersky.com s14.upd.kaspersky.com s15.upd.kaspersky.com s16.upd.kaspersky.com s17.upd.kaspersky.com s18.upd.kaspersky.com s19.upd.kaspersky.com Protocol: HTTPS Port: 443	Updating application databases and modules.

Network address of the service and protocol	Description
p00.upd.kaspersky.com p01.upd.kaspersky.com p02.upd.kaspersky.com p03.upd.kaspersky.com p04.upd.kaspersky.com p05.upd.kaspersky.com p06.upd.kaspersky.com p07.upd.kaspersky.com p08.upd.kaspersky.com p09.upd.kaspersky.com p10.upd.kaspersky.com p11.upd.kaspersky.com p12.upd.kaspersky.com p13.upd.kaspersky.com p14.upd.kaspersky.com p15.upd.kaspersky.com p16.upd.kaspersky.com p17.upd.kaspersky.com p18.upd.kaspersky.com p19.upd.kaspersky.com downloads.kaspersky-labs.com Protocol: HTTP Port: 80	Updating application databases and modules.
downloads.upd.kaspersky.com Protocol: HTTPS Port: 443	• Updating application databases and modules. • Checking access to Kaspersky servers. If there are errors accessing servers through the system DNS, the application uses a public DNS. This is needed for updating application databases and maintaining device security. The application will use the following public DNSes in this order: 1. Google Public DNS (8.8.8.8). 2. Cloudflare DNS (1.1.1.1). 3. Alibaba Cloud DNS (223.6.6.6). 4. Quad9 DNS (9.9.9.9). 5. CleanBrowsing (185.228.168.168). The application's requests may contain domain addresses and the user's external IP address, since the application establishes a TCP/UDP connection with the DNS server. This information is necessary, for example, to check the certificate of a web resource when interacting via HTTPS. If the application is using a public DNS server, data processing rules are governed by the Privacy Policy of the corresponding service.
ds.kaspersky.com Protocol: HTTPS Port: 443	Using Kaspersky Security Network.

Network address of the service and protocol	Description

`ksn-a-stat-geo.kaspersky-labs.com`
`ksn-file-geo.kaspersky-labs.com`
`ksn-verdict-geo.kaspersky-labs.com`
`ksn-url-geo.kaspersky-labs.com`
`ksn-a-p2p-geo.kaspersky-labs.com`
`ksn-cinfo-geo.kaspersky-labs.com`
Protocol: `KSN`
Port: `443`, `1443`
	Using Kaspersky Security Network.

`click.kaspersky.com` Protocol: `HTTPS` Port: `443`	Following links from the user interface.

`crl.kaspersky.com`
`ocsp.kaspersky.com`
Protocol: `HTTP`
Port: `80`
	Public Key Infrastructure (PKI).
	These servers (crl.kaspersky.com) are part of the public key infrastructure (PKI) and are required for verifying the validity status of Kaspersky digital signature certificates. The CRL server provides a list of revoked certificates. The OCSP service allows querying the status of a specific certificate in real time. These components maintain the security of interaction with digital certificates and provide protection against possible attacks.

Interoperability with Kaspersky solutions

The Kaspersky Endpoint Security application supports interoperability with some Kaspersky solutions. For optimal interoperability of the applications, follow the guidelines in this section.

Kaspersky Security Center Linux

When using Kaspersky Endpoint Security for Linux together with Kaspersky Security Center Linux, we recommend using the settings described in this article.

