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Kaspersky Security Center 14 Linux

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Kaspersky Security Center 14 Linux Help

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What's new

Kaspersky Security Center 14 Linux

Kaspersky Security Center 14 Linux has several new features and improvements:

- Besides the *Download updates to the Administration Server repository* task, anti-virus databases for Kaspersky security applications can now be downloaded through the *Download updates to the repositories of distribution points* task.

- Anti-virus databases and application modules on the managed devices can be propagated and updated through Administration Server or distribution points. You can choose an update scheme optimal for your organization, to reduce the load on Administration Server and optimize data traffic on the corporate network.

- Kaspersky Security Center downloads from Kaspersky update servers only those updates that are requested by the Kaspersky security applications. This reduces the size of the downloaded data.

- You can now use the diff files feature to download anti-virus databases and software modules. A diff file describes the differences between two versions of a file of a database or software module. The usage of diff files saves traffic inside your company's network because diff files occupy less space than entire files of databases and software modules.

- The *Update verification* task was added. By using this task, you can automatically check the downloaded updates for operability and errors before you install the updates on the managed devices.

- Kaspersky Security Center now supports Kaspersky Industrial CyberSecurity for Linux Nodes 1.3.

About Kaspersky Security Center Linux

The section contains information about the purpose of Kaspersky Security Center Linux, its main features and components, and ways to purchase Kaspersky Security Center Linux.

Kaspersky Security Center Linux (also referred to as Kaspersky Security Center) is designed to deploy and manage protection of Linux® devices by using Linux-based Administration Server to meet the requirements of pure Linux environments.

Kaspersky Security Center Linux enables you to install Kaspersky security applications on devices on a corporate network, remotely run scan and update tasks, and manage the security policies of managed applications. As an administrator, you can use a detailed dashboard that provides a snapshot of corporate device statuses, detailed reports, and granular settings in protection policies.

In comparison with Kaspersky Security Center that has Windows®-based Administration Server, Kaspersky Security Center Linux has a different feature set.

Kaspersky Security Center Linux is an application aimed at corporate network administrators and employees responsible for protection of devices in a wide range of organizations.

Using Kaspersky Security Center, you can do the following:

- Create a hierarchy of Administration Servers to manage the organization's network, as well as networks at remote offices or client organizations.

  The *client organization* is an organization whose anti-virus protection is ensured by the service provider.

- Create a hierarchy of administration groups to manage a selection of client devices as a whole.
- Manage an anti-virus protection system built based on Kaspersky applications.
- Perform remote installation of applications by Kaspersky and other software vendors.
- Perform centralized deployment of license keys for Kaspersky applications to client devices, monitor their use, and renew licenses.
- Receive statistics and reports about the operation of applications and devices.
- Receive notifications about critical events during the operation of Kaspersky applications.
- Perform inventory of hardware connected to the organization's network.

Centrally manage files moved to Quarantine or Backup by security applications, as well as manage files for which processing by security applications has been postponed.

You can purchase Kaspersky Security Center Linux through Kaspersky (for example, at https://www.kaspersky.com) or through partner companies.

If you purchase Kaspersky Security Center Linux through Kaspersky, you can copy the application from our website. Information that is required for application activation is sent to you by email after your payment is processed.

Updates functionality (including providing anti-virus signature updates and codebase updates), as well as KSN functionality may not be available in the software in the U.S.

Hardware and software requirements

Administration Server

Minimum hardware requirements:

- CPU with operating frequency of 1,4 GHz or higher.
- RAM: 4 GB.
- Available disk space: 10 GB required for the folder where Administration Server data is stored (/var/opt/kaspersky/klnagent_srv).

The following operating systems are supported:

- Debian GNU/Linux 11.x (Bullseye) 64-bit
- Debian GNU/Linux 10.x (Buster) 64-bit
- Debian GNU/Linux 9.x (Stretch) 64-bit
- Ubuntu Server 20.04 LTS (Focal Fossa) 64-bit
- Ubuntu Server 18.04 LTS (Bionic Beaver) 64-bit
- CentOS 7.x 64-bit
- Red Hat Enterprise Linux Server 8.x 64-bit
- Red Hat Enterprise Linux Server 7.x 64-bit
- SUSE Linux Enterprise Server 12 (all Service Packs) 64-bit
- SUSE Linux Enterprise Server 15 (all Service Packs) 64-bit
- Astra Linux Special Edition RUSB.10015-01 (operational update 1.7) 64-bit
- Astra Linux Special Edition RUSB.10015-01 (operational update 1.6) 64-bit
- Astra Linux Common Edition (operational update 2.12) 64-bit
- ALT Server 10 64-bit
- ALT Server 9.2 64-bit
- ALT 8 SP Server (LKNV.11100-01) 64-bit
- ALT 8 SP Server (LKNV.11100-02) 64-bit
- ALT 8 SP Server (LKNV.11100-03) 64-bit
- Oracle Linux 7 64-bit

- Oracle Linux 8 64-bit
- RED OS 7.3 Server 64-bit
- RED OS 7.3 Certified Edition 64-bit

We recommend that you use the EXT4 file system with its default settings.

The following virtualization platforms are supported:

- VMware vSphere 6.7
- VMware vSphere 7.0
- VMware Workstation 16 Pro
- Microsoft Hyper-V Server 2012 64-bit
- Microsoft Hyper-V Server 2012 R2 64-bit
- Microsoft Hyper-V Server 2016 64-bit
- Microsoft Hyper-V Server 2019 64-bit
- Microsoft Hyper-V Server 2022 64-bit
- Citrix XenServer 7.1 LTSR
- Citrix XenServer 8.x
- Parallels Desktop 17
- Kernel-based Virtual Machine (all Linux operating systems supported by Administration server)

The following database servers are supported (can be installed on a different device):

- MySQL 5.7 Community 32-bit/64-bit
- MySQL 8.0 32-bit/64-bit
- MariaDB 10.5 (build 10.5.27 and later) 32-bit/64-bit
- MariaDB 10.4.x 32-bit/64-bit
- MariaDB 10.3 (build 10.3.22 and later)32-bit/64-bit
- MariaDB Galera Cluster 10.3 32-bit/64-bit with InnoDB storage engine
- MariaDB 10.1 (build 10.1.30 and later) 32-bit/64-bit

Kaspersky Security Center 14 Web Console

Kaspersky Security Center 14 Web Console Server

Minimum hardware requirements:

- CPU: 4 cores, operating frequency of 2.5 GHz.
- RAM: 8 GB.
- Available disk space: 40 GB (/var/opt/kaspersky).

One of the following operating systems (64-bit versions only):

- Debian GNU/Linux 11.x (Bullseye)
- Debian GNU/Linux 10.x (Buster)
- Debian GNU/Linux 9.x (Stretch)
- Ubuntu Server 20.04 LTS (Focal Fossa)
- Ubuntu Server 18.04 LTS (Bionic Beaver)
- CentOS 7.x
- Red Hat Enterprise Linux Server 8.x
- Red Hat Enterprise Linux Server 7.x
- SUSE Linux Enterprise Server 12 (all Service Packs)
- SUSE Linux Enterprise Server 15 (all Service Packs)
- SUSE Linux Enterprise Desktop 15 (Service Pack 3) ARM 64-bit
- EulerOS 2.0 SP8 ARM
- Astra Linux Special Edition RUSB.10015-01 (operational update 1.7)
- Astra Linux Special Edition RUSB.10015-01 (operational update 1.6)
- Astra Linux Common Edition (operational update 2.12)
- ALT Server 10
- ALT Server 9.2
- ALT 8 SP Server (LKNV.11100-01)
- ALT 8 SP Server (LKNV.11100-02)
- ALT 8 SP Server (LKNV.11100-03)
- Oracle Linux 8
- Oracle Linux 7

- RED OS 7.3 Server
- RED OS 7.3 Certified Edition
- Kernel-based Virtual Machine (all Linux operating systems supported by Kaspersky Security Center 14 Web Console Server)

Client devices

For a client device, use of Kaspersky Security Center 14 Web Console requires only a browser.

The minimum screen resolution is 1366x768 pixels.

The hardware and software requirements for the device are identical to the requirements of the browser that is used with Kaspersky Security Center 14 Web Console.

Browsers:

- Mozilla Firefox Extended Support Release 91.8.0 or later (91.8.0 released on April 5, 2022)
- Mozilla Firefox Release 99.0 or later (99.0 released on April 5, 2022)
- Google Chrome 100.0.4896.88 or later (official build)
- Microsoft Edge 100 or later
- Safari 15 on macOS

Network Agent

Minimum hardware requirements:

- CPU with operating frequency of 1 GHz or higher. For a 64-bit operating system, the minimum CPU frequency is 1.4 GHz.
- RAM: 512 MB.
- Available disk space: 1 GB.

Software requirement for Linux-based devices: the Perl language interpreter version 5.10 or later must be installed.

The following operating systems are supported:

- Debian GNU/Linux 11.x (Bullseye) 32-bit/64-bit
- Debian GNU/Linux 10.x (Buster) 32-bit/64-bit
- Debian GNU/Linux 9.x (Stretch) 32-bit/64-bit
- Ubuntu Server 20.04 LTS (Focal Fossa) 32-bit/64-bit
- Ubuntu Server 20.04.04 LTS (Focal Fossa) ARM 64-bit

- Ubuntu Server 18.04 LTS (Bionic Beaver) 32-bit/64-bit
- Ubuntu Desktop 20.04 LTS (Focal Fossa) 32-bit/64-bit
- Ubuntu Desktop 18.04 LTS (Bionic Beaver) 32-bit/64-bit
- CentOS 8.x 64-bit
- CentOS 7.x 64-bit
- CentOS 7.x ARM 64-bit
- Red Hat Enterprise Linux Server 8.x 64-bit
- Red Hat Enterprise Linux Server 7.x 64-bit
- Red Hat Enterprise Linux Server 6.x 32-bit/64-bit
- SUSE Linux Enterprise Server 12 (all Service Packs) 64-bit
- SUSE Linux Enterprise Server 15 (all Service Packs) 64-bit
- SUSE Linux Enterprise Desktop 15 (all Service Packs) 64-bit
- SUSE Linux Enterprise Desktop 15 (Service Pack 3) ARM 64-bit
- openSUSE 15 64-bit
- EulerOS 2.0 SP8 ARM
- Pardus OS 19.1 64-bit
- Astra Linux Special Edition RUSB.10015-01 (operational update 1.7) 64-bit
- Astra Linux Special Edition RUSB.10015-01 (operational update 1.6) 64-bit
- Astra Linux Common Edition (operational update 2.12) 64-bit
- Astra Linux Special Edition RUSB.10152-02 (operational update 4.7) ARM 64-bit
- ALT Server 10 64-bit
- ALT Server 9.2 64-bit
- ALT Workstation 10 32-bit/64-bit
- ALT Workstation 9.2 32-bit/64-bit
- ALT 8 SP Server (LKNV.11100-01) 64-bit
- ALT 8 SP Server (LKNV.11100-02) 64-bit
- ALT 8 SP Server (LKNV.11100-03) 64-bit
- ALT 8 SP Workstation (LKNV.11100-01) 32-bit/64-bit

- ALT 8 SP Workstation (LKNV.11100-02) 32-bit/64-bit
- ALT 8 SP Workstation (LKNV.11100-03) 32-bit/64-bit
- Mageia 4 32-bit
- Oracle Linux 7 64-bit
- Oracle Linux 8 64-bit
- Linux Mint 19.x 32-bit
- Linux Mint 20.x 64-bit
- AlterOS 7.5 and later 64-bit
- GosLinux IC6 64-bit
- RED OS 7.3 Server 64-bit
- RED OS 7.3 Certified Edition 64-bit
- ROSA Enterprise Linux Server 7.3 64-bit
- ROSA Enterprise Linux Desktop 7.3 64-bit
- ROSA COBALT Workstation 7.3 64-bit
- ROSA COBALT Server 7.3 64-bit
- Lotos (Linux core version 4.19.50, DE: MATE) 64-bit

The following virtualization platforms are supported:

- VMware vSphere 6.7
- VMware vSphere 7.0
- VMware Workstation 16 Pro
- Microsoft Hyper-V Server 2012 64-bit
- Microsoft Hyper-V Server 2012 R2 64-bit
- Microsoft Hyper-V Server 2016 64-bit
- Microsoft Hyper-V Server 2019 64-bit
- Microsoft Hyper-V Server 2022 64-bit
- Citrix XenServer 7.1 LTSR
- Citrix XenServer 8.x
- Kernel-based Virtual Machine (all Linux operating systems supported by Network Agent)

We recommend that you install the same version of Network Agent for Linux as Kaspersky Security Center Linux.

About Kaspersky Security Center 14 Web Console

Kaspersky Security Center 14 Web Console is a web application designed to manage the status of the security system of a network protected by Kaspersky applications.

Using the application, you can do the following:

- Manage the status of the organization's security system.
- Install Kaspersky applications on devices on your network and manage installed applications.
- Manage policies created for devices on your network.
- Manage user accounts.
- Manage tasks for applications installed on your network devices.
- View reports on the security system status.
- Manage the delivery of reports to system administrators and other IT experts.

Kaspersky Security Center 14 Web Console provides a web interface that ensures interaction between your device and Administration Server over a browser. Administration Server is an application designed for managing Kaspersky applications installed on your network devices. Administration Server connects to devices on your network over channels protected with Secure Socket Layer (SSL). When you connect to Kaspersky Security Center 14 Web Console by using your browser, the browser establishes a connection with Kaspersky Security Center 14 Web Console Server.

You operate Kaspersky Security Center 14 Web Console as follows:

1. Use a browser to connect to Kaspersky Security Center 14 Web Console, where the web portal interface is displayed.
2. Use web portal controls to choose a command that you want to run. Kaspersky Security Center 14 Web Console performs the following operations:
    - If you select a command used for receiving information (for example, to view a list of devices), Kaspersky Security Center 14 Web Console generates a request for information to Administration Server, receives the necessary data, and sends it to the browser in an easy-to-view format.
    - If you have chosen a command used for management (for example, remote installation of an application), Kaspersky Security Center 14 Web Console receives the command from the browser and sends it to Administration Server. Then the application receives the result from Administration Server and sends it to the browser in an easy-to-view format.

Kaspersky Security Center 14 Web Console is a multi-language application. You can change the interface language at any time, without reopening the application. When you install Kaspersky Security Center 14 Web Console together with Kaspersky Security Center, Kaspersky Security Center 14 Web Console has the same interface language as the installation file. When you install only Kaspersky Security Center 14 Web Console, the application has the same interface language as your operating system. If Kaspersky Security Center 14 Web Console does not support the language of the installation file or operating system, English is set by default.

Compatible Kaspersky applications and solutions

Kaspersky Security Center Linux supports centralized deployment and management of the following Kaspersky applications:

- Kaspersky Endpoint Security for Linux
- Kaspersky Industrial CyberSecurity for Linux Nodes

These applications allow to protect both workstations and file servers. Refer to the Application Support Lifecycle webpage for the versions of the applications.

Comparison of Kaspersky Security Center: Windows-based vs. Linux-based

Kaspersky provides Kaspersky Security Center as an on-premises solution for two platforms—Windows and Linux. In the Windows-based solution, you install Administration Server on a Windows device, and the Linux-based solution has the Administration Server version that is designed to be installed on a Linux device. This Online Help contains information about Kaspersky Security Center Linux. For detailed information about the Windows-based solution, refer to the Kaspersky Security Center Windows Online Help.

The table below lets you compare the main features of Kaspersky Security Center as a Windows-based solution and as a Linux-based solution.

Feature comparison of Kaspersky Security Center working as a Windows-based solution and Linux-based solution

Feature or property	Kaspersky Security Center 14	
	Windows-based solution	Linux-based solution
Administration Server location	On-premises	On-premises
Database management system (DBMS) location	On-premises	On-premises
Operating system to install Administration Server on	Windows	Linux
Administration console type	On-premises and web-based	Web-based
Operating system to install the web-based administration console on	Windows or Linux	Windows or Linux
Hierarchy of Administration Servers	✓	✓
Administration group hierarchy	✓	✓
Network polling	✓	✓ (by IP ranges only)
Maximum number of managed devices	100,000	20,000
Protection of Windows, macOS, and Linux-managed devices	✓	– (protection of Linux devices only)
Protection of mobile devices	✓	–
Protection of virtual machines	✓	–

Protection of public cloud infrastructure	✓	–
Device-centric security management	✓	✓
User-centric security management	✓	✓
Application policies	✓	✓
Tasks for Kaspersky applications	✓	✓
Kaspersky Security Network	✓	–
KSN Proxy	✓	–
Kaspersky Private Security Network	✓	–
Centralized deployment of license keys for Kaspersky applications	✓	✓
Support for virtual Administration Servers	✓	✓
Installing third-party software updates and fixing third-party software vulnerabilities	✓	– (by using a remote installation task only)
Notifications about events that occurred on managed devices	✓	✓
Creating and managing user accounts	✓	✓
Monitoring the policies and tasks status	✓	✓
Deployment of the Kaspersky Security Center failover cluster	✓	✓

Basic concepts

This section explains basic concepts related to Kaspersky Security Center Linux.

Administration Server

Kaspersky Security Center components enable remote management of Kaspersky applications installed on client devices.

Devices with the Administration Server component installed will be referred to as *Administration Servers* (also referred to as *Servers*). Administration Servers must be protected, including physical protection, against any unauthorized access.

Administration Server is installed on a device as a service with the following set of attributes:

- With the name `kladminserver_srv`
- Set to start automatically when the operating system starts
- With the `ksc` account or the user account selected during the installation of Administration Server

Refer to the following topic for the full list of installation settings: Installing Kaspersky Security Center.

Administration Server performs the following functions:

- Storage of the administration groups' structure
- Storage of information about the configuration of client devices
- Organization of repositories for application distribution packages
- Remote installation of applications to client devices and removal of applications
- Updating application databases and software modules of Kaspersky applications
- Management of policies and tasks on client devices
- Storage of information about events that have occurred on client devices
- Generation of reports on the operation of Kaspersky applications
- Deployment of license keys to client devices and storing information about the license keys
- Forwarding notifications about the progress of tasks (such as detection of viruses on a client device)

Naming Administration Servers in the application interface

In the interface of the Kaspersky Security Center 14 Web Console, Administration Servers can have the following names:

- Name of the Administration Server device, for example: "*device_name*" or "Administration Server: *device_name*".

- IP address of the Administration Server device, for example: "*IP_address*" or "Administration Server: *IP_address*".
- Secondary Administration Servers and virtual Administration Servers have custom names that you specify when you connect a virtual or a secondary Administration Server to the primary Administration Server.
- If you use Kaspersky Security Center 14 Web Console installed on a Linux device, the application displays the names of the Administration Servers that you specified as trusted in the response file.

You can connect to Administration Server by using Kaspersky Security Center 14 Web Console.

Hierarchy of Administration Servers

Administration Servers can be arranged in a hierarchy. Each Administration Server can have several secondary Administration Servers (referred to as *secondary Servers*) on different nesting levels of the hierarchy. The nesting level for secondary Servers is unrestricted. The administration groups of the primary Administration Server will then include the client devices of all secondary Administration Servers. Thus, isolated and independent sections of networks can be managed by different Administration Servers which are in turn managed by the primary Server.

Virtual Administration Servers are a particular case of secondary Administration Servers.

In a hierarchy, Kaspersky Security Center Linux Administration Server can only work as a secondary Server managed by a primary Administration Server of Windows-based Kaspersky Security Center or Kaspersky Security Center Cloud Console.