Recommended settings

Application component	Recommended component state	Recommendations
File Threat Protection	Enabled	Add protection exclusions: • `/opt/kaspersky/klnagent/sbin/klnagent` • `/opt/kaspersky/klnagent64/sbin/klnagent` • `/var/lib/postgresql/<PostgreSQL version>`
Malware Scan	Enabled	
Removable drives scan	Disabled	–
Behavior Detection	Enabled	Use the default settings.
Network Threat Protection	Enabled	Select the eBPF network traffic interception mode `NetInterceptorMode=UseEBPF`
Web Threat Protection	Enabled	Use the default settings.
Anti-Cryptor	Disabled	–
Container Scan	Disabled	–
Inventory	Disabled	–
Device Control	Disabled	–

Application component	Recommended component state	Recommendations
Application Control	Disabled	–
Firewall	Disabled	–
Web Control	Disabled	–
System Integrity Monitoring	Enabled	Add scan scopes: • /etc • /opt/kaspersky/kesl/ • /opt/kaspersky/ksc64
System Integrity Check	Disabled	–
Endpoint Detection and Response Expert (on-premises)	Enabled	Use the default settings.
Endpoint Detection and Response Expert (cloud)	Disabled	–
Managed Detection and Response	Enabled	Use the default settings.
Network Detection and Response (KATA)	Disabled	–
Integration with KUMA	Disabled	–
Sandbox	Disabled	–
Response actions	Some limitations apply	For response actions, you cannot exclude objects required by Kaspersky Endpoint Security for Linux, as well as critical system objects. When initiating response actions, make sure that they do not disrupt the system and the applications that you use.
Graphical interface	Not set	–
Kaspersky Endpoint Security for Linux management web plug-in	Installed	Use the default settings.
Kaspersky Endpoint Security for Linux MMC management plug-in	Installed	Use the default settings.
Network Agent	Installed	Use the default settings.
File operation interception mechanism	System interception mechanism based on fanotify	Use the default settings.
System event telemetry source	eBPF+auditd	`TelemetrySource=Default`
Exploit Prevention	Disabled	–
Using Kaspersky Security Network	Enabled	Use the default settings.
Mail Threat Protection	Enabled	Use the default settings.
BadUSB Attack Prevention	Disabled	–
Global exclusions	Configured	If you install Kaspersky Security Center using quick install script, add mount points to exclusions: `/var/lib/postgresql/<PostgreSQL version>/main` where `<PostgreSQL version>` is the number of the PostgreSQL DBMS version that you use.

Network Detection and Response (KATA)

When using Kaspersky Endpoint Security for Linux together with Network Detection and Response (KATA), we recommend using the settings described in this article.

Also review the documentation of the Kaspersky Anti Targeted Attack (KATA) Platform solution.

Settings for Kaspersky Endpoint Security for Linux on servers with the Sensor component

Recommended settings for Sensor servers

Application component	Recommended component state	Recommendations
File Threat Protection	Enabled	Add protection exclusions: • `[container-name:*kata_scanner*]/var/opt/kaspersky/apt-collector/spool` • `[container-name:*kata_scanner*]/data/var/opt/kaspersky/apt-collector/spool` • `[container-name:*kata_scanner*]/storage/data/var/opt/kaspersky/apt-collector/spool` • `[container-name:*preprocessor_icap*]/tmp/content` • `[container-name:*preprocessor_span*]/tmp/suricata` • `[container-name:*preprocessor_span*]/mnt/kaspersky/nta` • `[container-name:*preprocessor_smtp*]/tmp/` • `[container-name:*preprocessor_pop*]/tmp/` • `[container-name:*sandbox_scan*]/tmp/` • `[container-name:*]/var/log/kaspersky`
Malware Scan	Disabled	–
Removable drives scan	Disabled	–
Behavior Detection	Enabled	Use the default settings.
Network Threat Protection	Disabled	–
Web Threat Protection	Disabled	–
Anti-Cryptor	Disabled	–
Container Scan	Enabled	Enable Container Monitoring to scan running containers and namespaces in real time `NamespaceMonitoring=Yes`
Inventory	Disabled	–
Device Control	Disabled	–
Application Control	Disabled	–
Firewall	Disabled	–
Web Control	Disabled	–
System Integrity Monitoring	Disabled	–
System Integrity Check	Disabled	–
Endpoint Detection and Response Expert (on-premises)	Disabled	–
Endpoint Detection and Response Expert (cloud)	Disabled	–