The hierarchy of Administration Servers can be used to do the following:

- Decrease the load on Administration Server (compared to a single installed Administration Server for an entire network).
- Decrease intranet traffic and simplify work with remote offices. You do not have to establish connections between the primary Administration Server and all networked devices, which may be located, for example, in different regions. It is sufficient to install a secondary Administration Server in each network segment, distribute devices among administration groups of secondary Servers, and establish connections between the secondary Servers and the primary Server over fast communication channels.
- Distribute responsibilities among the anti-virus security administrators. All capabilities for centralized management and monitoring of the anti-virus security status in corporate networks remain available.
- How service providers use Kaspersky Security Center. The service provider only needs to install Kaspersky Security Center and Kaspersky Security Center 14 Web Console. To manage a large number of client devices of various organizations, a service provider can add virtual Administration Servers to the hierarchy of Administration Servers.

Each device included in the hierarchy of administration groups can be connected to one Administration Server only. You must independently monitor the connection of devices to Administration Servers. Use the feature for device search in administration groups of different Servers based on network attributes.

Virtual Administration Server

Virtual Administration Server (also referred to as *virtual Server*) is a component of Kaspersky Security Center Linux intended for managing anti-virus protection of the network of a client organization.

Virtual Administration Server is a particular case of a secondary Administration Server and has the following restrictions as compared with a physical Administration Server:

- Virtual Administration Server can be created only on a primary Administration Server.
- Virtual Administration Server uses the primary Administration Server database in its operation. Data backup and restoration tasks, as well as update scan and download tasks, are not supported on a virtual Administration Server.
- Virtual Server does not support creation of secondary Administration Servers (including virtual Servers).

In addition, virtual Administration Server has the following restrictions:

- In the virtual Administration Server properties window, the number of sections is limited.
- To install Kaspersky applications remotely on client devices managed by the virtual Administration Server, you must make sure that Network Agent is installed on one of the client devices, in order to ensure communication with the virtual Administration Server. Upon first connection to the virtual Administration Server, the device is automatically assigned as a distribution point, thus functioning as a connection gateway between the client devices and the virtual Administration Server.
- A virtual Server can poll the network only through distribution points.
- To restart a malfunctioning virtual Server, Kaspersky Security Center Linux restarts the primary Administration Server and all virtual Administration Servers.
- Users created on a virtual Server cannot be assigned a role on the Administration Server.

The administrator of a virtual Administration Server has all privileges on this particular virtual Server.

Web Server

Kaspersky Security Center *Web Server* (hereinafter also referred to as *Web Server*) is a component of Kaspersky Security Center that is installed together with Administration Server. Web Server is designed for transmission, over a network, of stand-alone installation packages, and files from a shared folder.

When you create a stand-alone installation package, it is automatically published on Web Server. The link for downloading the stand-alone package is displayed in the list of created stand-alone installation packages. If necessary, you can cancel publication of the stand-alone package or you can publish it on Web Server again.

The shared folder is used for storage of information that is available to all users whose devices are managed through Administration Server. If a user has no direct access to the shared folder, he or she can be given information from that folder by means of Web Server.

To provide users with information from a shared folder by means of Web Server, the administrator must create a subfolder named "public" in the shared folder and paste the relevant information into it.

The syntax of the information transfer link is as follows:

```
https://<Web Server name>:<HTTPS port>/public/<object>
```

where:

- `<Web Server name>` is the name of Kaspersky Security Center Web Server.
- `<HTTPS port>` is an HTTPS port of Web Server that has been defined by the Administrator. The HTTPS port can be set in the **Web Server** section of the properties window of Administration Server. The default port number is 8061.
- `<object>` is the subfolder or file to which the user has access.

The administrator can send the new link to the user in any convenient way, such as by email.

By using this link, the user can download the required information to a local device.

Network Agent

Interaction between Administration Server and devices is performed by the *Network Agent* component of Kaspersky Security Center. Network Agent must be installed on all devices on which Kaspersky Security Center is used to manage Kaspersky applications.

Network Agent is installed on a device as a service, with the following set of attributes:

- With the name "Kaspersky Security Center Network Agent"
- Set to start automatically when the operating system starts
- Using the LocalSystem account

A device that has Network Agent installed is called a *managed device* or *device*. You can install Network Agent from one of the following sources:

- Installation package in Administration Server storage (you must have Administration Server installed)
- Installation package located at Kaspersky web servers

When you install Administration Server, the server version of Network Agent is automatically installed together with Administration Server. Nevertheless, to manage the Administration Server device as any other managed device, install Network Agent for Linux on the Administration Server device. In this case, Network Agent for Linux is installed and works independently from the server version of Network Agent that you installed together with Administration Server.

The names of the process that Network Agent starts are as follows:

- klnagent64.service (for a 64-bit operating system)
- klnagent.service (for a 32-bit operating system)

Network Agent synchronizes the managed device with the Administration Server. We recommend that you set the synchronization interval (also referred to as the *heartbeat*) to 15 minutes per 10,000 managed devices.

Administration groups

An *administration group* (hereinafter also referred to as *group*) is a logical set of managed devices combined on the basis of a specific trait for the purpose of managing the grouped devices as a single unit within Kaspersky Security Center.

All managed devices within an administration group are configured to do the following:

- Use the same application settings (which you can specify in group policies).
- Use a common operating mode for all applications through the creation of group tasks with specified settings. Examples of group tasks include creating and installing a common installation package, updating the application databases and modules, scanning the device on demand, and enabling real-time protection.

A managed device can belong to only one administration group.

You can create hierarchies that have any degree of nesting for Administration Servers and groups. A single hierarchy level can include secondary and virtual Administration Servers, groups, and managed devices. You can move devices from one group to another without physically moving them. For example, if a worker's position in the enterprise changes from that of accountant to developer, you can move this worker's device from the Accountants administration group to the Developers administration group. Thereafter, the device will automatically receive the application settings required for developers.

Managed device

A *managed device* is a computer running Linux and which has Network Agent installed. You can manage such devices by creating tasks and policies for applications installed on these devices. You can also receive reports from managed devices.

You can make a managed device function as a distribution point and as a connection gateway.

A device can be managed by only one Administration Server. One Administration Server can manage up to 20,000 devices.

Unassigned device

An *unassigned device* is a device on the network that has not been included in any administration group. You can perform some actions on unassigned devices, for example, move them to administration groups or install applications on them.

When a new device is discovered on your network, this device goes to the **Unassigned devices** administration group. You can configure rules for devices to be moved automatically to other administration groups after the devices are discovered.

Administrator's workstation

Devices on which Kaspersky Security Center 14 Web Console Server is installed are referred to as *administrator's workstations*. Administrators can use these devices for centralized remote management of Kaspersky applications installed on client devices.

There are no restrictions on the number of administrator's workstations. From any administrator's workstation, you can manage administration groups of several Administration Servers on the network at once. You can connect an administrator's workstation to an Administration Server (physical or virtual) of any level of the hierarchy.

You can include an administrator's workstation in an administration group as a client device.

Within the administration groups of any Administration Server, the same device can function as an Administration Server client, an Administration Server, or an administrator's workstation.

Management web plug-in

A special component—the *management web plug-in*—is used for remote administration of Kaspersky software by means of Kaspersky Security Center 14 Web Console. Hereinafter, a management web plug-in is also referred to as a *management plug-in*. A management plug-in is an interface between Kaspersky Security Center 14 Web Console and a specific Kaspersky application. With a management plug-in, you can configure tasks and policies for the application.

You can download management web plug-ins from the Kaspersky Technical Support webpage.

The management plug-in provides the following:

- Interface for creating and editing application tasks and settings
- Interface for creating and editing policies and policy profiles for remote and centralized configuration of Kaspersky applications and devices
- Transmission of events generated by the application
- Kaspersky Security Center 14 Web Console functions for displaying operational data and events of the application, and statistics relayed from client devices

Policies

A *policy* is a set of Kaspersky application settings that are applied to an administration group and its subgroups. You can install several Kaspersky applications on the devices of an administration group. Kaspersky Security Center provides a single policy for each Kaspersky application in an administration group. A policy has one of the following statuses:

The status of the policy

Status	Description
Active	The current policy that is applied to the device. Only one policy may be active for a Kaspersky application in each administration group. Devices apply the settings values of an active policy for a Kaspersky application.
Inactive	A policy that is not currently applied to a device.
Out-of-office	If this option is selected, the policy becomes active when the device leaves the corporate network.

Policies function according to the following rules:

- Multiple policies with different values can be configured for a single application.
- Only one policy can be active for the current application.
- A policy can have child policies.

Generally, you can use policies as preparations for emergency situations, such as a virus attack. For example, if there is an attack via flash drives, you can activate a policy that blocks access to flash drives. In this case, the current active policy automatically becomes inactive.

In order to prevent maintaining multiple policies, for example, when different occasions assume changing of several settings only, you may use policy profiles.

A *policy profile* is a named subset of policy settings values that replaces the settings values of a policy. A policy profile affects the effective settings formation on a managed device. *Effective settings* are a set of policy settings, policy profile settings, and local application settings that are currently applied for the device.

Policy profiles function according to the following rules:

- A policy profile takes effect when a specific activation condition occurs.
- Policy profiles contain values of settings that differ from the policy settings.
- Activation of a policy profile changes the effective settings of the managed device.
- A policy can include a maximum of 100 policy profiles.

Policy profiles

Sometimes it may be necessary to create several instances of a single policy for different administration groups; you might also want to modify the settings of those policies centrally. These instances might differ by only one or two settings. For example, all the accountants in an enterprise work under the same policy—but senior accountants are allowed to use flash drives, while junior accountants are not. In this case, applying policies to devices only through the hierarchy of administration groups can be inconvenient.

To help you avoid creating several instances of a single policy, Kaspersky Security Center enables you to create *policy profiles*. Policy profiles are necessary if you want devices within a single administration group to run under different policy settings.

A policy profile is a named subset of policy settings. This subset is distributed on target devices together with the policy, supplementing it under a specific condition called the *profile activation condition*. Profiles only contain settings that differ from the "basic" policy, which is active on the managed device. Activation of a profile modifies the settings of the "basic" policy that were initially active on the device. The modified settings take values that have been specified in the profile.

Tasks

Kaspersky Security Center manages Kaspersky security applications installed on devices by creating and running *tasks*. Tasks are required for installing, launching, and stopping applications, scanning files, updating databases and software modules, and performing other actions on applications.

Tasks for a specific application can be created only if the management plug-in for that application is installed.

Tasks can be performed on the Administration Server and on devices.

The following tasks are performed on the Administration Server:

- Automatic distribution of reports
- Downloading of updates to the repository of the Administration Server
- Backup of Administration Server data
- Maintenance of the database

The following types of tasks are performed on devices:

- *Local tasks*—Tasks that are performed on a specific device

  Local tasks can be modified either by the administrator, by using Kaspersky Security Center 14 Web Console, or by the user of a remote device (for example, through the security application interface). If a local task has been modified simultaneously by the administrator and the user of a managed device, the changes made by the administrator will take effect because they have a higher priority.

- *Group tasks*—Tasks that are performed on all devices of a specific group

  Unless otherwise specified in the task properties, a group task also affects all subgroups of the selected group. A group task also affects (optionally) devices that have been connected to secondary and virtual Administration Servers deployed in the group or any of its subgroups.

- *Global tasks*—Tasks that are performed on a set of devices, regardless of whether they are included in any group

For each application, you can create any number of group tasks, global tasks, or local tasks.

You can make changes to the settings of tasks, view the progress of tasks, and copy, export, import, and delete tasks.

A task is started on a device only if the application for which the task was created is running.

Results of tasks are saved in the Syslog event log and the Kaspersky Security Center event log, both centrally on the Administration Server and locally on each device.

Do not include private data in task settings. For example, avoid specifying the domain administrator password.

Task scope

The *scope of a task* is the set of devices on which the task is performed. The types of scope are as follows:

- For a *local task*, the scope is the device itself.
- For an *Administration Server task*, the scope is the Administration Server.
- For a *group task*, the scope is the list of devices included in the group.

When creating a *global task*, you can use the following methods to specify its scope:

- Specifying certain devices manually.

  You can use an IP address (or IP range) or DNS name as the device address.

- Importing a list of devices from a .txt file with the device addresses to be added (each address must be placed on an individual line).

  If you import a list of devices from a file or create a list manually, and if devices are identified by their names, the list can only contain devices for which information has already been entered into the Administration Server database. Moreover, the information must have been entered when those devices were connected or during device discovery.

- Specifying a device selection.

  Over time, the scope of a task changes as the set of devices included in the selection change. A selection of devices can be made on the basis of device attributes, including software installed on a device, and on the basis of tags assigned to devices. Device selection is the most flexible way to specify the scope of a task.

  Tasks for device selections are always run on a schedule by the Administration Server. These tasks cannot be run on devices that lack connection to the Administration Server. Tasks whose scope is specified by using other methods are run directly on devices and therefore do not depend on the device connection to the Administration Server.

  Tasks for device selections are not run on the local time of a device; instead, they are run on the local time of the Administration Server. Tasks whose scope is specified by using other methods are run on the local time of a device.

How local application settings relate to policies

You can use policies to set identical values of the application settings for all devices in a group.

The values of the settings that a policy specifies can be redefined for individual devices in a group by using local application settings. You can set only the values of settings that the policy allows to be modified, that is, the unlocked settings.

The value of a setting that the application uses on a client device is defined by the lock position (🔒) for that setting in the policy:

- If a setting modification is locked, the same value (defined in the policy) is used on all client devices.
- If a setting modification is unlocked, the application uses a local setting value on each client device instead of the value specified in the policy. The setting can then be changed in the local application settings.

This means that, when a task is run on a client device, the application applies settings that have been defined in two different ways:

- By task settings and local application settings, if the setting is not locked against changes in the policy.
- By the group policy, if the setting is locked against changes.

Local application settings are changed after the policy is first applied in accordance with the policy settings.

Distribution point

Distribution point (previously known as update agent) is a device with Network Agent installed that is used for update distribution, remote installation of applications, and retrieval of information about networked devices.

The features and use cases of Network Agent installed on a device used as a distribution point vary depending on the operating system.

A distribution point can perform the following functions:

- Distribute updates and installation packages received from the Administration Server to client devices within the group (including distribution through multicasting using UDP). Updates can be received either from the Administration Server or from Kaspersky update servers. In the latter case, an update task must be created for the distribution point.

  Distribution points accelerate update distribution and free up Administration Server resources.

- Distribute policies and group tasks through multicasting using UDP.

- Act as a gateway for connection to the Administration Server for devices in an administration group.

  If a direct connection between managed devices within the group and the Administration Server cannot be established, you can use the distribution point as a connection gateway to the Administration Server for this group. In this case, managed devices connect to the connection gateway, which in turn connects to the Administration Server.

  The presence of a distribution point that functions as connection gateway does not block the option of a direct connection between managed devices and the Administration Server. If the connection gateway is not available, but direct connection with the Administration Server is technically possible, managed devices are connected to the Administration Server directly.

- Poll the network to detect new devices and update information about existing ones. A distribution point can apply the same device discovery methods as the Administration Server.

- Perform remote installation of applications by Kaspersky and other software vendors, including installation on client devices without Network Agent.

  This feature allows you to remotely transfer Network Agent installation packages to client devices located on networks to which the Administration Server has no direct access.

Files are transmitted from the Administration Server to a distribution point over HTTP or, if SSL connection is enabled, over HTTPS. Using HTTP or HTTPS results in a higher level of performance, compared to SOAP, through cutting traffic.

Devices with Network Agent installed can be assigned distribution points either manually (by the administrator), or automatically (by the Administration Server). The full list of distribution points for specified administration groups is displayed in the report about the list of distribution points.

The scope of a distribution point is the administration group to which it has been assigned by the administrator, as well as its subgroups of all levels of embedding. If multiple distribution points have been assigned in the hierarchy of administration groups, Network Agent on the managed device connects to the nearest distribution point in the hierarchy.

If distribution points are assigned automatically by the Administration Server, it assigns them by broadcast domains, not by administration groups. This occurs when all broadcast domains are known. Network Agent exchanges messages with other Network Agents in the same subnet and then sends Administration Server information about itself and other Network Agents. Administration Server can use that information to group Network Agents by broadcast domains. Broadcast domains are known to Administration Server after more than 70% Network Agents in administration groups are polled. Administration Server polls broadcast domains every two hours. After distribution points are assigned by broadcast domains, they cannot be re-assigned by administration groups.

If the administrator manually assigns distribution points, they can be assigned to administration groups or network locations.

Network Agents with an active connection profile do not participate in broadcast domain detection.

Kaspersky Security Center Linux assigns each Network Agent a unique IP multicast address that differs from every other address. This allows you to avoid network overload that might occur due to IP overlaps. IP multicast addresses that were assigned in previous versions of the application will not be changed.

If two or more distribution points are assigned to a single network area or to a single administration group, one of them becomes the active distribution point, and the rest become standby distribution points. The active distribution point downloads updates and installation packages directly from the Administration Server, while standby distribution points receive updates from the active distribution point only. In this case, files are downloaded once from the Administration Server and then are distributed among distribution points. If the active distribution point becomes unavailable for any reason, one of the standby distribution points becomes active. The Administration Server automatically assigns a distribution point to act as standby.

The distribution point status (*Active*/*Standby*) is displayed with a check box in the klnagchk report.

A distribution point requires at least 4 GB of free disk space. If the free disk space of the distribution point is less than 2 GB, Kaspersky Security Center Linux creates an incident with the *Warning* importance level. The incident will be published in the device properties, in the **Incidents** section.

Running remote installation tasks on a device assigned as a distribution point requires additional free disk space. The volume of free disk space must exceed the total size of all installation packages to be installed.

Running any updating (patching) tasks and vulnerability fix tasks on a device assigned as a distribution point requires additional free disk space. The volume of free disk space must be at least twice the total size of all patches to be installed.

Devices functioning as distribution points must be protected, including physical protection, against any unauthorized access.

Connection gateway

A *connection gateway* is a Network Agent acting in a special mode. A connection gateway accepts connections from other Network Agents and tunnels them to the Administration Server through its own connection with the Server. Unlike an ordinary Network Agent, a connection gateway waits for connections from the Administration Server rather than establishes connections to the Administration Server.

A connection gateway can receive connections from up to 10,000 devices.

You have two options for using connection gateways:

- We recommend that you install a connection gateway in a demilitarized zone (DMZ). For other Network Agents installed on out-of-office devices, you need to specially configure a connection to Administration Server through the connection gateway.

  A connection gateway does not in any way modify or process data that is transmitted from Network Agents to Administration Server. Moreover, it does not write this data into any buffer and therefore cannot accept data from a Network Agent and later forward it to Administration Server. If Network Agent attempts to connect to Administration Server through the connection gateway, but the connection gateway cannot connect to Administration Server, Network Agent perceives this as if Administration Server is inaccessible. All data remains on Network Agent (not on the connection gateway).

A connection gateway cannot connect to Administration Server through another connection gateway. It means that Network Agent cannot simultaneously be a connection gateway and use a connection gateway to connect to Administration Server.

All connection gateways are included in the list of distribution points in the Administration Server properties.

- You can also use connection gateways within the network. For example, automatically assigned distribution points also become connection gateways in their own scope. However, within an internal network, connection gateways do not provide considerable benefit. They reduce the number of network connections received by Administration Server, but do not reduce the volume of incoming data. Even without connection gateways, all devices could still connect to Administration Server.

Licensing

This section provides information about general concepts related to Kaspersky Security Center 14 Linux licensing.

About the End User License Agreement

The End User License Agreement (License Agreement or EULA) is a binding agreement between you and AO Kaspersky Lab stipulating the terms under which you may use the application.

Carefully read the License Agreement before you start using the application.

Kaspersky Security Center Linux and its components, for example, Network Agent, have their own EULA.

You can view the terms of the End User License Agreement for Kaspersky Security Center Linux by using the following methods:

- During installation of Kaspersky Security Center.
- By reading the license.txt document included in the Kaspersky Security Center distribution kit.
- By reading the license.txt document in the Kaspersky Security Center installation folder.
- By downloading the license.txt file from the Kaspersky website.

You can view the terms of the End User License Agreement for Network Agent for Linux by using the following methods:

- While downloading the Network Agent distribution package from the Kaspersky web servers.
- During installation of Network Agent for Linux.

  Please note that when you install Network Agent for Linux, the End User License Agreement for Network Agent is displayed in English language. You can check the End User License Agreement for Network Agent in other languages in /opt/kaspersky/klnagent64/share/license folder before accepting the terms of the End User License Agreement during installation.

- By reading the license.txt document included in the Network Agent for Linux distribution package.
- By reading the license.txt document in the Network Agent for Linux installation folder.
- By downloading the license.txt file from the Kaspersky website.

You accept the terms of the End User License Agreement by confirming that you agree with the End User License Agreement when installing the application. If you do not accept the terms of the License Agreement, cancel the application installation and do not use the application.

About the license

A *license* is a time-limited right to use Kaspersky Security Center Linux, granted under the terms of the signed License Contract (End User License Agreement).

The scope of services and validity period depend on the license under which the application is used.

The following license types are provided:

- *Trial*

  A free license intended for trying out the application. A trial license usually has a short term.

  When a trial license expires, all Kaspersky Security Center Linux 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*

  A paid license.

  When a commercial license expires, key features of the application become disabled. To continue using Kaspersky Security Center, you must renew your commercial license. After a commercial license expires, you cannot continue using the application and must remove it from your device.

  We recommend renewing your license before it expires, to ensure uninterrupted protection against all security threats.

About the license certificate

A *license certificate* is a document that you receive along with a key file or an activation code.

A license certificate contains the following information about the license provided:

- License key or order number
- Information about the user who has been granted the license
- Information about the application that can be activated under the license provided
- Limit of the number of licensing units (e.g., devices on which the application can be used under the license provided)
- License validity start date
- License expiration date or license term
- License type

About the license key

A *license key* is a sequence of bits that you can apply to activate and then use the application in accordance with the terms of the End User License Agreement. License keys are generated by Kaspersky specialists.

You can add a license key to the application using one of the following methods: by applying a *key file* or by entering an *activation code*. The license key is displayed in the application interface as a unique alphanumeric sequence after you add it to the application.

The license key may be blocked by Kaspersky in case the terms of the License Agreement have been violated. If the license key has been blocked, you need to add another one if you want to use the application.

A license key may be active or additional (or reserve).

An *active license key* is a license key that is currently used by the application. An active license key can be added for a trial or commercial license. The application cannot have more than one active license key.

An *additional (or reserve) license key* is a license key that entitles the user to use the application, but is not currently in use. The additional license key automatically becomes active when the license associated with the current active license key expires. An additional license key can be added only if an active license key has already been added.

A license key for a trial license can be added as an active license key. A license key for a trial license cannot be added as an additional license key.

Viewing the Privacy Policy

The Privacy Policy is available online at https://www.kaspersky.com/products-and-services-privacy-policy.

The Privacy Policy is also available offline:

- You can read the Privacy Policy before Installing Kaspersky Security Center.
- The Privacy Policy text is included in the license.txt file, in the Kaspersky Security Center installation folder.
- The privacy_policy.txt file is available on a managed device, in the Network Agent installation folder.
- You can unpack the privacy_policy.txt file from the Network Agent distribution package.

Kaspersky Security Center licensing options

Kaspersky Security Center is delivered as a part of Kaspersky applications for protection of corporate networks. You can also download it from Kaspersky website.

The following functions are available:

- Creation of virtual Administration Servers that are used to administer a network of remote offices or client organizations.
- Creation of a hierarchy of administration groups to manage specific devices as a single entity.
- Control of the anti-virus security status of an organization.
- Remote installation of applications.
- Viewing the list of operating system images available for remote installation.

- Centralized configuration of applications installed on client devices.
- Statistics and reports on the application's operation, as well as notifications about critical events.
- Viewing and manual editing of the list of hardware components detected by polling the network.
- Centralized operations with files that were moved to Quarantine or Backup and files whose processing was postponed.
- Management of user roles.

About the key file

A *key file* is a file with the .key extension provided to you by Kaspersky. Key files are designed to activate the application by adding a license key.

You receive a key file at the email address that you provided when you bought Kaspersky Security Center or ordered the trial version of Kaspersky Security Center.

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.
- Receive a key file through Kaspersky website by using your available activation code.

About data provision

Data transferred to the Rightholder

Provided in the Kaspersky Security Center 14 Linux End User License Agreement.

Data processed locally

Kaspersky Security Center Linux is designed for centralized execution of basic administration and maintenance tasks on an organization's network. Kaspersky Security Center Linux provides the administrator with access to detailed information about the organization's network security level; Kaspersky Security Center Linux lets an administrator configure all the components of protection based on Kaspersky applications. Kaspersky Security Center Linux performs the following main functions:

- Detecting devices and their users on the organization's network
- Creating a hierarchy of administration groups for device management
- Installing Kaspersky applications on devices

- Managing the settings and tasks of installed applications
- Activating Kaspersky applications on devices
- Managing user accounts
- Viewing information about the operation of Kaspersky applications on devices
- Viewing reports

To perform its main functions Kaspersky Security Center Linux can receive, store, and process the following information:

- Information about the devices on the organization's network received as a result of device discovery on the network through scanning of IP intervals. Administration Server gets data independently or receives data from Network Agent.
- Details of managed devices. Network Agent transfers the data listed below from the device to Administration Server. The user enters the display name and description of the device in the Kaspersky Security Center 14 Web Console interface:
    - Technical specifications of the managed device and its components required for device identification: device display name and description, DNS domain and DNS name, IPv4 address, IPv6 address, network location, MAC address, operating system type, whether the device is a virtual machine together with hypervisor type, and whether the device is a dynamic virtual machine as part of VDI.
    - Other specifications of managed devices and their components required for audit of managed devices: operating system architecture, operating system vendor, operating system build number, operating system release ID, operating system location folder, if the device is a virtual machine—the virtual machine type.
    - Details of actions on managed devices: date and time of the last update, time the device was last visible on the network, restart waiting status, and time the device was turned on.
    - Details of device user accounts and their work sessions.
- Distribution point operation statistics if the device is a distribution point. Network Agent transfers data from the device to Administration Server.
- Distribution point settings entered by the User in Kaspersky Security Center 14 Web Console.
- Details of Kaspersky applications installed on the device. The managed application transfers data from the device to Administration Server through Network Agent:
    - Settings of Kaspersky applications installed on the managed device: Kaspersky application name and version, status, real-time protection status, last device scan date and time, number of threats detected, number of objects that failed to be disinfected, availability and status of the application components, details of Kaspersky application settings and tasks, information about the active and reserve license keys, application installation date and ID.
    - Application operation statistics: events related to the changes in the status of Kaspersky application components on the managed device and to the performance of tasks initiated by the application components.
    - Device status defined by the Kaspersky application.
    - Tags assigned by the Kaspersky application.

- Data contained in events from Kaspersky Security Center Linux components and Kaspersky managed applications. Network Agent transfers data from the device to Administration Server.
- Settings of Kaspersky Security Center Linux components and Kaspersky managed applications presented in policies and policy profiles. The User enters data in the Kaspersky Security Center 14 Web Console interface.
- Task settings of Kaspersky Security Center Linux components and Kaspersky managed applications. The User enters data in the Kaspersky Security Center 14 Web Console interface.
- Data processed by the Vulnerability and Patch Management feature. Network Agent transfers from the device to Administration Server information about the hardware detected on managed devices (Hardware registry).
- User categories of applications. The User enters data in the Kaspersky Security Center 14 Web Console interface.
- Details of executable files detected on managed devices by the Application Control feature. The managed application transfers data from the device to Administration Server through Network Agent. A complete list of data is provided in the Help files of the corresponding application.
- Details of files placed in Backup. The managed application transfers data from the device to Administration Server through Network Agent. A complete list of data is provided in the Help files of the corresponding application.
- Details of files placed in Quarantine. The managed application transfers data from the device to Administration Server through Network Agent. A complete list of data is provided in the Help files of the corresponding application.
- Details of files requested by Kaspersky specialists for detailed analysis. The managed application transfers data from the device to Administration Server through Network Agent. A complete list of data is provided in the Help files of the corresponding application.
- Details of external devices (memory units, information transfer tools, information hardcopy tools, and connection buses) installed or connected to the managed device and detected by the Device Control feature. The managed application transfers data from the device to Administration Server through Network Agent. A complete list of data is provided in the Help files of the corresponding application.
- List of managed programmable logic controllers (PLCs). The managed application transfers data from the device to Administration Server through Network Agent. A complete list of data is provided in the Help files of the corresponding application.
- Details of the entered activation codes. The User enters data in the Administration Console or Kaspersky Security Center 14 Web Console interface.
- User accounts: name, description, full name, email address, main phone number, and password. The User enters data in the Kaspersky Security Center 14 Web Console interface.
- Revision history of management objects. The User enters data in the Kaspersky Security Center 14 Web Console interface.
- Registry of deleted management objects. The User enters data in the Kaspersky Security Center 14 Web Console interface.
- Installation packages created from the file, as well as installation settings. The User enters data in the Kaspersky Security Center 14 Web Console interface.
- Data required for the display of announcements from Kaspersky in Kaspersky Security Center 14 Web Console. The User enters data in the Kaspersky Security Center 14 Web Console interface.

- Data required for the functioning of plug-ins of managed applications in Kaspersky Security Center 14 Web Console and saved by the plug-ins in the Administration Server database during their routine operation. The description and ways of providing the data are provided in the Help files of the corresponding application.

- Kaspersky Security Center 14 Web Console user settings: localization language and theme of the interface, Monitoring panel display settings, information about the status of notifications (Already read / Not yet read), status of columns in spreadsheets (Show / Hide), Training mode progress. The User enters data in the Kaspersky Security Center 14 Web Console interface.

- Certificate for secure connection of managed devices to the Kaspersky Security Center Linux components. The User enters data in the Kaspersky Security Center 14 Web Console interface.

- The Administration Server data that the User enters in the Kaspersky Security Center 14 Web Console.

- Any data that the User enters in the Kaspersky Security Center 14 Web Console interface.

The data listed above can be present in Kaspersky Security Center Linux if one of the following methods is applied:

- The User enters data in the Kaspersky Security Center 14 Web Console interface.

- Network Agent automatically receives data from the device and transfers it to Administration Server.

- Network Agent receives data retrieved by the Kaspersky managed application and transfers it to Administration Server. The lists of data processed by Kaspersky managed applications are provided in the Help files for the corresponding applications.

- Administration server gets information about networked devices independently or receives information from a Network Agent acting as a distribution point.

The listed data is stored in the Administration Server database. User names and passwords are stored in encrypted form.

All data processed locally can be transferred to Kaspersky only through dump files, trace files, or log files of Kaspersky Security Center Linux components, including log files created by installers and utilities.

Kaspersky protects any information received in accordance with law and applicable Kaspersky rules. Data is transmitted over a secure channel.

Following the links in the Administration Console or Kaspersky Security Center 14 Web Console, the User agrees to the automatic transfer of the following data:

- Kaspersky Security Center Linux code

- Kaspersky Security Center Linux version

- Kaspersky Security Center Linux localization

- License ID

- License type

- Whether the license was purchased through a partner

The list of data provided via each link depends on the purpose and location of the link.

Kaspersky uses the received data in anonymized form and for general statistics only. Summary statistics are generated automatically from the originally received information and do not contain any personal or confidential data. As soon as new data is accumulated, the previous data is wiped (once a year). Summary statistics are stored indefinitely.

About the subscription

Subscription to Kaspersky Security Center Linux is an order for use of the application under the selected settings (subscription expiration date, number of protected devices). You can register your subscription to Kaspersky Security Center Linux with your service provider (for example, your internet provider). A subscription can be renewed manually or in automatic mode; also, you can cancel it.

A subscription can be limited (for example, one-year) or unlimited (with no expiration date). To continue using Kaspersky Security Center after a limited subscription expires, you must renew it. An unlimited subscription is renewed automatically if it has been prepaid to the service provider in due dates.

When a limited subscription expires, you may be provided a grace period for renewal during which the application continues to function. The availability and duration of the grace period is defined by the service provider.

To use Kaspersky Security Center Linux under subscription, you must apply the activation code received from the service provider.

You can apply a different activation code for Kaspersky Security Center Linux only after your subscription expires or when you cancel it.

Depending on the service provider, the set of possible actions for subscription management may vary. The service provider might not provide a grace period for subscription renewal and so the application loses its functionality.

Activation codes purchased under subscription cannot be used for activating earlier versions of Kaspersky Security Center.

When the application is used under subscription, Kaspersky Security Center Linux automatically attempts to access the activation server at specified time intervals until the subscription expires. If access to the server using system DNS is not possible, the application uses public DNS servers. You can renew your subscription on the service provider's website.

Events of the licensing limit exceeded

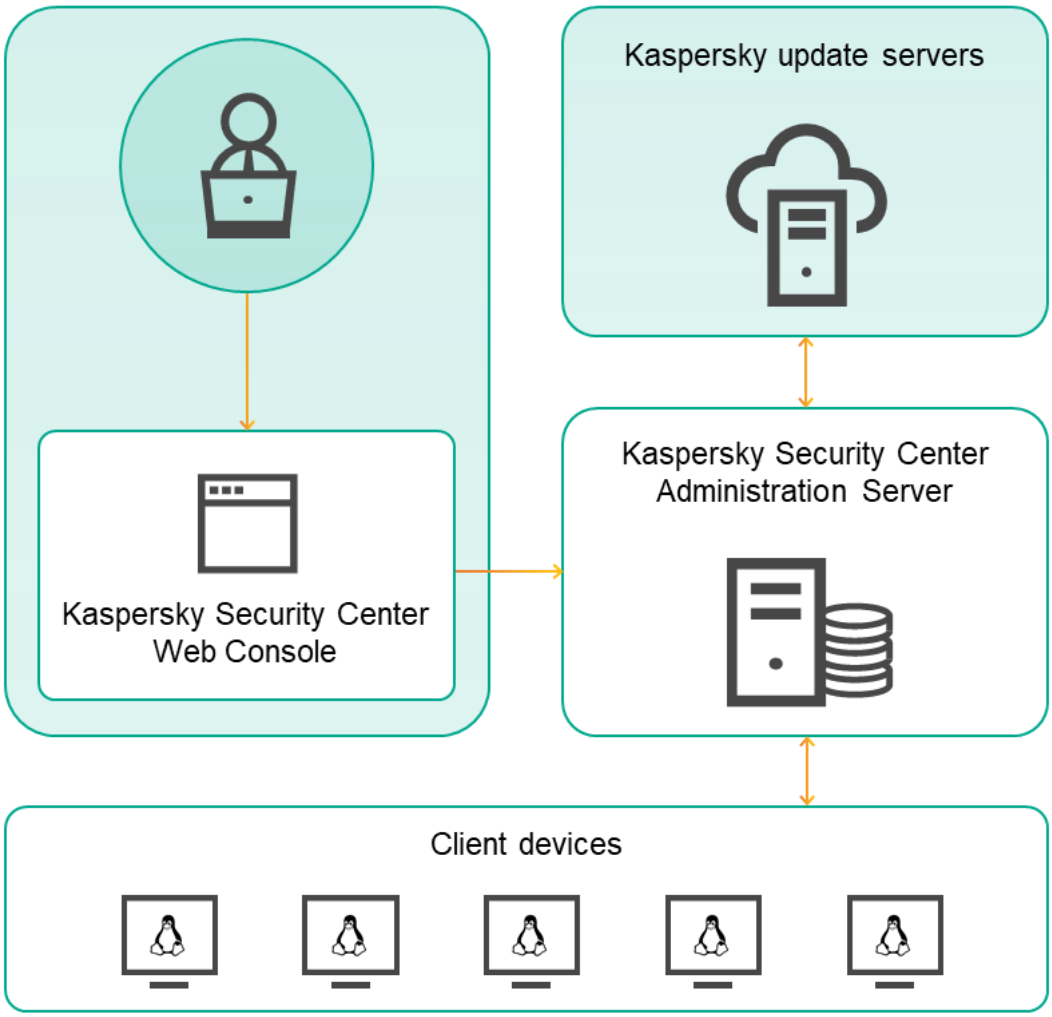
Kaspersky Security Center Linux allows you to get information about events when some licensing limits are exceeded by Kaspersky applications installed on client devices.

The importance level of such events when a licensing limit is exceeded is defined according to the following rules:

- If the currently used units covered by a single license constitute 90% to 100% of the total number of units covered by the license, the event is published with the **Info** importance level.
- If the currently used units covered by a single license constitute 100% to 110% of the total number of units covered by the license, the event is published with the **Warning** importance level.
- If the number of currently used units covered by a single license exceeds 110% of the total number of units covered by the license, the event is published with the **Critical event** importance level.

Architecture

This section provides a description of the components of Kaspersky Security Center and their interaction.