Application component	Recommended component state	Recommendations
Managed Detection and Response	Disabled	–
Network Detection and Response (KATA)	Disabled	–
Integration with KUMA	Disabled	–
Sandbox	Disabled	–
Response actions	Disabled	–
Graphical interface	Not set	–
Network Agent	Installed	Use the default settings.
File operation interception mechanism	System interception mechanism based on fanotify	Use the default settings.
System event telemetry source	eBPF+auditd	`TelemetrySource=Default`
Exploit Prevention	Disabled	–
Using Kaspersky Security Network	Enabled	Use the default settings.
Mail Threat Protection	Disabled	–
BadUSB Attack Prevention	Disabled	–
Trace files	–	Change the directory for trace files to a directory outside the `/var/log/kaspersky` directory. For example, use the `/var/log/kesl` directory.
Global exclusions	Configured	Exclude the following mount points: • `/apt_spool` • `/storage` • `/var/lib/postgresql` • `/var/lib/clickhouse` • `/tmp` • `/tmp/*` The exclusion of the /tmp and /tmp/* mount points applies to NDR (KATA) servers version 10.0 and earlier. • `/varog/kaspersky` • `/var/opt/kaspersky` • `/data` • `/data/volumes/dumps`

Settings for Kaspersky Endpoint Security for Linux on servers with the Central Node component

Recommended settings for Central Node servers

Application component	Recommended component state	Recommendations
File Threat Protection	Enabled	Add protection exclusions: • `[container-name:*edr_synchronizer*]/tmp/` • `[container-name:*ids_alert_syncer*]/tmp/` • `[container-name:kata_product_main_1_kata_scanner]/storage` • `[container-name:kata_product_main_1_postgresql_server]/var/lib/postgresql` • `[container-name:kata_product_main_1_clickhouse]/var/lib/clickhouse` • `[container-name:*kata_scanner*]/storage/data/var/opt/kaspersky/apt-collector/spool` • `[container-name:*kata_scanner*]/var/opt/kaspersky/apt-agents` • `[container-name:*kata_scanner*]/var/lib/nginx/body` • `[container-name:*kata_scanner*]/apt_spool` • `[container-name:*kata_scanner*]/tmp/` • `[container-name:*kafka*]/tmp/` • `[container-name:*ksn_proxy*]/tmp/` • `[container-name:*preprocessor_smtp*]/tmp/` • `[container-name:*preprocessor_pop*]/tmp/` • `[container-name:*preprocessor_icap*]/tmp/` • `[container-name:*preprocessor_span*]/tmp/` • `[container-name:*sandbox_scan*]/tmp/` • `[container-name:*statistics_clickhouse_importer*]/tmp/` • `[container-name:*updates_consistency_checker*]/tmp/` • `[container-name:*web_backend*]/tmp/` • `[container-name:*]/var/opt/kaspersky` • `/tmp/` • `/var/log/kaspersky`
Malware Scan	Disabled	–
Removable drives scan	Disabled	–
Behavior Detection	Enabled	Use the default settings.
Network Threat Protection	Disabled	–
Web Threat Protection	Disabled	–
Anti-Cryptor	Disabled	–
Container Scan	Enabled	Enable Container Monitoring to scan running containers and namespaces in real time `NamespaceMonitoring=Yes`
Inventory	Disabled	–
Device Control	Disabled	–
Application Control	Disabled	–
Firewall	Disabled	–
Web Control	Disabled	–
System Integrity Monitoring	Disabled	–
System Integrity Check	Disabled	–
Endpoint Detection and Response Expert (on-premises)	Disabled	–