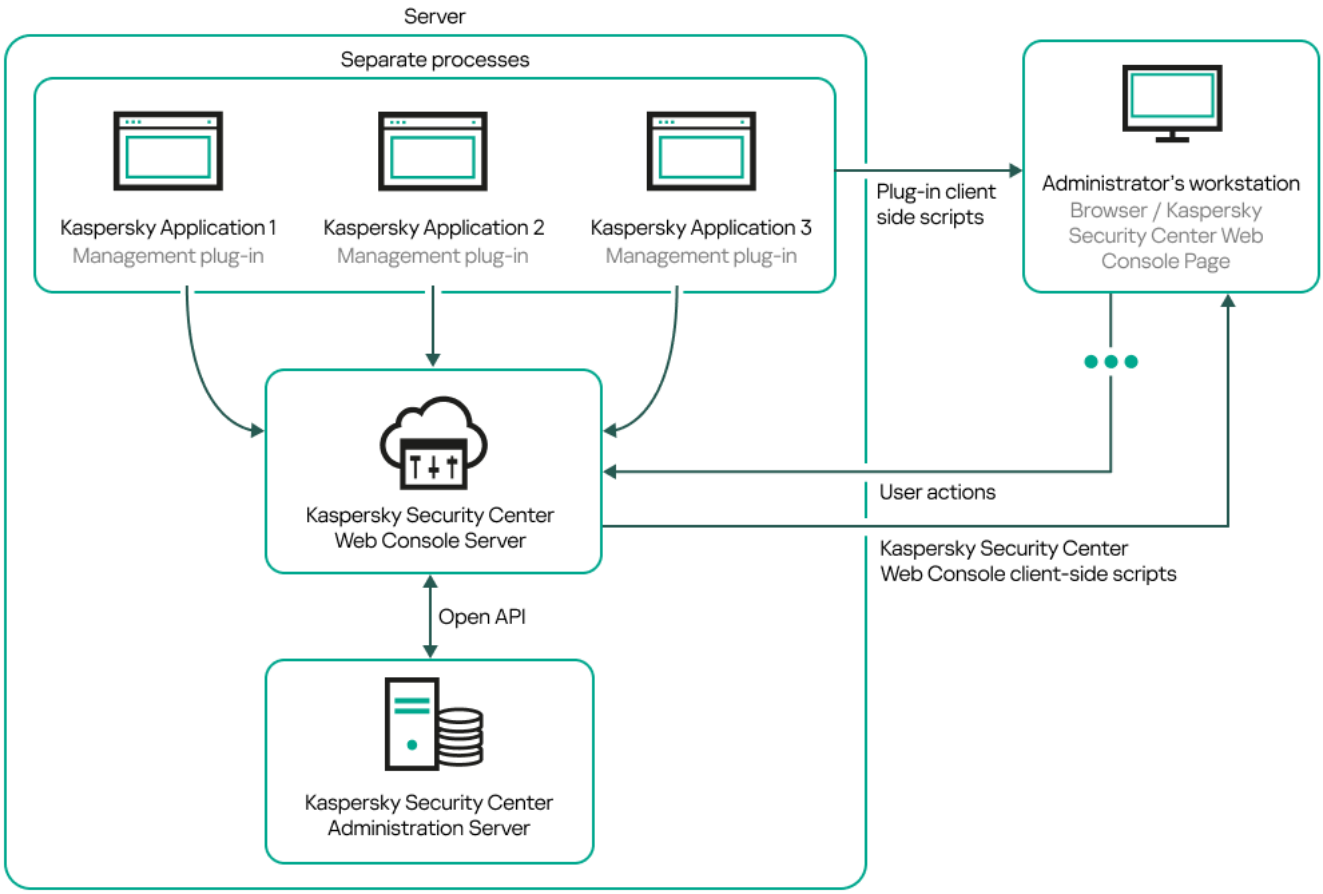
Kaspersky Security Center 14 Linux architecture

Kaspersky Security Center 14 Linux comprises the following main components:

- **Kaspersky Security Center 14 Web Console**. Provides a web interface for creating and maintaining the protection system of a client organization's network that is managed by Kaspersky Security Center.
- **Kaspersky Security Center Administration Server** (also referred to as *Server*). Centralizes storage of information about applications installed on the organization's network and about how to manage them.
- **Kaspersky update servers**. HTTP(S) servers at Kaspersky from which Kaspersky applications download database and application module updates.
- **Client devices.** A client company's devices protected by Kaspersky Security Center 14 Linux. Each device that has to be protected must have one of the Kaspersky security applications installed.

Deployment diagram of Kaspersky Security Center Administration Server and Kaspersky Security Center 14 Web Console

The figure below shows the deployment diagram of Kaspersky Security Center Administration Server and Kaspersky Security Center 14 Web Console.



Deployment diagram of Kaspersky Security Center Administration Server and Kaspersky Security Center 14 Web Console

Management plug-ins for Kaspersky applications installed on protected devices (one plug-in for each application) are deployed together with Kaspersky Security Center 14 Web Console Server.

As an administrator, you access Kaspersky Security Center 14 Web Console by using a browser on your workstation.

When you perform specific actions in Kaspersky Security Center 14 Web Console, Kaspersky Security Center 14 Web Console Server communicates with Kaspersky Security Center Administration Server through OpenAPI. Kaspersky Security Center 14 Web Console Server requests the required information from Kaspersky Security Center Administration Server and displays the results of your operations in Kaspersky Security Center 14 Web Console.

Ports used by Kaspersky Security Center Linux

The tables below show the default ports used by Administration Server and by client devices. If you want, you can change each of these default port numbers.

Ports used by Kaspersky Security Center Linux Administration Server

Port number	Name of the process that opens the port	Protocol	Port purpose	Scope
8060	klcsweb	TCP	Transmitting published installation packages to client devices	Publishing installation packages. You can change the default port number in the **Web Server** section of the Administration Server properties window. This port is optional. For security reasons we recommend using 8061 TCP port.
8061	klcsweb	TCP (TLS)	Transmitting published installation packages to client devices	Publishing installation packages. You can change the default port number in the **Web Server** section of the Administration Server properties window.
13000	klserver	TCP (TLS)	Receiving connections from Network Agents and secondary Administration Servers; also used on secondary Administration Servers for receiving connections from the primary Administration Server (for example, if the secondary Administration Server is in DMZ)	Managing client devices and secondary Administration Servers. You can change the number of the default port for receiving connections from Network Agents when configuring connection ports during the installation of Kaspersky Security Center Linux; you can change the number of default port for receiving connections from secondary Administration Servers when creating a hierarchy of Administration Servers.
13000	klserver	UDP	Receiving information about devices that were turned off from Network Agents	Managing client devices. You can change the default port number in the Network Agent policy settings.
13291	klserver	TCP (TLS)	Receiving connections from Administration Console to Administration Server	Managing Administration Server. This port is closed by default. If you want to use the klakaut utility to automate the Kaspersky Security Center Linux operation, open the 13291 port by using the klscflag utility.
13299	klserver	TCP (TLS)	Receiving connections from Kaspersky Security Center 14 Web Console to the Administration Server; receiving connections to the Administration Server over OpenAPI	Kaspersky Security Center 14 Web Console, OpenAPI. You can change the default port number in the Administration Server properties window (in the **Connection ports** subsection of the **General** section), or when creating a hierarchy of Administration Servers.
14000	klserver	TCP	Receiving connections from Network Agents	Managing client devices. You can change the default port number when configuring connection ports during the installation of Kaspersky Security Center Linux, or when manually connecting a client device to the Administration Server. This port is optional. For security reasons we recommend using 1300 TCP port.
13111 (only if KSN proxy service is run on the device)	ksnproxy	TCP	Receiving requests from managed devices to KSN proxy server	KSN proxy server. You can change the default port number in the Administration Server properties window.
15111 (only if KSN	ksnproxy	UDP	Receiving requests from managed devices to KSN proxy server	KSN proxy server.

proxy service is run on the device)				You can change the default port number in the Administration Server properties window.
17000	klactprx	TCP (TLS)	Receiving connections for application activation from managed devices	Activation proxy server for managed devices. You can change the default port number in the Administration Server properties window (in the **Additional ports** subsection of the **General** section).

If you install the Administration Server and the database on different devices, you must make available the necessary ports on the device where the database is located (for example, port 3306 for MariaDB). Please refer to the DBMS documentation for the relevant information.

The table below shows the port used by Kaspersky Security Center 14 Web Console Server. It can be the same device where Administration Server is installed or a different device.

Port used by Kaspersky Security Center 14 Web Console Server

Port number	Name of the process that opens the port	Protocol	Port purpose	Scope
8080	Node.js: Server-side JavaScript	TCP (TLS)	Receiving connections from browser to Kaspersky Security Center 14 Web Console	Kaspersky Security Center 14 Web Console. You can change the default port number when installing Kaspersky Security Center 14 Web Console. If you install Kaspersky Security Center 14 Web Console on the Linux ALT operating system, you must specify a port number other than 8080, because port 8080 is used by the operating system.

The table below shows the port used by managed devices where Network Agent is installed.

Ports used by Network Agent

Port number	Name of the process that opens the port	Protocol	Port purpose	Scope
15000	klnagent	UDP	Management signals from Administration Server or distribution point to Network Agents	Managing client devices. You can change the default port number in the Network Agent policy settings.
15000	klnagent	UDP broadcast	Getting data about other Network Agents within the same broadcasting domain (the data is then sent to the Administration Server)	Delivering updates and installation packages.
15001	klnagent	UDP	Receiving multicast requests from a distribution point (if in use)	Receiving updates and installation packages from a distribution point. You can change the default port number in the distribution point properties window.
30522, 30523 (ports on the localhost interface)	klnagent	TCP	Receiving Kaspersky application updates from Administration Server by using the FileTransferBridge component	Managed devices that receive Kaspersky application updates from Administration Server specified as a database update source.

Please note that the klnagent process can also request free ports from the dynamic port range of an endpoint operating system. These ports are allocated to the klnagent process automatically by the operating system, so klnagent process can use some ports that are used by another software. If the klnagent process affects that software operations, change the port settings in this software, or change the default dynamic port range in your operating system to exclude the port used by the software affected.

Also take into account that recommendations on the compatibility of Kaspersky Security Center Linux with third-party software are described for reference only and may not be applicable to new versions of third-party software. The described recommendations for configuring ports are based on the experiences of Technical Support and our best practices.

The table below shows the ports used by a managed device with Network Agent installed acting as a distribution point. The listed ports are used by the distribution point devices in addition to the ports used by Network Agents (see table above).

Ports used by Network Agent functioning as distribution point

Port number	Name of the process that opens the port	Protocol	Port purpose	Scope
13000	klnagent	TCP (TLS)	Receiving connections from Network Agents and connection gateways	Managing client devices, delivering updates and installation packages. You can change the default port number in the distribution point properties.
13111 (only if KSN proxy service is run on the device)	ksnproxy	TCP	Receiving requests from managed devices to KSN proxy server	KSN proxy server. You can change the default port number in the distribution point properties.
15111 (only if KSN proxy service is run on the device)	ksnproxy	UDP	Receiving requests from managed devices to KSN proxy server	KSN proxy server. You can change the default port number in the distribution point properties.

Ports used by Kaspersky Security Center 14 Web Console

The table below lists the ports that must be open on the device where Kaspersky Security Center 14 Web Console Server (also referred to as Kaspersky Security Center 14 Web Console) is installed.

Ports used by Kaspersky Security Center 14 Web Console

Port number	Service name	Protocol	Port purpose	Scope
2001	Kaspersky Security Center Product Plugins Server	HTTPS	API port that is used by the management plug-in processes to receive requests from the "Kaspersky Security Center Web Console Management Service"	Running node processes of management plug-ins
1329, 2003	Kaspersky Security Center Web Console Management Service	HTTPS	API ports that are used to receive requests from the "Kaspersky Security Center Web Console Management Service" running on the same device	Updating Kaspersky Security Center 14 Web Console components
2005	Kaspersky Security Center Web Console	HTTPS	API port that is used to receive requests from the "Kaspersky Security Center Web Console Management Service" running on the same device	Running node processes of Kaspersky Security Center 14 Web Console
8200	—	HTTP	API port that is used to generate certificates by means of HashiCorp Vault (for more details, see the HashiCorp Vault website)	Installing Kaspersky Security Center 14 Web Console and updating Kaspersky Security Center 14 Web Console components
4150, 4151, 4152	Kaspersky Security Center Web Console Message Queue	HTTPS	API ports of the Message Broker that are used for communication between processes of both Kaspersky Security Center 14 Web Console and management plug-ins	Interaction between Kaspersky Security Center 14 Web Console and management plug-ins

Installation

This section describes installation of Kaspersky Security Center and Kaspersky Security Center 14 Web Console.

Main installation scenario

Following this scenario, you can install Kaspersky Security Center 14 Linux Administration Server and Kaspersky Security Center 14 Web Console, perform initial setup of the Administration Server by using the Quick Start Wizard, and install Kaspersky applications on managed devices by using the Protection Deployment Wizard.

Prerequisites

You must have a license key (activation code) for Kaspersky Endpoint Security for Business or license keys (activation codes) for Kaspersky security applications.

If you first want to try out Kaspersky Security Center 14 Linux, you can get a free 30-day trial at the Kaspersky website.

Stages

The main installation scenario proceeds in stages:

1. **Selecting a structure for protection of an organization**

   Find out more about the Kaspersky Security Center Linux components. Based on the network configuration and throughput of communication channels, define the number of Administration Servers to use and how they must be distributed among your offices (if you run a distributed network).

   Define whether a hierarchy of Administration Servers will be used in your organization. To do this, you must evaluate whether it is possible and expedient to cover all client devices with a single Administration Server or it is necessary to build a hierarchy of Administration Servers. You may also have to build a hierarchy of Administration Servers that is identical to the organizational structure of the organization whose network you want to protect.

2. **Preparation for the use of custom certificates**

   If your organization's Public Key Infrastructure (PKI) requires that you use custom certificates issued by a specific certification authority (CA), prepare those certificates and make sure that they meet all the requirements.

3. **Installing a database management system (DBMS)**

   Install the DBMS that will be used by Kaspersky Security Center or use an existing one.

   You can choose from one of the supported DBMSs.

   For information about how to install the selected DBMS, refer to its documentation.

   If you use MariaDB, you need to configure the recommended settings for optimal work of the DBMS with Kaspersky Security Center.

4. **Configuring ports**

   Make sure that all the necessary ports are open for interaction between components in accordance with your selected security structure.

If you have to provide internet access to the Administration Server, configure the ports and specify the connection settings, depending on the network configuration.

5. **Installing Kaspersky Security Center**

   Select a Linux device that you intend to use as Administration Server, ensure that the device meets the software and hardware requirements, and then install Kaspersky Security Center on the device. The server version of Network Agent is installed together with Administration Server automatically.

6. **Installing Kaspersky Security Center 14 Web Console and management web plug-ins**

   Select a Linux device that you intend to use as the administrator's workstation, ensure that the device meets the software and hardware requirements, and then install Kaspersky Security Center 14 Web Console on the device. You can install Kaspersky Security Center 14 Web Console either on the same device where Administration Server is installed or on another device.

   Download the Kaspersky Endpoint Security for Linux management web plug-in and then install it on the same device where Kaspersky Security Center 14 Web Console is installed.

7. **Installing Kaspersky Endpoint Security for Linux and Network Agent on the Administration Server device**

   By default, the application does not consider the Administration Server device as a managed device. To protect Administration Server against viruses and other threats, and to manage the device as any other managed device, we recommend that you install Kaspersky Endpoint Security for Linux and Network Agent for Linux on the Administration Server device. In this case, Network Agent for Linux is installed and works independently from the server version of Network Agent that you installed together with Administration Server.

8. **Performing initial setup**

   When Administration Server installation is complete, the first connection to the Administration Server the Quick Start Wizard starts automatically. Perform initial configuration of Administration Server according to the existing requirements. During the initial configuration stage, the Wizard uses the default settings to create the policies and tasks that are required for protection deployment. However, the default settings may be less than optimal for the needs of your organization. If necessary, you can edit the settings of policies and tasks.

9. **Discovery of networked devices**

   Discover the devices manually. Kaspersky Security Center Linux receives the addresses and names of all devices detected on the network. You can then use Kaspersky Security Center Linux to install Kaspersky applications and software from other vendors on the detected devices. Kaspersky Security Center Linux regularly starts device discovery, which means that if any new instances appear on the network, they will be detected automatically.

10. **Arranging devices into administration groups**

    In some cases, deploying protection on networked devices in the most convenient way may require you to divide the entire pool of devices into administration groups taking into account the structure of the organization. You can create moving rules to distribute devices among groups or you can distribute devices manually. You can assign group tasks for administration groups, define the scope of policies, and assign distribution points.

    Make sure that all managed devices have been correctly assigned to the appropriate administration groups, and that there are no longer any unassigned devices in the network.

11. **Assigning distribution points**

    Distribution points are assigned to administration groups automatically but you can assign them manually, if necessary. We recommend that you use distribution points on large-scale networks to reduce the load on the Administration Server, and on networks that have a distributed structure to provide the Administration Server with access to devices (or device groups) communicated through channels with low throughput rates.

12. **Installing Network Agent and security applications on networked devices**

    Deployment of protection on an enterprise network entails installation of Network Agent and security applications on devices that have been detected by Administration Server during the device discovery.

To install the applications remotely, run the Protection Deployment Wizard.

Security applications protect devices against viruses and other programs that pose a threat. Network Agent ensures communication between the device and Administration Server. Network Agent settings are configured automatically by default.

Before you start installing Network Agent and the security applications on networked devices, make sure that these devices are accessible (turned on).

13. **Deploying license keys to client devices**

    Deploy license keys to client devices to activate managed security applications on those devices.

14. **Configuring Kaspersky application policies**

    To apply different application settings to different devices, you can use device-centric security management and/or user-centric security management. Device-centric security management can be implemented by using policies and tasks. You can apply tasks only to those devices that meet specific conditions. To set the conditions for filtering devices, use device selections and tags.

15. **Monitoring the network protection status**

    You can monitor your network by using widgets on the dashboard, generate reports from Kaspersky applications, configure and view selections of events received from the applications on the managed devices, and view notification lists.

Configuring the MariaDB x64 server for working with Kaspersky Security Center 14 Linux

Recommended settings for the my.cnf file

For more details about DBMS configuring, refer also to the account configuring procedure. For information about DBMS installation, refer to the DBMS installation procedure.

To configure the my.cnf file:

1. Open the my.cnf file in a text editor.

2. Enter the following lines into the [mysqld] section of the my.cnf file:

```
sort_buffer_size=10M
join_buffer_size=100M
join_buffer_space_limit=300M
join_cache_level=8
tmp_table_size=512M
max_heap_table_size=512M
key_buffer_size=200M
innodb_buffer_pool_size=<value>
innodb_thread_concurrency=20
innodb_flush_log_at_trx_commit=0
innodb_lock_wait_timeout=300
max_allowed_packet=32M
max_connections=151
max_prepared_stmt_count=12800
table_open_cache=60000
table_open_cache_instances=4
table_definition_cache=60000
```

The value of the `innodb_buffer_pool_size` must be no less than 80 percent of the expected KAV database size. Note that the specified memory is allocated at server startup. If the database size is smaller than the specified buffer size, only the required memory is allocated. If you use MariaDB 10.4.3 or older, the actual size of allocated memory is approximately 10 percent greater than the specified buffer size.

It is recommended to use the parameter value `innodb_flush_log_at_trx_commit=0`, because the values "1" or "2" negatively affect the operating speed of MariaDB. Ensure that the `innodb_file_per_table` parameter is set to `1`.

For MariaDB 10.6, additionally enter the following lines into the [mysqld] section:

```
optimizer_prune_level=0
optimizer_search_depth=8
```

By default, the optimizer add-ons `join_cache_incremental`, `join_cache_hashed`, `join_cache_bka` are enabled. If these add-ons are not enabled, you must enable them.

To check whether optimizer add-ons are enabled:

1. In the MariaDB client console, execute the command:

   ```
   SELECT @@optimizer_switch;
   ```

2. Make sure that its output contains the following lines:

   ```
   join_cache_incremental=on
   join_cache_hashed=on
   join_cache_bka=on
   ```

   If these lines are present and have the values `on`, then optimizer add-ons are enabled.

   If these lines are missing or have `off` values, you need to do the following:

   a. Open the my.cnf file in a text editor.

   b. Add the following lines into the my.cnf file:

   ```
   optimizer_switch='join_cache_incremental=on'
   optimizer_switch='join_cache_hashed=on'
   optimizer_switch='join_cache_bka=on'
   ```

The add-ons `join_cache_incremental`, `join_cache_hash`, and `join_cache_bka` are enabled.

Configuring the MySQL x64 server for working with Kaspersky Security Center 14 Linux

If you use the MySQL server for Kaspersky Security Center, enable support of InnoDB and MEMORY storage and of UTF-8 and UCS-2 encodings.

Recommended settings for the my.cnf file

For more details about DBMS configuring, refer also to the account configuring procedure. For information about DBMS installation, refer to the DBMS installation procedure.

To configure the my.cnf file:

1. Open the my.cnf file in a text editor.

2. Add the following lines into the `[mysqld]` section of the my.cnf file:

```
sort_buffer_size=10M
join_buffer_size=20M
tmp_table_size=600M
max_heap_table_size=600M
key_buffer_size=200M
innodb_buffer_pool_size= the real value must be no less than 80% of the expected KAV
database size
innodb_thread_concurrency=20
innodb_flush_log_at_trx_commit=0 (in most cases, the server uses small transactions)
innodb_lock_wait_timeout=300
max_allowed_packet=32M
max_connections=151
max_prepared_stmt_count=12800
table_open_cache=60000
table_open_cache_instances=4
table_definition_cache=60000
```

Note that the memory specified in the `innodb_buffer_pool_size` value is allocated at server startup. If the database size is smaller than the specified buffer size, only the required memory is allocated. The actual size of allocated memory is approximately 10 percent greater than the specified buffer size. Refer to the MySQL documentation for details.

It is recommended to use the parameter value `innodb_flush_log_at_trx_commit = 0`, because the values "1" or "2" negatively affect the operating speed of MySQL. Ensure that the `innodb_file_per_table` parameter is set to `1`.

Installing Kaspersky Security Center

This procedure describes how to install Kaspersky Security Center.

Before installation:

- Install a DBMS.
- Make sure that the device on which you want to install Kaspersky Security Center is running one of the supported Linux distributions.
- Make sure that the DNS server is available on the network.

Use the installation file—ksc64_[version_number]_amd64.deb or ksc64-[version_number].x86_64.rpm—that corresponds to the Linux distribution installed on your device. You receive the installation file by downloading it from the Kaspersky website.

To install Kaspersky Security Center, run the commands provided in the instruction below under an account with root privileges.

To install Kaspersky Security Center:

1. If your device runs on Astra Linux 1.8 or later, do the actions described in this step. If your device runs on a different OS, proceed to the next step.

   a. Create the /etc/systemd/system/kladminserver_srv.service.d directory and create a file named override.conf with the following content:

```
[Service]
```

```
User=
User=ksc
CapabilitiesParsec=PARSEC_CAP_PRIV_SOCK
ExecStart=
ExecStart=/opt/kaspersky/ksc64/sbin/klserver -d from_wd
```

b. Create a directory /etc/systemd/system/klwebsrv_srv.service.d and create a file named override.conf with the following content:

```
[Service]
User=
User=ksc
CapabilitiesParsec=PARSEC_CAP_PRIV_SOCK
ExecStart=
ExecStart=/opt/kaspersky/ksc64/sbin/klcsweb -d from_wd
```

2. Create a group 'kladmins' and an unprivileged account 'ksc'. The account must be a member of the 'kladmins' group. To do this, sequentially run the following commands:

```
# adduser ksc
# groupadd kladmins
# gpasswd -a ksc kladmins
# usermod -g kladmins ksc
```

3. Run the Kaspersky Security Center installation. Depending on your Linux distribution, run one of the following commands:

- `# apt install /<path>/ksc64_[ version_number ]_amd64.deb`
- `# yum install /<path>/ksc64-[ version_number ].x86_64.rpm -y`

4. Run the Kaspersky Security Center configuration:

```
# /opt/kaspersky/ksc64/lib/bin/setup/postinstall.pl
```

5. Read the End User License Agreement (EULA) and the Privacy Policy. The text is displayed in the command line window. Press the space bar to view the next text segment. Then, when prompted, enter the following values:

a. Enter `y` if you understand and accept the terms of the EULA. Enter `n` if you do not accept the terms of the EULA. To use Kaspersky Security Center, you must accept the terms of the EULA.

b. Enter `y` if you understand and accept the terms of the Privacy Policy, and you agree that your data will be handled and transmitted (including to third countries) as described in the Privacy Policy. Enter `n` if you do not accept the terms of the Privacy Policy. To use Kaspersky Security Center, you must accept the terms of the Privacy Policy.

6. When prompted, enter the following settings:

a. Enter the Administration Server DNS name or static IP address.

b. Enter the Administration Server port number. By default, port 14000 is used.

c. Enter the Administration Server SSL port number. By default, port 13000 is used.

d. Evaluate the approximate number of devices that you intend to manage:

- If you have from 1 to 100 networked devices, enter 1.
- If you have from 101 to 1000 networked devices, enter 2.

- If you have more than 1000 networked devices, enter 3.

e. Enter the security group name for services. By default, the 'kladmins' group is used.

f. Enter the account name to start the Administration Server service. The account must be a member of the entered security group. By default, the 'ksc' account is used.

g. Enter the account name to start other services. The account must be a member of the entered security group. By default, the 'ksc' account is used.

h. Enter the DNS name or IP address of the device on which the database is installed.

i. Enter the database port number. This port is used to communicate with Administration Server. By default, port 3306 is used.

j. Enter the database name.

k. Enter the login of the database root account that you use to access the database.

l. Enter the password of the database root account that you use to access the database.

Wait for the services to be added and started automatically:

- `klnagent_srv`
- `kladminserver_srv`
- `klactprx_srv`
- `klwebsrv_srv`

m. Create an account that will act as an Administration Server administrator. Enter the user name and password.

The password must comply with the following rules:

- The user password cannot have less than 8 or more than 16 characters.
- The password must contain characters from at least three of the groups listed below:
  - Uppercase letters (A-Z)
  - Lowercase letters (a-z)
  - Numbers (0-9)
  - Special characters (@ # $ % ^ & * - _ ! + = [ ] { } | : ' , . ? / \ ` ~ " ( ) ;)

The user is added and Kaspersky Security Center is installed.

Service verification

Use the following commands to check whether or not a service is running:

- `# systemctl status klnagent_srv.service`

- `# systemctl status kladminserver_srv.service`
- `# systemctl status klactprx_srv.service`
- `# systemctl status klwebsrv_srv.service`

Installing Kaspersky Security Center in silent mode

You can install Kaspersky Security Center on Linux devices by using an answer file to run an installation in silent mode, that is, without user participation. The answer file contains a custom set of installation parameters: variables and their respective values.

Before installation:

- Install a database management system (DBMS).
- Make sure that the device on which you want to install Kaspersky Security Center is running one of the supported Linux distributions.

To install Kaspersky Security Center in silent mode:

1. Read the End User License Agreement. Follow the steps below only if you understand and accept the terms of the End User License Agreement.
2. If your device runs on Astra Linux 1.8 or later, do the actions described in this step. If your device runs on a different OS, proceed to the next step.

   a. Create the /etc/systemd/system/kladminserver_srv.service.d directory and create a file named override.conf with the following content:
   ```
   [Service]
   User=
   User=ksc
   CapabilitiesParsec=PARSEC_CAP_PRIV_SOCK
   ExecStart=
   ExecStart=/opt/kaspersky/ksc64/sbin/klserver -d from_wd
   ```

   b. Create a directory /etc/systemd/system/klwebsrv_srv.service.d and create a file named override.conf with the following content:
   ```
   [Service]
   User=
   User=ksc
   CapabilitiesParsec=PARSEC_CAP_PRIV_SOCK
   ExecStart=
   ExecStart=/opt/kaspersky/ksc64/sbin/klcsweb -d from_wd
   ```

3. Create a group 'kladmins' and an unprivileged account 'ksc', that must be a member of the 'kladmins' group. To do this, sequentially run the following commands under an account with root privileges:
   ```
   # adduser ksc
   # groupadd kladmins
   # gpasswd -a ksc kladmins
   # usermod -g kladmins ksc
   ```

4. Create the answer file (in TXT format), and add a list of variables in the `VARIABLE_NAME=variable_value` format to the answer file, each one in a separate line. The answer file should include the variables listed in the table below.

5. Set the value of the `KLAUTOANSWERS` environment variable in the root environment containing the full name of the answer file including the path, for example, with the following command:

   ```
   export KLAUTOANSWERS=/tmp/ksc_install/answers.txt
   ```

6. Run the Kaspersky Security Center installation in silent mode—depending on your Linux distribution, run one of the following commands:

   - `# apt install /<path>/ksc64_[ version_number ]_amd64.deb`
   - `# yum install /<path>/ksc64-[ version_number ].x86_64.rpm -y`

7. Create a user to work with Kaspersky Security Center 14 Web Console. To do this, run the following command under an account with root privileges:

   `/opt/kaspersky/ksc64/sbin/kladduser -n ksc -p < password >`, where the password must contain at least 8 characters.

Variables of the answer file used as parameters of Kaspersky Security Center installation in silent mode

Variable name	Required	Description	Possible values
`EULA_ACCEPTED`	Yes	Confirms that you understand and accept the terms of the End User License Agreement.	`1`
`PP_ACCEPTED`	Yes	Confirms that you understand and accept the terms of the Privacy Policy.	1
`KLSRV_UNATT_SERVERADDRESS`	Yes	The Administration Server DNS-name or static IP address.	DNS name or IP address
`KLSRV_UNATT_PORT_SRV`	No	The Administration Server port number. Optional, default value is 14000.	Port number
`KLSRV_UNATT_PORT_SRV_SSL`	No	The Administration Server SSL port number. Optional, default value is 13000.	Port number
`KLSRV_UNATT_PORT_KLOAPI`	No	The Administration Server KLOAPI port number. Optional, default value is 13299.	Port number
`KLSRV_UNATT_PORT_GUI`	No	The Administration Server GUI port number. Optional, default value is 13291.	Port number
`KLSRV_UNATT_NETRANGETYPE`	No	The approximate number of devices that you intend to manage. Optional, default value is 1.	`1` for 1 to 100 networked devices. `2` for 101 to 1,000 networked devices. `3` for more than 1,000 networked devices.
`KLSRV_UNATT_DBMS_INSTANCE`	Yes	The database server IP address.	IP address
`KLSRV_UNATT_DBMS_PORT`	Yes	The database server port.	`3306`
`KLSRV_UNATT_DB_NAME`	Yes	The database name.	`kav`
`KLSRV_UNATT_DBMS_LOGIN`	Yes	The username of a user that has access to the database.	
`KLSRV_UNATT_DBMS_PASSWORD`	Yes	The password of a user that has access to the database.	
`KLSRV_UNATT_KLADMINSGROUP`	Yes	The security group name for services.	`kladmins`
`KLSRV_UNATT_KLSRVUSER`	Yes	The account name to start the Administration Server service. The account must be a member of the security group specified in `KLSRV_UNATT_KLADMINSGROUP` variable.	`ksc`
`KLSRV_UNATT_KLSVCUSER`	Yes	The account name to start other services. The account must be a member of the security group specified in `KLSRV_UNATT_KLADMINSGROUP` variable.	`ksc`

If the Administration Server is to be deployed as a Kaspersky Security Center failover cluster, the answer file must include the following

additional variables:			
KLFOC_UNATT_NODE	Yes	The node number (1 or 2).	1 or 2
KLFOC_UNATT_STATE_SHARE_MOUNT_PATH	Yes	The state share mount point.	
KLFOC_UNATT_DATA_SHARE_MOUNT_PATH	Yes	The data share mount point.	
KLFOC_UNATT_CONN_MODE	Yes	The failover cluster connectivity mode.	VirtualAdapter or ExternalLoadBalancer
In case the KLFOC_UNATT_CONN_MODE variable has VirtualAdapter value, the answer file must include the following additional variables:			
KLFOC_UNATT_CONN_MODE_VA_NAME	One of these variables is required	The virtual network adapter name.	
KLFOC_UNATT_CONN_MODE_VA_IPV4		The virtual network adapter IP address.	IP address
KLFOC_UNATT_CONN_MODE_VA_IPV6		The virtual network adapter IPv6 address.	IPv6 address

Installing Kaspersky Security Center on Astra Linux in the closed software environment mode

This section describes how to install Kaspersky Security Center on the Astra Linux Special Edition operating system.

Before installation:

- Install a database management system.
- Make sure that the device on which you want to install Kaspersky Security Center is running one of the supported Linux distributions.
- Download the kaspersky_astra_pub_key.gpg application key.

Use the ksc64_[version_number]_amd64.deb installation file. You receive the installation file by downloading it from the Kaspersky website.

Run the commands provided in this instruction under an account with root privileges.

To install Kaspersky Security Center on the Astra Linux Special Edition (operational update 1.7) and Astra Linux Special Edition (operational update 1.6) operating system:

1. Open the `/etc/digsig/digsig_initramfs.conf` file, and then specify the following setting:

   ```
   DIGSIG_ELF_MODE=1
   ```

2. In the command line, run the following command to 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. Place the application key in the directory created in the previous step:

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

5. Update the RAM disks:

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

   Reboot the system.

6. If your device runs on Astra Linux 1.8 or later, do the actions described in this step. If your device runs on a different OS, proceed to the next step.

   a. Create the /etc/systemd/system/kladminserver_srv.service.d directory and create a file named override.conf with the following content:

   ```
   [Service]
   User=
   User=ksc
   CapabilitiesParsec=PARSEC_CAP_PRIV_SOCK
   ExecStart=
   ExecStart=/opt/kaspersky/ksc64/sbin/klserver -d from_wd
   ```

   b. Create a directory /etc/systemd/system/klwebsrv_srv.service.d and create a file named override.conf with the following content:

   ```
   [Service]
   User=
   User=ksc
   CapabilitiesParsec=PARSEC_CAP_PRIV_SOCK
   ExecStart=
   ExecStart=/opt/kaspersky/ksc64/sbin/klcsweb -d from_wd
   ```

7. Create a group 'kladmins' and an unprivileged account 'ksc'. The account must be a member of the 'kladmins' group. To do this, sequentially run the following commands:

   ```
   # adduser ksc
   # groupadd kladmins
   # gpasswd -a ksc kladmins
   # usermod -g kladmins ksc
   ```

8. Run the Kaspersky Security Center installation:

   ```
   # apt install /<path>/ksc64_[ version_number ]_amd64.deb
   ```

9. Run the Kaspersky Security Center configuration:

   ```
   # /opt/kaspersky/ksc64/lib/bin/setup/postinstall.pl
   ```

10. Read the End User License Agreement (EULA) and the Privacy Policy. The text is displayed in the command line window. Press the space bar to view the next text segment. When prompted, enter the following values:

    a. Enter `y` if you understand and accept the terms of the EULA. Enter `n` if you do not accept the terms of the EULA. To use Kaspersky Security Center, you must accept the terms of the EULA.

    b. Enter `y` if you understand and accept the terms of the Privacy Policy, and you agree that your data will be handled and transmitted (including to third countries) as described in the Privacy Policy. Enter `n` if you do not accept the terms of the Privacy Policy. To use Kaspersky Security Center, you must accept the terms of the Privacy Policy.

11. When prompted, enter the following settings:

    a. Enter the Administration Server DNS name or static IP address.

b. Enter the Administration Server port number. By default, port 14000 is used.

c. Enter the Administration Server SSL port number. By default, port 13000 is used.

d. Evaluate the approximate number of devices that you intend to manage:

- If you have from 1 to 100 networked devices, enter 1.
- If you have from 101 to 1000 networked devices, enter 2.
- If you have more than 1000 networked devices, enter 3.

e. Enter the security group name for services. By default, the 'kladmins' group is used.

f. Enter the account name to start the Administration Server service. The account must be a member of the entered security group. By default, the 'ksc' account is used.

g. Enter the account name to start other services. The account must be a member of the entered security group. By default, the 'ksc' account is used.

h. Enter the IP address of the device on which the database is installed.

i. Enter the database port number. This port is used to communicate with Administration Server. By default, port 3306 is used.

j. Enter the database name.

k. Enter the login of the database root account that you use to access the database.

l. Enter the password of the database root account that you use to access the database.

Wait for the services to be added and started automatically:

- `klnagent_srv`
- `kladminserver_srv`
- `klactprx_srv`
- `klwebsrv_srv`

m. Create an account that will act as an Administration Server administrator. Enter the user name and password.

The password must comply with the following rules:

- The user password must have a minimum of 8, and a maximum of 16, characters.
- The password must contain characters from at least three of the groups listed below:
  - Uppercase letters (A-Z)
  - Lowercase letters (a-z)
  - Numbers (0-9)
  - Special characters (@ # $ % ^ & * - _ ! + = [ ] { } | : ' , . ? / \ ` ~ " ( ) ;)

Kaspersky Security Center is installed and the user is added.

Service verification

Use the following commands to check whether or not a service is running:

- `# systemctl status klnagent_srv.service`
- `# systemctl status kladminserver_srv.service`
- `# systemctl status klactprx_srv.service`
- `# systemctl status klwebsrv_srv.service`

Installing Kaspersky Security Center 14 Web Console

This section describes how to install Kaspersky Security Center 14 Web Console Server (also referred to as Kaspersky Security Center 14 Web Console) on devices running the Linux operating system. Before installation, you must install a DBMS and the Kaspersky Security Center Administration Server.

Use one of the following installation files that corresponds to the Linux distribution installed on your device:

- For Debian—ksc-web-console-[build_number].x86_64.deb
- For RPM-based operating systems—ksc-web-console-[build_number].x86_64.rpm
- For ALT 8 SP—ksc-web-console-[build_number]-alt8p.x86_64.rpm

You receive the installation file by downloading it from the Kaspersky website.

To install Kaspersky Security Center 14 Web Console:

1. Make sure that the device on which you want to install Kaspersky Security Center 14 Web Console is running one of the supported Linux distributions.
2. Read the End User License Agreement (EULA). If the Kaspersky Security Center distribution kit does not include a TXT file with the text of EULA, you can download the file from the Kaspersky website. If you do not accept the terms of the License Agreement, do not install the application.
3. Create a response file that contains parameters for connecting Kaspersky Security Center 14 Web Console to the Administration Server. Name this file ksc-web-console-setup.json and place it in the following directory: /etc/ksc-web-console-setup.json.

   Example of a response file containing the minimal set of parameters and the default address and port:

```
{
  "address": "127.0.0.1",
  "port": 8080,
  "trusted":
"127.0.0.1|13299|/var/opt/kaspersky/klnagent_srv/1093/cert/klserver.cer|KSC
Server",
  "acceptEula": true
}
```

We recommend that you specify port numbers above 1024. If you want Kaspersky Security Center 14 Web Console to work on ports below 1024, after installation you have to run the following command:

```
sudo setcap 'cap_net_bind_service=+ep' /var/opt/kaspersky/ksc-web-console/node
```

When you install Kaspersky Security Center 14 Web Console on Linux ALT operating system, you must specify a port number other than 8080, because port 8080 is used by the operating system.

Kaspersky Security Center 14 Web Console cannot be updated by using the same .rpm installation file. If you want to change settings in a response file and use this file to reinstall the application, you must first remove the application, and then install it again with the new response file.

4. Under an account with root privileges, use the command line to run the setup file with the .deb or .rpm extension, depending on your Linux distribution.

   - To install or upgrade Kaspersky Security Center 14 Web Console from a .deb file, run the following command:
     ```
     $ sudo dpkg -i ksc-web-console-[build_number].x86_64.deb
     ```
   - To install Kaspersky Security Center 14 Web Console from an .rpm file, run one of the following commands:
     ```
     $ sudo rpm -ivh --nodeps ksc-web-console-[build_number].x86_64.rpm
     ```
     or
     ```
     $ sudo alien -i ksc-web-console-[build_number].x86_64.rpm
     ```
   - To upgrade from a previous version of Kaspersky Security Center 14 Web Console, run one of the following commands:
     - For devices running RPM-based operating system:
       ```
       $ sudo rpm -Uvh --nodeps --force ksc-web-console-[build_number].x86_64.rpm
       ```
     - For devices running Debian-based operating system:
       ```
       $ sudo dpkg -i ksc-web-console-[build_number].x86_64.deb
       ```

   This starts unpacking of the setup file. Please wait until the installation is complete. Kaspersky Security Center 14 Web Console is installed to the following directory: /var/opt/kaspersky/ksc-web-console.