Application component	Recommended component state	Recommendations
Endpoint Detection and Response Expert (cloud)	Disabled	–
Managed Detection and Response	Disabled	–
Network Detection and Response (KATA)	Disabled	–
Integration with KUMA	Disabled	–
Sandbox	Disabled	–
Response actions	Disabled	–
Graphical interface	Not set	–
Network Agent	Installed	Use the default settings.
File operation interception mechanism	System interception mechanism based on fanotify	Use the default settings.
System event telemetry source	eBPF+auditd	`TelemetrySource=Default`
Exploit Prevention	Disabled	–
Using Kaspersky Security Network	Enabled	Use the default settings.
Mail Threat Protection	Disabled	–
BadUSB Attack Prevention	Disabled	–
Trace files	–	Change the directory for trace files to a directory outside the `/var/log/kaspersky` directory. For example, use the `/var/log/kesl` directory.
Global exclusions	Configured	Add mount points to exclusions: • `/apt_spool` • `/storage` • `/var/lib/postgresql` • `/var/lib/clickhouse` • `/tmp` • `/tmp/*` The exclusion of the /tmp and /tmp/* mount points applies to NDR (KATA) servers version 10.0 and earlier. • `/var/log/kaspersky` • `/var/opt/kaspersky` • `/data`

Kaspersky Unified Monitoring and Analysis Platform

When using Kaspersky Endpoint Security for Linux together with Kaspersky Unified Monitoring and Analysis Platform, we recommend using the settings described in this article.

Application component	Recommended component state	Recommendations
File Threat Protection	Enabled	Add protection exclusions: • `/opt/kaspersky/kuma` • `/opt/kaspersky/klnagent/sbin/klnagent` • `/opt/kaspersky/klnagent64/sbin/klnagent`
Malware Scan	Disabled	–
Removable drives scan	Disabled	–
Behavior Detection	Enabled	Exclude the process from scanning `/opt/kaspersky/kuma`
Network Threat Protection	Enabled	Disable blocking of the compromised device `BlockAttackingHosts=No`
Web Threat Protection	Disabled	–
Anti-Cryptor	Disabled	–
Container Scan	Disabled	–
Inventory	Disabled	–
Device Control	Disabled	–
Application Control	Disabled	–
Firewall	Disabled	–
Web Control	Disabled	–
System Integrity Monitoring	Disabled	–
System Integrity Check	Disabled	–
Endpoint Detection and Response Expert (on-premises)	Disabled	–
Endpoint Detection and Response Expert (cloud)	Disabled	–
Managed Detection and Response	Disabled	–
Network Detection and Response (KATA)	Disabled	–
Integration with KUMA	Disabled	–
Sandbox	Disabled	–
Response actions	Disabled	–
Graphical interface	Not set	–
Network Agent	Installed	Use the default settings.
File operation interception mechanism	System interception mechanism based on fanotify	Use the default settings.
System event telemetry source	eBPF+auditd	`TelemetrySource=Default`
Exploit Prevention	Disabled	–
Using Kaspersky Security Network	Enabled	Use the default settings.
Mail Threat Protection	Disabled	–
BadUSB Attack Prevention	Disabled	–

Sources of information about Kaspersky Endpoint Security

Kaspersky Endpoint Security page in the Knowledge Base

Knowledge Base is a section on the Technical Support website.

On the Kaspersky Endpoint Security page in the Knowledge Base, you can read articles that provide useful information, recommendations, and answers to frequently asked questions on how to purchase, install, and use the application.

Articles in the Knowledge Base may provide answers to questions that relate both to Kaspersky Endpoint Security as well as to other Kaspersky applications. Articles in the Knowledge Base may also contain news from Technical Support.

Discussion of Kaspersky applications in the Forum

If your question does not require an urgent answer, you can discuss it with Kaspersky experts and other users in our Forum.

In the Forum, you can view existing topics, post your own comments, and create new discussion topics.

Glossary

Activating the application

Switching the application to the fully functional mode. Application activation is performed during or after the installation of the application. You need an activation code or a key file to activate the application.

Active key

A key that is currently used by the application.

Active policy

Policy currently used by the application to control data leaks. The application can use several policies at the same time.

Administration group

A set of devices combined in Kaspersky Security Center in accordance with the functions they perform and the set of Kaspersky applications installed on them. Devices are grouped to simplify administration as the group of devices can be managed as a single entity. An administration group can include other groups. For each application installed in the administration group, group policies and group tasks can be created.