5. Restart all of the Kaspersky Security Center 14 Web Console services by running the following command:
   ```
   $ sudo systemctl restart KSC*
   ```

When the installation is complete, you can use your browser to open and log in to Kaspersky Security Center 14 Web Console.

Kaspersky Security Center 14 Web Console installation parameters

For installing Kaspersky Security Center 14 Web Console Server on devices running Linux, you must create a response file—a .json file that contains parameters for connecting Kaspersky Security Center 14 Web Console to the Administration Server.

Here is an example of a response file containing the minimal set of parameters and the default address and port:

```
{
```

```
  "address": "127.0.0.1",
  "port": 8080,
  "defaultLangId": 1049,
  "enableLog": false,
  "trusted": "127.0.0.1|13299|/var/opt/kaspersky/klnagent_srv/1093/cert/klserver.cer|KSC
Server",
  "acceptEula": true,
  "certPath": "/var/opt/kaspersky/klnagent_srv/1093/cert/klserver.cer",
  "webConsoleAccount": "Group1:User1",
  "managementServiceAccount": "Group1:User2",
  "serviceWebConsoleAccount": "Group1:User3",
  "pluginAccount": "Group1:User4",
  "messageQueueAccount": "Group1:User5"
}
```

We recommend that you specify port numbers above 1024. If you want Kaspersky Security Center 14 Web Console to work on ports below 1024, after installation you have to run the following command:

```
sudo setcap 'cap_net_bind_service=+ep' /var/opt/kaspersky/ksc-web-console/node
```

When you install Kaspersky Security Center 14 Web Console on the Linux ALT operating system, you must specify a port number other than 8080, because port 8080 is used by the operating system.

The table below describes the parameters that can be specified in a response file.

Parameters for installing Kaspersky Security Center 14 Web Console on devices running Linux

Parameter	Description	Available values
`address`	Address of Kaspersky Security Center 14 Web Console Server (required).	String value.
`port`	Number of port that Kaspersky Security Center 14 Web Console Server uses to connect to the Administration Server (required).	Numerical value.
`defaultLangId`	Language of user interface (by default, `1033`).	Numerical code of the language: • German: `1031` • English: `1033` • Spanish: `3082` • Spanish (Mexico): `2058` • French: `1036` • Japanese: `1041` • Kazakh: `1087` • Polish: `1045` • Portuguese (Brazil): `1046` • Russian: `1049` • Turkish: `1055` • Simplified Chinese: `4` • Traditional Chinese: `31748`

		If no value is specified, then English (en-US) language is used.
`enableLog`	Whether or not to enable Kaspersky Security Center 14 Web Console activity logging.	Boolean value: • `true` —Logging is enabled (selected by default). • `false` —Logging is disabled.
`trusted`	List of trusted Administration Servers allowed to connect to Kaspersky Security Center 14 Web Console. Each Administration Server must be defined with the following parameters: • Administration Server address • OpenAPI port that is used by Kaspersky Security Center 14 Web Console to connect to the Administration Server (by default, 13299) • Path to the certificate of the Administration Server • Administration Server name that will be displayed in the login window The parameters are separated with vertical bars. If several Administration Servers are specified, separate them with two vertical bars (pipes).	String value in the following format: `" server address | port | certificate path | server name "`. Example: `"X.X.X.X|13299|/cert/server-1.cer| Server 1 ||Y.Y.Y.Y|13299|/cert/server-2.cer| Server 2 "`.
`acceptEula`	Whether or not you want to accept the terms of the End User License Agreement (EULA). The file containing the terms of the EULA is downloaded together with the installation file.	Boolean value: • `true` —I confirm that I have fully read, understand, and accept the terms and conditions of this End User License Agreement. • `false` —I do not accept the terms of the License Agreement (selected by default). If no value is specified, the Kaspersky Security Center 14 Web Console installer shows you the EULA and asks whether or not you agree to accept the terms of the EULA.
`certDomain`	If you want to generate a new certificate, use this parameter to specify the domain name for which a new certificate is to be generated.	String value.
`certPath`	If you want to use an existing certificate, use this parameter to specify the path to the certificate file.	String value. Specify the path `"/var/opt/kaspersky/klnagent_srv/1093/cert/klserver.cer"` to use the existing certificate. For a custom certificate, specify the path where this custom certificate is stored.
`keyPath`	If you want to use an existing certificate, use this parameter to specify path to the key file.	String value.
`webConsoleAccount`	Name of the account under which the Kaspersky Security Center Web Console service is run.	String value in the following format: `" group name : user name "`. Example: `" Group1 : User1 "`. If no value is specified, the Kaspersky Security Center 14 Web Console installer creates a new account with the default name `user_management_%uid%`.
`managementServiceAccount`	Name of the privileged account under which the Kaspersky Security Center Web Console Management Service is run.	String value in the following format: `" group name : user name "`. Example: `" Group1 : User1 "`. If no value is specified, the Kaspersky Security Center 14 Web Console installer creates a new account with the default name `user_nodejs_%uid%`.
`serviceWebConsoleAccount`	Name of the account under which	String value in the following format: `" group name : user name "`.

	the Kaspersky Security Center Web Console service is run.	Example: "Group1 : User1". If no value is specified, the Kaspersky Security Center 14 Web Console installer creates a new account with the default name user_svc_nodejs_%uid%.
pluginAccount	Name of the account under which the Kaspersky Security Center Product Plugins service is run.	String value in the following format: "group name : user name". Example: "Group1 : User1". If no value is specified, the Kaspersky Security Center 14 Web Console installer creates a new account with the default name user_web_plugin_%uid%.
messageQueueAccount	Name of the account under which the Kaspersky Security Center Web Console Message Queue service is run.	String value in the following format: "group name : user name". Example: "Group1 : User1". If no value is specified, the Kaspersky Security Center 14 Web Console installer creates a new account with the default name user_message_queue_%uid%.

If you specify the webConsoleAccount, managementServiceAccount, serviceWebConsoleAccount, pluginAccount, or messageQueueAccount parameters, make sure that the custom user accounts belong to the same security group. If these parameters are not specified, the Kaspersky Security Center 14 Web Console installer creates a default security group, and then creates user accounts with default names in this group.

Installing Kaspersky Security Center 14 Web Console connected to Administration Server installed on Kaspersky Security Center Linux failover cluster nodes

This section describes how to install Kaspersky Security Center 14 Web Console Server (hereinafter also referred to as Kaspersky Security Center 14 Web Console), that connects to Administration Server installed on Kaspersky Security Center Linux failover cluster nodes. Prior to installing Kaspersky Security Center 14 Web Console, install a DBMS and Kaspersky Security Center Administration Server on Kaspersky Security Center Linux failover cluster nodes.

To install Kaspersky Security Center 14 Web Console that connects to Administration Server installed on Kaspersky Security Center Linux failover cluster nodes:

1. Perform step 1 and step 2 of the Kaspersky Security Center 14 Web Console installation.

2. At step 3, in the response file, specify the trusted installation parameter to allow the Kaspersky Security Center Linux failover cluster to connect to Kaspersky Security Center 14 Web Console. The string value of this parameter has the following format:
   ```
   "trusted": "server address|port|certificate path|server name"
   ```
   Specify the components of the trusted installation parameter:

   - **Administration Server address**. If you created a secondary network adapter when preparing the cluster nodes, use the IP address of the adapter as the Kaspersky Security Center Linux failover cluster address. Otherwise, specify the IP address of the third-party load balancer that you use.

   - **Administration Server port**. The OpenAPI port that Kaspersky Security Center 14 Web Console uses to connect to Administration Server (default value is 13299).

   - **Administration Server certificate**. The Administration Server certificate is located in the shared data storage of the Kaspersky Security Center Linux failover cluster. The default path to the certificate file is: <shared data folder>\1093\cert\klserver.cer. Copy the certificate file from the shared data storage to the

device where you install Kaspersky Security Center 14 Web Console. Specify the local path to the Administration Server certificate.

- **Administration Server name**. The Kaspersky Security Center Linux failover cluster name that will be displayed in the login window of Kaspersky Security Center 14 Web Console.

3. Continue with the standard installation of Kaspersky Security Center 14 Web Console.

After the installation is complete, a shortcut appears on your desktop, and you can log in to Kaspersky Security Center 14 Web Console.

You can go to **DISCOVERY & DEPLOYMENT** → **UNASSIGNED DEVICES** to view the information about the cluster nodes and the file server.

Installing Network Agent for Linux in silent mode (with an answer file)

You can install Network Agent on Linux devices by using an answer file—a text file that contains a custom set of installation parameters: variables and their respective values. Using this answer file allows you to run an installation in silent mode, that is, without user participation.

To perform installation of Network Agent for Linux in silent mode:

1. If you want to install Network Agent on devices with the SUSE Linux Enterprise Server 15 operating system, install the insserv-compat package first to configure Network Agent.

2. Read the End User License Agreement. Follow the steps below only if you understand and accept the terms of the End User License Agreement.

3. Set the value of the KLAUTOANSWERS environment variable by entering the full name of the answer file (including the path), for example, as follows:

   ```
   export KLAUTOANSWERS=/tmp/nagent_install/answers.txt
   ```

4. Create the answer file (in TXT format) in the directory that you have specified in the environment variable. Add to the answer file a list of variables in the VARIABLE_NAME=variable_value format, each variable on a separate line.

   For correct usage of the answer file, you must include in it a minimum set of the three required variables:

   - KLNAGENT_SERVER
   - KLNAGENT_AUTOINSTALL
   - EULA_ACCEPTED

   You can also add any optional variables to use more specific parameters of your remote installation. The following table lists all of the variables that can be included in the answer file:

   Variables of the answer file used as parameters of Network Agent for Linux installation in silent mode

Variables of the answer file used as parameters of Network Agent for Linux installation in silent mode

Variable name	Required	Description	Possible values
KLNAGENT_SERVER	Yes	Contains the Administration Server name presented as fully qualified domain name (FQDN) or IP address.	DNS name or IP address.
KLNAGENT_AUTOINSTALL	Yes	Defines whether silent installation mode is enabled.	1—Silent mode is enabled; the user is not prompted for any actions during installation. Other—Silent mode is disabled; the user may be prompted for actions during installation.
EULA_ACCEPTED	Yes	Defines whether the user accepts the End User License Agreement (EULA) of Network Agent; when missing, can be interpreted as non-acceptance of the EULA.	1—I confirm that I have fully read, understand, and accept the terms and conditions of this End User License Agreement. Other or not specified—I do not accept the terms of the License Agreement (installation is not performed).
KLNAGENT_PROXY_USE	No	Defines whether connection with the Administration Server will use proxy settings. The default value is 0.	1—Proxy settings are used. Other—Proxy settings are not used.
KLNAGENT_PROXY_ADDR	No	Defines the address of the proxy server used for connection with the Administration Server.	DNS name or IP address.
KLNAGENT_PROXY_LOGIN	No	Defines the user name used for login to the proxy server.	Any existing user name.
KLNAGENT_PROXY_PASSWORD	No	Defines the user password used for login to the proxy server.	Any set of alphanumeric characters allowed by the password format in the operating system.
KLNAGENT_VM_VDI	No	Defines whether Network Agent is installed on an image for creation of dynamic virtual machines.	1—Network Agent is installed on an image, which is subsequently used for creation of dynamic virtual machines. Other—No image is used during installation.
KLNAGENT_VM_OPTIMIZE	No	Defines whether the Network Agent settings are optimal for hypervisor.	1—The default local settings of Network Agent are modified so that they allow optimized usage on hypervisor.
KLNAGENT_TAGS	No	Lists the tags assigned to the Network Agent instance.	One or multiple tag names separated with semicolon.
KLNAGENT_UDP_PORT	No	Defines the UDP port used by Network Agent. The default value is 15000.	Any existing port number.
KLNAGENT_PORT	No	Defines the non-TLS port used by Network Agent. The default value is 14000.	Any existing port number.
KLNAGENT_SSLPORT	No	Defines the TLS port used by Network Agent. The default value is 13000.	Any existing port number.
KLNAGENT_USESSL	No	Defines whether Transport Layer Security (TLS) is used for connection.	1 (default)—TLS is used. Other—TLS is not used.
KLNAGENT_GW_MODE	No	Defines whether connection gateway is used.	1 (default)—The current settings are not modified (at the first call, no connection gateway is specified). 2—No connection gateway is used.

			3—Connection gateway is used. 4—The Network Agent instance is used as connection gateway in demilitarized zone (DMZ).
KLNAGENT_GW_ADDRESS	No	Defines the address of the connection gateway. The value is applicable only if KLNAGENT_GW_MODE=3.	DNS name or IP address.

5. Install Network Agent:

   - To install Network Agent from an RPM package to a 32-bit operating system, execute the following command:
     `# rpm -i klnagent-<build number>.i386.rpm`
   - To install Network Agent from an RPM package to a 64-bit operating system, execute the following command:
     `# rpm -i klnagent64-<build number>.x86_64.rpm`
   - To install Network Agent from an RPM package on a 64-bit operating system for the Arm architecture, execute the following command:
     `# rpm -i klnagent64-<build number>.aarch64.rpm`
   - To install Network Agent from a DEB package to a 32-bit operating system, execute the following command:
     `# apt-get install ./klnagent_<build number>_i386.deb`
   - To install Network Agent from a DEB package to a 64-bit operating system, execute the following command:
     `# apt-get install ./klnagent64_<build number>_amd64.deb`
   - To install Network Agent from a DEB package on a 64-bit operating system for the Arm architecture, execute the following command:
     `# apt-get install ./klnagent64_<build number>_arm64.deb`

   Installation of Network Agent for Linux starts in silent mode; the user is not prompted for any actions during the process.

Installing Network Agent on Astra Linux in the closed software environment mode

This section describes how to install Network Agent for Linux on the Astra Linux Special Edition operating system.

Before installation:

- Make sure that the device on which you want to install Network Agent for Linux is running one of the supported Linux distributions.
- Download the kaspersky_astra_pub_key.gpg application key.
- Download the necessary Network Agent installation file from the Kaspersky website.

Run the commands provided in this instruction under an account with root privileges.

To install Network Agent for Linux on the Astra Linux Special Edition (operational update 1.7) and Astra Linux Special Edition (operational update 1.6) operating system:

1. Open the /etc/digsig/digsig_initramfs.conf file, and then specify the following setting:

   ```
   DIGSIG_ELF_MODE=1
   ```

2. In the command line, run the following command to 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. Place the application key in the directory created in the previous step:

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

5. Update the RAM disks:

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

   Reboot the system.

6. Install Network Agent:

   - To install Network Agent from a DEB package to a 32-bit operating system, execute the following command:
     `# apt-get install ./klnagent_<build number>_i386.deb`
   - To install Network Agent from a DEB package to a 64-bit operating system, execute the following command:
     `# apt-get install ./klnagent64_<build number>_amd64.deb`
   - To install Network Agent from a DEB package to a 64-bit operating system for the Arm architecture, execute the following command:
     `# apt-get install ./klnagent64_<build number>_arm64.deb`

Network Agent for Linux is installed.

Account for working with the DBMS

To install Administration Server and work with it, you need to create an internal DBMS account. This account allows you to access the DBMS and requires specific rights. When you grant rights and permissions to the DBMS account, follow the principle of least privilege. This means that the granted rights should be only enough to perform the required actions. Note that you should grant rights to the DBMS account before you install and start Administration Server.

Kaspersky Security Center 14 Linux supports MySQL and MariaDB DBMSs. After you create an internal account for one of these DBMSs, grant this account the required rights. Note that the sets of rights for the internal MySQL account and the internal MariaDB account are the same. The required rights are listed below:

- Schema privileges:
  - Administration Server database: ALL (excluding GRANT OPTION).
  - System schemes (mysql and sys): SELECT, SHOW VIEW.
  - The sys.table_exists stored procedure: EXECUTE (if you use MariaDB 10.5 or earlier as a DBMS, you do not need to grant the EXECUTE privilege).

- Global privileges for all schemes: PROCESS, SUPER.

For more information on how to configure the account rights, see Configuring the DBMS account for work with MySQL and MariaDB.

Rights that you granted to the internal DBMS account are enough to restore Administration Server data from the backup.

Configuring the DBMS account for work with MySQL and MariaDB

Prerequisites

Before you assign rights to the DBMS account, perform the following actions:

1. Make sure that you log in to the system under the local administrator account.
2. Install an environment for working with MySQL or MariaDB.

Configuring the DBMS account to install Administration Server

To configure the DBMS account for the Administration Server installation:

1. Run an environment for working with MySQL or MariaDB under the root account that you created when you installed the DBMS.
2. Create an internal DBMS account with a password. The Administration Server installer (hereinafter also referred to as the installer) and the Administration Server service will use this internal DBMS account to access DBMS.

   To create a DBMS account with a password, execute the following command:

   ```
   /* Create a user named KSCAdmin and specify the password for KSCAdmin */
   CREATE USER 'KSCAdmin' IDENTIFIED BY '<password>';
   ```

   If you use MySQL 8.0 or earlier as a DBMS, note that for these versions the "Caching SHA2 password" authentication is not supported. Change the default authentication from "Caching SHA2 password" to "MySQL native password":

   - To create a DBMS account that uses the "MySQL native password" authentication, execute the following command:

     ```
     CREATE USER 'KSCAdmin'@'%' IDENTIFIED WITH mysql_native_password BY '<password>';
     ```

   - To change the authentication for an existing DBMS account, execute the following command:

     ```
     ALTER USER 'KSCAdmin'@'%' IDENTIFIED WITH mysql_native_password BY '<password>';
     ```

3. Grant the following privileges to the created DBMS account:

   - Schema privileges:
     - Administration Server database: ALL (excluding GRANT OPTION)
     - System schemes (mysql and sys): SELECT, SHOW VIEW
     - The sys.table_exists stored procedure: EXECUTE

- Global privileges for all schemes: PROCESS, SUPER

To grant the required privileges to the created DBMS account, run the following script:

```
/* Grant privileges to KSCAdmin */
GRANT USAGE ON *.* TO 'KSCAdmin';
GRANT ALL ON kav.* TO 'KSCAdmin';
GRANT SELECT, SHOW VIEW ON mysql.* TO 'KSCAdmin';
GRANT SELECT, SHOW VIEW ON sys.* TO 'KSCAdmin';
GRANT EXECUTE ON PROCEDURE sys.table_exists TO 'KSCAdmin';
GRANT PROCESS ON *.* TO 'KSCAdmin';
GRANT SUPER ON *.* TO 'KSCAdmin';
```

If you use MariaDB 10.5 or earlier as a DBMS, you do not need to grant the EXECUTE privilege. In this case, exclude the following command from the script: `GRANT EXECUTE ON PROCEDURE sys.table_exists TO 'KSCAdmin'`.

4. To view the list of privileges granted to the DBMS account, execute the following command:

   ```
   SHOW grants for 'KSCAdmin';
   ```

5. To create an Administration Server database manually, run the following script (in this script, the Administration Server database name is *kav*):

   ```
   CREATE DATABASE kav
   DEFAULT CHARACTER SET ascii
   DEFAULT COLLATE ascii_general_ci;
   ```

   Use the same database name that you specify in the script that creates the DBMS account.

6. Install Administration Server.

After the installation finishes, the Administration Server database is created and Administration Server is ready to use.

Deployment of the Kaspersky Security Center Linux failover cluster

This section contains both general information about the Kaspersky Security Center Linux failover cluster, and instructions on the preparation and deployment of the Kaspersky Security Center Linux failover cluster in your network.