Administration Server

A component of Kaspersky Security Center that centrally stores information about all Kaspersky applications installed within the corporate network. It can also be used to manage these applications.

Anti-Cryptor

Malicious activity of ransomware aimed at encrypting files with user data. Files thus encrypted cannot be read or used.

Application databases

Databases that contain information about computer security threats known to Kaspersky as of when the databases are released. Application databases are created by Kaspersky experts and updated hourly.

Application settings

Application settings that are common to all types of tasks and govern the overall operation of the application, such as application performance settings, reporting settings, and backup settings.

Database of malicious web addresses

A list of web addresses whose content may be considered to be dangerous. The list is created by Kaspersky specialists. It is regularly updated and is included in the Kaspersky application distribution kit.

Database of phishing web addresses

A list of web addresses which Kaspersky specialists have determined to be phishing-related. The database is regularly updated and is part of the Kaspersky application distribution kit.

Disinfection

A method of processing infected objects that results in complete or partial recovery of data. Not all infected objects can be disinfected.

Exclusion

Exclusion is an object excluded from the Kaspersky application scan. You can exclude from scan files of certain formats, file masks, a certain area (for example, a folder or an application), application processes, or objects by name, according to the Virus Encyclopedia classification. Each task can be assigned a set of exclusions.

False positive

A situation when a Kaspersky application considers a non-infected object to be infected because the object's code is similar to that of a virus.

File mask

Representation of a file name using wildcards. The standard wildcards used in file masks are * and ?, where * is any number of any characters, and ? is any single character.

Group policy

See Policy.

Group task

A task assigned to an administration group and performed on all managed devices included in this administration group.

Infected object

An object which includes a portion of code that completely matches the part of a known malware code. Kaspersky experts do not recommend accessing such objects.

Integration Server

Kaspersky Endpoint Security for Virtualization Light Agent component. Interacts between Kaspersky Endpoint Security components and the virtual infrastructure.

Kaspersky update servers

Kaspersky HTTP and FTP servers from which Kaspersky applications download database and application module updates.

License

A time-limited right to use the application, granted under the End User License Agreement.

License certificate

A document that Kaspersky transfers to the user together with the key file or activation code. It contains information about the license granted to the user.

Light Agent

Kaspersky Endpoint Security for Virtualization Light Agent component. It is installed on each virtual machine that needs to be protected.

Policy

A policy determines the application settings and manages the access to configuration of an application installed on devices within an administration group. An individual policy must be created for each application. You can create an unlimited number of various policies for applications installed on the devices in each administration group, but only one policy can be applied to each application at a time within an administration group.

Proxy server

A computer network service which allows users to make indirect requests to other network services. First, a user connects to a proxy server and requests a resource (e.g., a file) located on another server. Then the proxy server either connects to the specified server and obtains the resource from it or returns the resource from its own cache (if the proxy has its own cache). In some cases, a user's request or a server's response can be modified by the proxy server for certain purposes.

Reserve key

A key that certifies the right to use the application but is not currently being used.

SIEM system

Security Information and Event Management system. A solution for managing information and events in the security system of an organization.

Startup objects

A set of applications needed for the operating system and software that is installed on the computer to start and operate correctly. These objects are executed every time the operating system is started. There are viruses capable of infecting such objects specifically, which may lead, for example, to blocking of operating system startup.

Subscription

Enables use of the application with the selected settings (expiration date and the number of devices). You can pause or resume your subscription, renew it automatically, or cancel it.

SVM

Secure virtual machine – a special virtual machine on which the scanserver service (Protection Server, a component of Kaspersky Endpoint Security for Virtualization Light Agent) is installed.

Trusted device

Device that can be fully accessed at any time by the users listed under the trusted device settings.

Information about third-party code

Information about third-party code is contained in the file legal_notices.txt located in the application installation folder.

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