Scenario: Deployment of Kaspersky Security Center Linux failover cluster

A Kaspersky Security Center failover cluster provides high availability of Kaspersky Security Center and minimizes downtime of Administration Server in case of a failure. The failover cluster is based on two identical instances of Kaspersky Security Center installed on two computers. One of the instances works as an active node and the other one is a passive node. The active node manages protection of the client devices, while the passive one is prepared to take all of the functions of the active node in case the active node fails. When a failure occurs, the passive node becomes active and the active node becomes passive.

Prerequisites

You have the hardware that meets the requirements for the failover cluster.

Kaspersky applications deployment proceeds in stages:

1. **Creating accounts for Kaspersky Security Center services**

   Perform the following steps on the active node, passive node, and the file server:

   1. Create a domain group with the name 'kladmins' and assign the same GID to all three groups.
   2. Create a user account with the name 'ksc' and assign the same UID to all three user accounts. Set the primary group to 'kladmins' for the created accounts.
   3. Create a user account with the name 'rightless' and assign the same UID to all three user accounts. Set the primary group to 'kladmins' for the created accounts.

2. **File server preparation**

   Prepare the file server to work as a component of Kaspersky Security Center Linux failover cluster. Make sure that the file server meets the hardware and software requirements, create two shared folders for Kaspersky Security Center data, and configure permissions to access the shared folders.

   How-to instructions: Preparing a file server for Kaspersky Security Center Linux failover cluster

3. **Preparation of active and passive nodes**

   Prepare two computers with identical hardware and software to work as an active and passive nodes.

   How-to instructions: Preparing nodes for Kaspersky Security Center Linux failover cluster

4. **Database Management System (DBMS) installation**

   You have two options:

   - If you want to use MariaDB Galera Cluster, you do not need a dedicated computer for DBMS. Install MariaDB Galera Cluster on each of the nodes.
   - If you want to use any other supported DBMS, install the selected DBMS on a dedicated computer.

5. **Kaspersky Security Center installation**

   Install Kaspersky Security Center in the failover cluster mode on both nodes. You must first install Kaspersky Security Center on the active node, and then install it on the passive one.

   Additionally, you can install Kaspersky Security Center 14 Web Console on a separate device that is not a cluster node.

6. **Testing the failover cluster**

   Check that you configured the failover cluster correctly and it works properly. For example, you can stop one of the Kaspersky Security Center services on the active node: kladminserver, klnagent, ksnproxy, klactprx, or klwebsrv. After the service stopped, the protection management must be automatically switched to the passive node.

Results

Kaspersky Security Center Linux failover cluster is deployed. Please be acquainted with the events that lead to the switch between the active and passive nodes.

About Kaspersky Security Center Linux failover cluster

A Kaspersky Security Center failover cluster provides high availability of Kaspersky Security Center and minimizes downtime of Administration Server in case of a failure. The failover cluster is based on two identical instances of Kaspersky Security Center installed on two computers. One of the instances works as an active node and the other one is a passive node. The active node manages protection of the client devices, while the passive one is prepared to take all of the functions of the active node in case the active node fails. When a failure occurs, the passive node becomes active and the active node becomes passive.

In a Kaspersky Security Center Linux failover cluster, all Kaspersky Security Center services are managed automatically. Do not try to restart the services manually.

Hardware and software requirements

To deploy a Kaspersky Security Center Linux failover cluster, you must have the following hardware:

- Two devices with identical hardware and software. These devices will act as the active and passive nodes.
- A file server running Linux, with the EXT4 file system. You must provide a dedicated device that will act as a file server.

  Make sure you have provided high network bandwidth between the file server, and the active and passive nodes.

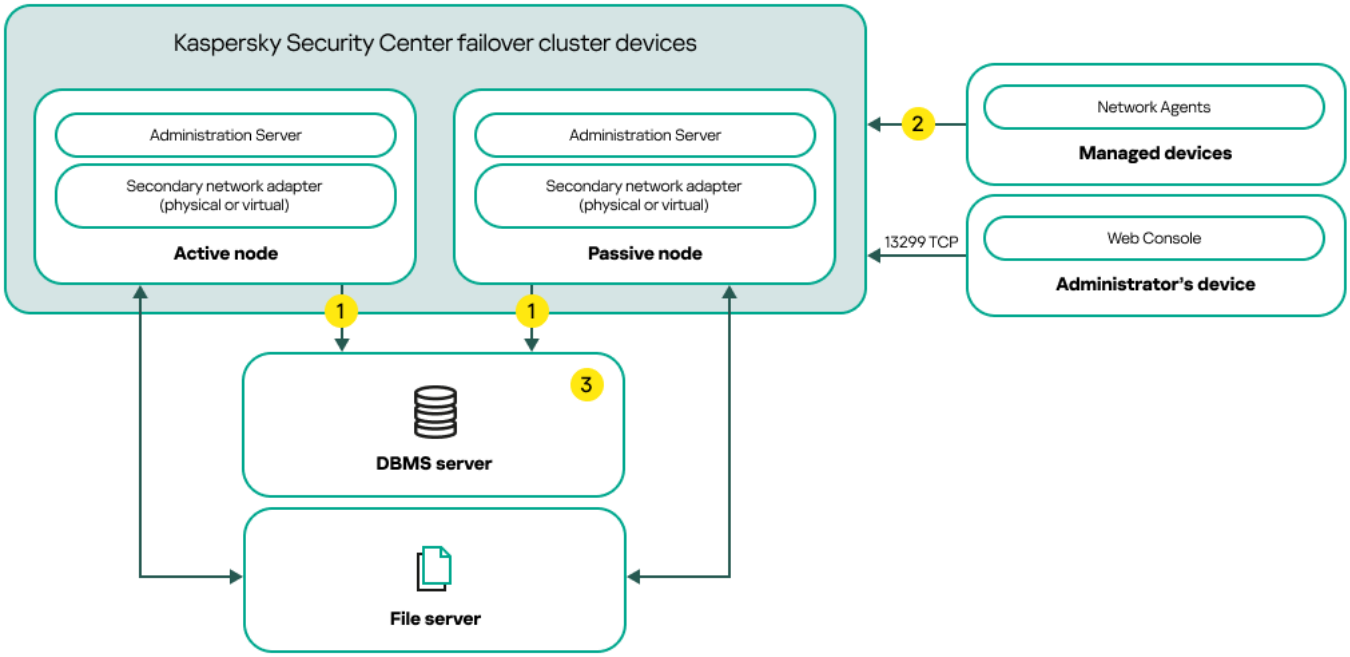
- A device with a supported Database Management System (DBMS). If you use MariaDB Galera Cluster as a DBMS, a dedicated device for this purpose is not required.

Failover cluster deployment fails when you have either both arping and iputils-arping packages or only the arping package installed. Before deploying a failover cluster, ensure that you only have the iputils-arping package installed on both nodes.

Deployment schemes

You can choose one of the following schemes to deploy Kaspersky Security Center failover cluster:

- A scheme that uses a secondary network adapter.
- A scheme that uses a third-party load balancer.



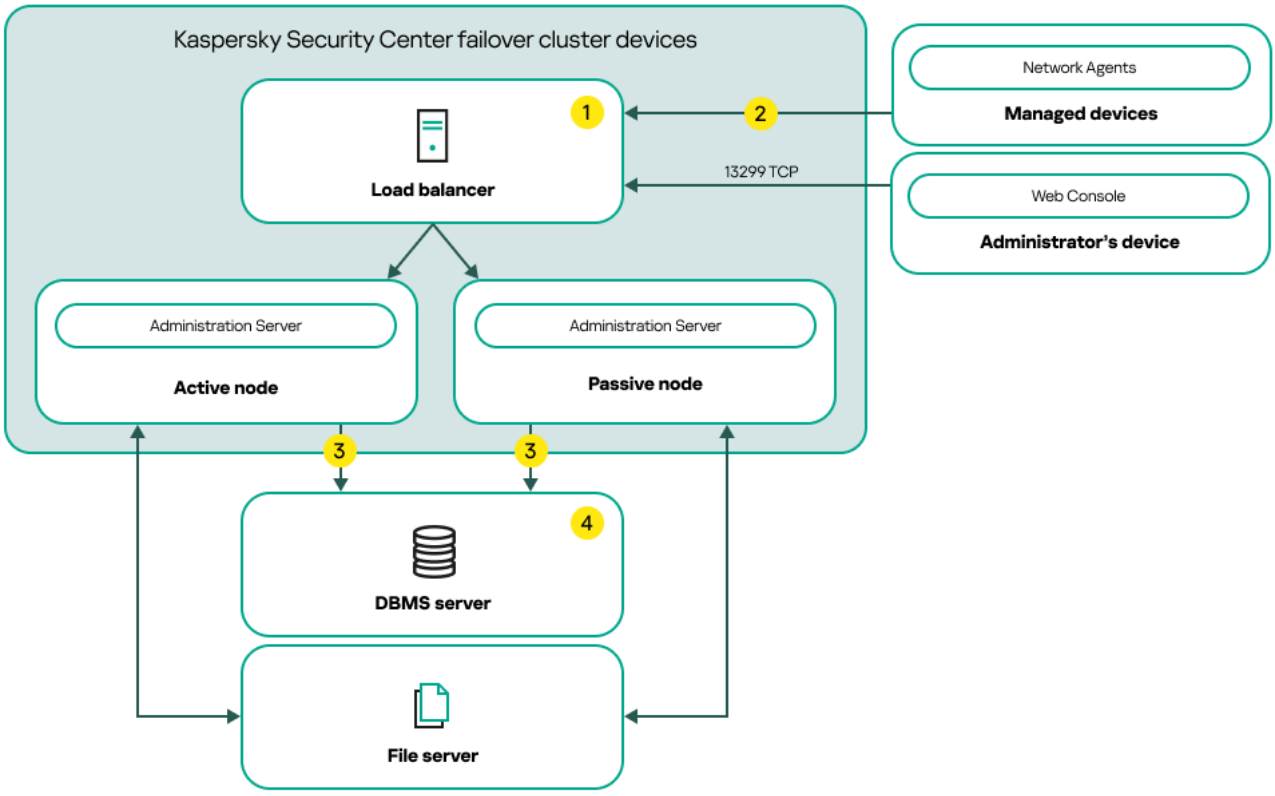
A scheme that uses a secondary network adapter

Scheme legend:

1 Administration Server sends data to the database. Open the necessary ports on the device where the database is located, for example, port 3306 for MySQL Server, or port 5432 for PostgreSQL or Postgres Pro. Please refer to the DBMS documentation for the relevant information.

2 On the managed devices, open the following ports: TCP 13000, UDP 13000, and TCP 17000.

3 A device with Database Management System (DBMS). If you use MariaDB Galera Cluster as a DBMS, a dedicated device for this purpose is not required. Install MariaDB Galera Cluster on each of the nodes.



A scheme that uses a third-party load balancer

Scheme legend:

1 On the load balancer device, open all of the Administration Server ports: TCP 13000, UDP 13000, TCP 13299, and TCP 17000.

> If you want to use the klakaut utility for automation, you must also open the TCP 13291 port.

2 On the managed devices, open the following ports: TCP 13000, UDP 13000, and TCP 17000.

3 Administration Server sends data to the database. Open the necessary ports on the device where the database is located, for example, port 3306 for MySQL Server, or port 5432 for PostgreSQL or Postgres Pro. Please refer to the DBMS documentation for the relevant information.

4 A device with Database Management System (DBMS). If you use MariaDB Galera Cluster as a DBMS, a dedicated device for this purpose is not required. Install MariaDB Galera Cluster on each of the nodes.

Switch conditions

The failover cluster switches protection management of the client devices from the active node to the passive one, if any of the following events occurs on the active node:

- The active node is broken due to a software or hardware failure.
- The active node was temporarily stopped for maintenance activities.
- At least one of the Kaspersky Security Center services (or processes) failed or was deliberately terminated by user. The Kaspersky Security Center services are the following ones: kladminserver, klnagent, klactprx, and klwebsrv.
- The network connection between the active node and the storage on the file server was interrupted or terminated.

Preparing a file server for a Kaspersky Security Center Linux failover cluster

A file server works as a required component of a Kaspersky Security Center Linux failover cluster.

To prepare a file server:

1. Make sure that the file server meets the hardware and software requirements.
2. Install and configure an NFS server:
   - Access to the file server must be enabled for both nodes in the NFS server settings.
   - The NFS protocol must have version 4.0 or 4.1.
   - Minimum requirements for Linux kernel:
     - 3.19.0-25, if you use NFS 4.0

- 4.4.0-176, if you use NFS 4.1

3. On the file server, create two folders and share them by using NFS. One of them is used to keep information about the failover cluster state. The other one is used to store the data and settings of Kaspersky Security Center. You will specify paths to the shared folders while configuring the installation of Kaspersky Security Center.

   Run the following commands:

   ```
   sudo yum install nfs-utils
   sudo mkdir -p /mnt/KlFocStateShare
   sudo mkdir -p /mnt/KlFocDataShare_klfoc
   sudo chown ksc:kladmins /mnt/KlFocStateShare
   sudo chown ksc:kladmins /mnt/KlFocDataShare_klfoc
   sudo chmod -R 777 /mnt/KlFocStateShare /mnt/KlFocDataShare_klfoc
   sudo sh -c "echo /mnt/KlFocStateShare *\(rw,sync,no_subtree_check,no_root_squash\) >>
   /etc/exports"
   sudo sh -c "echo /mnt/KlFocDataShare_klfoc *\
   (rw,sync,no_subtree_check,no_root_squash\) >> /etc/exports"
   sudo cat /etc/exports
   sudo exportfs -a
   sudo systemctl start rpcbind
   sudo service nfs start
   ```

   Enable autostart by running the following command:

   ```
   sudo systemctl enable rpcbind
   ```

4. Restart the file server.

The file server is prepared. To deploy the Kaspersky Security Center Linux failover cluster, follow the further instructions in this scenario.

Preparing nodes for a Kaspersky Security Center Linux failover cluster

Prepare two computers to work as the active and passive nodes of the Kaspersky Security Center Linux failover cluster.

To prepare nodes for the Kaspersky Security Center Linux failover cluster:

1. Make sure that you have two computers that meet the hardware and software requirements. These computers will act as the active and passive nodes of the failover cluster.

2. To make the nodes function as NFS clients, install the nfs-utils package on each node.

   Run the following command:

   ```
   sudo yum install nfs-utils
   ```

3. Create mount points by running the following commands:

   ```
   sudo mkdir -p /mnt/KlFocStateShare
   sudo mkdir -p /mnt/KlFocDataShare_klfoc
   ```

4. Check that the shared folders can be successfully mounted. [optional step]

   Run the following commands:

   ```
   sudo mount -t nfs -o vers=4,soft,auto,user,rw {server}:{path to the KlFocStateShare
   folder} /mnt/KlFocStateShare
   ```

```
sudo mount -t nfs -o vers=4,noauto,user,rw {server}:{path to the
KlFocDataShare_klfoc folder} /mnt/KlFocDataShare_klfoc
```

Here, {server}:{path to the KlFocStateShare folder} and {server}:{path to the KlFocDataShare_klfoc folder} are the network paths to the shared folders on the file server.

After the shared folders have been successfully mounted, unmount them by running the following commands:

```
sudo umount /mnt/KlFocStateShare
sudo umount /mnt/KlFocDataShare_klfoc
```

5. Match the mount points and the shared folders:

```
sudo vi /etc/fstab
{server}:{path to the KlFocStateShare folder} /mnt/KlFocStateShare nfs
vers=4,soft,timeo=50,retrans=2,auto,user,rw 0 0
{server}:{path to the KlFocDataShare_klfoc folder} /mnt/KlFocDataShare_klfoc nfs
vers=4,noauto,user,rw,exec 0 0
```

Here, {server}:{path to the KlFocStateShare folder} and {server}:{path to the KlFocDataShare_klfoc folder} are the network paths to the shared folders on the file server.

6. Restart both nodes.

7. Mount the shared folders by running the following commands:

```
mount /mnt/KlFocStateShare
mount /mnt/KlFocDataShare_klfoc
```

8. Ensure that the permissions to access the shared folders belong to ksc:kladmins.

Run the following command:

```
sudo ls -la /mnt/
```

9. On each of the nodes, configure a secondary network adapter.

A secondary network adapter can be physical or virtual. If you want to use a physical network adapter, connect and configure it with standard operating system tools. If you want to use a virtual network adapter, create it by using third-party software.

Do one of the following:

- Use a virtual network adapter.

  a. Use the following command to check that NetworkManager is used to manage the physical adapter:

  ```
  nmcli device status
  ```

  If the physical adapter is shown as unmanaged in the output, configure NetworkManager to manage the physical adapter. The exact configuration steps depend on your distribution.

  b. Use the following command to identify interfaces:

  ```
  ip a
  ```

  c. Create a new configuration profile:

  ```
  nmcli connection add type macvlan dev <physical interface> mode bridge
  ifname <virtual interface> ipv4.addresses <address mask> ipv4.method manual
  autoconnect no
  ```

- Use a physical network adapter or a hypervisor. In this scenario, disable the software NetworkManager.

  a. Delete NetworkManager connections for the target interface:

  ```
  nmcli con del <connection name>
  ```

  Use the following command to check if the target interface has connections:

```
nmcli con show
```

b. Edit the NetworkManager.conf file. Locate the keyfile section and assign the target interface to the unmanaged-devices parameter.

```
[keyfile]
unmanaged-devices=interface-name:<interface name>
```

c. Restart NetworkManager:

```
systemctl reload NetworkManager
```

Use the following command to verify that the target interface is unmanaged:

```
nmcli dev status
```

- Use a third-party load balancer. For example, you can use an nginx server. In this case, do the following:

a. Provide a dedicated Linux-based computer with nginx installed.

b. Configure load balancing. Set the active node as the main server, and the passive node as a backup server.

c. On the nginx server, open all of the Administration Server ports: TCP 13000, UDP 13000, TCP 13299, TCP 17000.

> If you want to use the klakaut utility for automation, you must also open the TCP 13291 port.

The nodes are prepared. To deploy Kaspersky Security Center Linux failover cluster, follow the further instructions of the scenario.

Installing Kaspersky Security Center on the Kaspersky Security Center failover cluster nodes

This procedure describes how to install Kaspersky Security Center on the nodes of the Kaspersky Security Center failover cluster. Kaspersky Security Center is installed on both nodes of the Kaspersky Security Center failover cluster separately. First, you install the application on the active node, then on the passive one. When installing, you choose which node will be active and which will be passive.

Use the installation file—ksc64_[version_number]_amd64.deb or ksc64-[version_number].x86_64.rpm—that corresponds to the Linux distribution installed on your device. You receive the installation file by downloading it from the Kaspersky website.

> Only a user from the KLAdmins domain group can install Kaspersky Security Center on every node.

Installation on the primary (active) node

To install Kaspersky Security Center on the primary node:

1. Make sure that the device on which you want to install Kaspersky Security Center is running one of the supported Linux distributions.

2. In the command line, run the commands provided in this instruction under an account with root privileges.

3. Run the Kaspersky Security Center installation. Depending on your Linux distribution, run one of the following commands:

   - `sudo apt install /<path>/ksc64_[ version_number ]_amd64.deb`
   - `sudo yum install /<path>/ksc64-[ version_number ].x86_64.rpm -y`

4. Run the Kaspersky Security Center configuration:

   ```
   sudo /opt/kaspersky/ksc64/lib/bin/setup/postinstall.pl
   ```

5. Read the End User License Agreement (EULA) and the Privacy Policy. The text is displayed in the command line window. Press the space bar to view the next text segment. Then, when prompted, enter the following values:

   a. Enter `y` if you understand and accept the terms of the EULA. Enter `n` if you do not accept the terms of the EULA. To use Kaspersky Security Center, you must accept the terms of the EULA.

   b. Enter `y` if you understand and accept the terms of the Privacy Policy, and you agree that your data will be handled and transmitted (including to third countries) as described in the Privacy Policy. Enter `n` if you do not accept the terms of the Privacy Policy. To use Kaspersky Security Center, you must accept the terms of the Privacy Policy.

6. Select **Primary cluster node** as an Administration Server installation mode.

7. When prompted, enter the following settings:

   a. Enter the local path to the mount point of the state share.

   b. Enter the local path to the mount point of the data share.

   c. Choose a failover cluster connectivity mode: through a secondary network adapter or an external load balancer.

   d. If you use a secondary network adapter, enter its name.

   e. When you are prompted to enter the Administration Server DNS name or static IP address, enter the IP address of the secondary network adapter or the IP address of the external load balancer.

   f. Enter the Administration Server port number. By default, port 14000 is used.

   g. Enter the Administration Server SSL port number. By default, port 13000 is used.

   h. Evaluate the approximate number of devices that you intend to manage:

      - If you have from 1 to 100 networked devices, enter 1.
      - If you have from 101 to 1000 networked devices, enter 2.
      - If you have more than 1000 networked devices, enter 3.

   i. Enter the security group name for services. By default, the kladmins group is used.

   j. Enter the account name to start the Administration Server service. The account must be a member of the entered security group. By default, the 'ksc' account is used.

k. Enter the account name to start other services. The account must be a member of the entered security group. By default, the 'ksc' account is used.

l. Enter the IP address of the device on which the database is installed.

m. Enter the database port number. This port is used to communicate with Administration Server. By default, port 3306 is used.

n. Enter the database name.

o. Enter the login of the database root account that you use to access the database.

p. Enter the password of the database root account that you use to access the database.

Wait for the services to be added and started automatically:

- klfocsvc_klfoc
- kladminserver_klfoc
- klwebsrv_klfoc
- klactprx_klfoc
- klnagent_klfoc

q. Create an account that will act as an Administration Server administrator. Enter the user name and password. The user password cannot have less than 8 or more than 16 characters.

The user is added and Kaspersky Security Center is installed on the primary node.

Installation on the secondary (passive) node

To install Kaspersky Security Center on the secondary node:

1. Make sure that the device on which you want to install Kaspersky Security Center is running one of the supported Linux distributions.

2. In the command line, run the commands provided in this instruction under an account with root privileges.

3. Run the Kaspersky Security Center installation. Depending on your Linux distribution, run one of the following commands:

   - `sudo apt install /<path>/ksc64_[version_number]_amd64.deb`
   - `sudo yum install /<path>/ksc64-[version_number].x86_64.rpm -y`

4. Run the Kaspersky Security Center configuration:

   ```
   sudo /opt/kaspersky/ksc64/lib/bin/setup/postinstall.pl
   ```

5. Read the End User License Agreement (EULA) and the Privacy Policy. The text is displayed in the command line window. Press the space bar to view the next text segment. Then, when prompted, enter the following values:

   a. Enter `y` if you understand and accept the terms of the EULA. Enter `n` if you do not accept the terms of the EULA. To use Kaspersky Security Center, you must accept the terms of the EULA.

b. Enter `y` if you understand and accept the terms of the Privacy Policy, and you agree that your data will be handled and transmitted (including to third countries) as described in the Privacy Policy. Enter `n` if you do not accept the terms of the Privacy Policy. To use Kaspersky Security Center, you must accept the terms of the Privacy Policy.

6. Select **Secondary cluster node** as an Administration Server installation mode.

7. When prompted, enter the local path to the mount point of the state share.

Kaspersky Security Center is installed on the secondary node.

Service verification

Use the following commands to check whether or not a service is running:

- `systemctl status klnagent_srv.service`
- `systemctl status kladminserver_srv.service`
- `systemctl status klactprx_srv.service`
- `systemctl status klwebsrv_srv.service`

Now, you can test the Kaspersky Security Center failover cluster to make sure that you configured it correctly and that the cluster works properly.

Starting and stopping cluster nodes manually

You may need to stop the entire Kaspersky Security Center Linux failover cluster or temporarily detach one of the nodes of the cluster for maintenance. If this is the case, follow the instructions in this section. Do not try to start or stop the services or processes related to the failover cluster by using any other means. This may cause data loss.

Starting and stopping the entire failover cluster for maintenance

To start or stop the entire failover cluster:

1. On the active node, go to /opt/kaspersky/ksc64/sbin.

2. Open the command line, and then run one of the following commands:

   - To stop the cluster, run: `klfoc -stopcluster --stp klfoc`
   - To start the cluster, run: `klfoc -startcluster --stp klfoc`

The failover cluster is started or stopped, depending on the command that you run.

Maintaining one of the nodes

To maintain one of the nodes:

1. On the active node, stop the failover cluster by using the `klfoc -stopcluster --stp klfoc` command.

2. On the node that you want to maintain, go to /opt/kaspersky/ksc64/sbin.
3. Open command line, and then detach the node from the cluster by running the `detach_node.sh` command.
4. On the active node, start the failover cluster by using the `klfoc -startcluster --stp klfoc` command.
5. Perform maintenance activities.
6. On the active node, stop the failover cluster by using the `klfoc -stopcluster --stp klfoc` command.
7. On the node that was maintained, go to /opt/kaspersky/ksc64/sbin.
8. Open command line, and then attach the node to the cluster by running the `attach_node.sh` command.
9. On the active node, start the failover cluster by using the `klfoc -startcluster --stp klfoc` command.

The node is maintained and attached to the failover cluster.

Certificates for work with Kaspersky Security Center

This section contains information about Kaspersky Security Center certificates and describes how to issue and replace certificates for Kaspersky Security Center 14 Web Console and how to renew a certificate for Administration Server if the Server interacts with Kaspersky Security Center 14 Web Console.

About Kaspersky Security Center certificates

Kaspersky Security Center uses the following types of certificates to enable a secure interaction between the application components:

- Administration Server certificate
- Mobile certificate
- Web Server certificate
- Kaspersky Security Center 14 Web Console certificate

By default, Kaspersky Security Center uses self-signed certificates (that is, issued by Kaspersky Security Center itself), but you can replace them with custom certificates to better meet the requirements of your organization's network and comply with the security standards. After Administration Server verifies whether a custom certificate meets all applicable requirements, this certificate assumes the same functional scope as a self-signed certificate. The only difference is that a custom certificate is not reissued automatically upon expiration. You replace certificates with custom ones by means of the klsetsrvcert utility or through the Administration Server properties section in Kaspersky Security Center 14 Web Console, depending on the certificate type. When you use the klsetsrvcert utility, you need to specify a certificate type by using one of the following values:

- C—Common certificate for ports 13000 and 13291.
- CR—Common reserve certificate for ports 13000 and 13291.

- M—Mobile certificate for port 13292.
- MR—Mobile reserve certificate for port 13292.
- MCA—Mobile certification authority for auto-generated user certificates.

The maximum validity period for any of the Administration Server certificates must be 397 days or less.

Administration Server certificates

An Administration Server certificate is required for the following purposes:

- Authentication of Administration Server when connecting to Kaspersky Security Center 14 Web Console
- Secure interaction between Administration Server and Network Agent on managed devices
- Authentication when the primary Administration Servers are connected to secondary Administration Servers

The Administration Server certificate is created automatically during installation of the Administration Server component and it is stored in the /var/opt/kaspersky/klnagent_srv/1093/cert/ folder. You specify the Administration Server certificate when you create a response file to install Kaspersky Security Center 14 Web Console. This certificate is called common ("C").

The Administration Server certificate is valid for 397 days. Kaspersky Security Center automatically generates a common reserve ("CR") certificate 90 days before the expiration of the common certificate. The common reserve certificate is subsequently used for seamless replacement of the Administration Server certificate. When the common certificate is about to expire, the common reserve certificate is used to maintain the connection with Network Agent instances installed on managed devices. With this purpose, the common reserve certificate automatically becomes the new common certificate 24 hours before the old common certificate expires.

> The maximum validity period for any of the Administration Server certificates must be 397 days or less.

If necessary, you can assign a custom certificate for the Administration Server. For example, this may be necessary for better integration with the existing PKI of your enterprise or for custom configuration of the certificate fields. When replacing the certificate, all Network Agents that were previously connected to Administration Server through SSL will lose their connection and will return "Administration Server authentication error." To eliminate this error, you will have to restore the connection after the certificate replacement.

If the Administration Server certificate is lost, you must reinstall the Administration Server component, and then restore the data in order to recover it.

You can also back up the Administration Server certificate separately from other Administration Server settings in order to move Administration Server from one device to another without data loss.

> If you open Kaspersky Security Center 14 Web Console in different browsers and download the Administration Server certificate file in the Administration Server properties window, the downloaded files have different names.

Mobile certificates

A mobile certificate ("M") is required for authentication of the Administration Server on mobile devices. You specify the mobile certificate in the Administration Server properties.

Also, a mobile reserve ("MR") certificate exists: it is used for seamless replacement of the mobile certificate. Kaspersky Security Center automatically generates this certificate 60 days before the expiration of the common certificate. When the mobile certificate is about to expire, the mobile reserve certificate is used to maintain the connection with Network Agent instances installed on managed mobile devices. With this purpose, the mobile reserve certificate automatically becomes the new mobile certificate 24 hours before the old mobile certificate expires.

If the connection scenario requires the use of a client certificate on mobile devices (connection involving two-way SSL authentication), you can generate those certificates by means of the certificate authority for auto-generated user certificates ("MCA"). Also, in the Administration Server properties, you can specify custom client certificates issued by a different certification authority, while integration with the domain Public Key Infrastructure (PKI) of your organization enables you to issue client certificates by means of your domain certification authority.

Also, for authentication of Administration Server on mobile devices running the iOS operating system an iOS MDM Server certificate is required. For more information, see Configuring an iOS MDM Server certificate.

Web Server certificate

Web Server, a component of Kaspersky Security Center Administration Server, uses a special type of certificate. This certificate is required for publishing Network Agent installation packages that you subsequently download to managed devices, as well as for Kaspersky Security for Mobile installation packages. For this purpose, Web Server can use various certificates.

If the mobile device support is disabled, Web Server uses one of the following certificates, in order of priority:

1. Custom Web Server certificate that you specified manually by means of Administration Console
2. Common Administration Server certificate ("C")

If the mobile device support is enabled, Web Server uses one of the following certificates, in order of priority:

1. Custom Web Server certificate that you specified manually by means of Administration Console
2. Custom mobile certificate
3. Self-signed mobile certificate ("M")
4. Common Administration Server certificate ("C")

Kaspersky Security Center 14 Web Console certificate

The Server of Kaspersky Security Center 14 Web Console (hereinafter referred to as Web Console) has its own certificate. When you open a website, a browser verifies whether your connection is trusted. The Web Console certificate allows you to authenticate the Web Console and is used to encrypt traffic between a browser and the Web Console.

When you open the Web Console, the browser may inform you that the connection to the Web Console is not private and the Web Console certificate is invalid. This warning appears because the Web Console certificate is self-signed and automatically generated by Kaspersky Security Center. To remove this warning, you can do one of the following:

- Replace the Web Console certificate with a custom one (recommended option). Create a certificate that is trusted in your infrastructure and that meets the requirements for custom certificates.
- Add the Web Console certificate to the list of trusted browser certificates. We recommend that you use this option only if you cannot create a custom certificate.

Requirements for custom certificates used in Kaspersky Security Center

The table below shows the requirements for custom certificates specified for different components of Kaspersky Security Center.

Requirements for Kaspersky Security Center certificates

Certificate type	Requirements	Comments
Common certificate, Common reserve certificate ("C", "CR")	Minimum key length: 2048. Basic constraints: • Path Length Constraint: None Key Usage: • Digital signature • Certificate signing • Key encipherment • CRL Signing Extended Key Usage (optional): server authentication, client authentication.	Extended Key Usage parameter is optional. Path Length Constraint value may be an integer different from "None," but not less than 1.
Web Server certificate	Extended Key Usage: server authentication. The PKCS #12 / PEM container from which the certificate is specified includes the entire chain of public keys. The Subject Alternative Name (SAN) of the certificate is present; that is, the value of the `subjectAltName` field is valid. The certificate meets the effective requirements of web browsers imposed on server certificates, as well as the current baseline requirements of the CA/Browser Forum.	—
Kaspersky Security Center 14 Web Console certificate	The PEM container from which the certificate is specified includes the entire chain of public keys. The Subject Alternative Name (SAN) of the certificate is present; that is, the value of the `subjectAltName` field is valid. The certificate meets the effective requirements of web browsers to server certificates, as well as the current baseline requirements of the CA/Browser Forum.	Encrypted certificates are not supported by Kaspersky Security Center 14 Web Console.

Reissuing the certificate for Kaspersky Security Center 14 Web Console

Most browsers impose a limit on the validity term of a certificate. To fall within this limit, the validity term of the Kaspersky Security Center 14 Web Console certificate is limited to 397 days. You can replace an existing certificate received from a certification authority (CA) by issuing a new self-signed certificate manually. Alternatively, you can reissue your expired Kaspersky Security Center 14 Web Console certificate.

Automatically reissuing the certificate for Kaspersky Security Center 14 Web Console is not supported. You have to manually reissue the expired certificate.

When you open the Kaspersky Security Center 14 Web Console, the browser may inform you that the connection to the Kaspersky Security Center 14 Web Console is not private and the Kaspersky Security Center 14 Web Console certificate is invalid. This warning appears because the Web Console certificate is self-signed and automatically generated by Kaspersky Security Center. To remove or prevent this warning, you can do one of the following:

- Specify a custom certificate when you reissue it (recommended option). Create a certificate that is trusted in your infrastructure and that meets the requirements for custom certificates.
- Add the Kaspersky Security Center 14 Web Console certificate to the list of trusted browser certificates after you reissue the certificate. We recommend that you use this option only if you cannot create a custom certificate.

To reissue the expired Kaspersky Security Center 14 Web Console certificate:

Reinstall Kaspersky Security Center 14 Web Console by performing one of the following:

- If you want to use the same installation file of Kaspersky Security Center 14 Web Console, remove Kaspersky Security Center 14 Web Console, and then install the same Kaspersky Security Center 14 Web Console version.
- If you want to use an installation file of an upgraded version, run the upgrade command.

The Kaspersky Security Center 14 Web Console certificate is reissued for another validity term of 397 days.

Replacing certificate for Kaspersky Security Center 14 Web Console

By default, when you install Kaspersky Security Center 14 Web Console Server (also referred to as Kaspersky Security Center 14 Web Console), a browser certificate for the application is generated automatically. You can replace the automatically generated certificate with a custom one.

To replace the certificate for Kaspersky Security Center 14 Web Console with a custom one:

1. Create a new response file required for the Kaspersky Security Center 14 Web Console installation.
2. In this file, specify paths to the custom certificate file and the key file by using the `certPath` parameter and the `keyPath` parameter.
3. Reinstall Kaspersky Security Center 14 Web Console by specifying the new response file. Do one of the following:
   - If you want to use the same installation file of Kaspersky Security Center 14 Web Console, remove Kaspersky Security Center 14 Web Console, and then install the same Kaspersky Security Center 14 Web Console version.
   - If you want to use an installation file of an upgraded version, run the upgrade command.

Kaspersky Security Center 14 Web Console works with the specified certificate.

Converting a PFX certificate to the PEM format

To use a PFX certificate in Kaspersky Security Center 14 Web Console, you must first convert it to the PEM format by using any convenient OpenSSL-based cross-platform utility.

To convert a PFX certificate to the PEM format in the Linux operating system:

1. In an OpenSSL-based cross-platform utility, execute the following commands:

   ```
   openssl pkcs12 -in <filename.pfx> -clcerts -nokeys | sed -ne '/-BEGIN CERTIFICATE-/,/-END CERTIFICATE-/p' > server.crt
   ```

   ```
   openssl pkcs12 -in <filename.pfx> -nocerts -nodes | sed -ne '/-BEGIN PRIVATE KEY-/,/-END PRIVATE KEY-/p' > key.pem
   ```

2. Make sure that the certificate file and the private key are generated to the same directory where the .pfx file is stored.

3. Kaspersky Security Center 14 Web Console does not support passphrase-protected certificates. Therefore, run the following command in an OpenSSL-based cross-platform utility to remove a passphrase from the .pem file:

   ```
   openssl rsa -in key.pem -out key-without-passphrase.pem
   ```

   > Do not use the same name for the input and output .pem files.

   As a result, the new .pem file is unencrypted. You do not have to enter a passphrase to use it.

The .crt and .pem files are ready to use, so you can specify them in the Kaspersky Security Center 14 Web Console installer.

Scenario: Specifying the custom Administration Server certificate

You can assign the custom Administration Server certificate, for example, for better integration with the existing public key infrastructure (PKI) of your enterprise or for custom configuration of the certificate fields. It is useful to replace the certificate immediately after installation of Administration Server and before the Quick Start Wizard finishes.

> The maximum validity period for any of the Administration Server certificates must be 397 days or less.

Prerequisites

The new certificate must be created in the PKCS#12 format (for example, by means of the organization's PKI) and must be issued by trusted certification authority (CA). Also, the new certificate must include the entire chain of trust and a private key, which must be stored in the file with the pfx or p12 extension. For the new certificate, the requirements listed below must be met.

Certificate type: Common certificate, common reserve certificate ("C", "CR")

Requirements:

- Minimum key length: 2048
- Basic constraints:
  - CA: true
  - Path Length Constraint: None

Path Length Constraint value may be an integer different from "None" but not less than 1.

- Key Usage:
  - Digital signature
  - Certificate signing
  - Key encipherment
  - CRL Signing
- Extended Key Usage (EKU): server authentication and client authentication. The EKU is optional, but if your certificate contains it, the server and client authentication data must be specified in the EKU.

Certificates issued by a public CA do not have the certificate signing permission. To use such certificates, make sure that you installed Network Agent version 13 or later on distribution points or connection gateways in your network. Otherwise, you will not be able to use certificates without the signing permission.

Stages

Specifying the Administration Server certificate proceeds in stages:

1. **Replacing the Administration Server certificate**

   Use the command-line klsetsrvcert utility for this purpose.

2. **Specifying a new certificate and restoring connection of Network Agents to the Administration Server**

   When the certificate is replaced, all Network Agents that were previously connected to Administration Server through SSL lose their connection and return "Administration Server authentication error." To specify the new certificate and restore the connection, use the command-line klmover utility.

Results

When you finish the scenario, the Administration Server certificate is replaced and the server is authenticated by Network Agents on the managed devices.

Replacing the Administration Server certificate by using the klsetsrvcert utility

To replace the Administration Server certificate:

From the command line, run the following utility:

```
klsetsrvcert [-t <type> {-i <inputfile> [-p <password>] [-o <chkopt>] | -g <dnsname>}][-f <time>][-r <calistfile>]
[-l <logfile>]
```

You do not need to download the klsetsrvcert utility. It is included in the Kaspersky Security Center distribution kit. It is not compatible with previous Kaspersky Security Center versions.

The description of the klsetsrvcert utility parameters is presented in the table below.

Values of the klsetsrvcert utility parameters

Parameter	Value
`-t <type>`	Type of certificate to be replaced. Possible values of the `<type>` parameter: • `C`—Replace the common certificate for ports 13000 and 13291. • `CR`—Replace the common reserve certificate for ports 13000 and 13291.
`-f <time>`	Schedule for changing the certificate, using the format "DD-MM-YYYY hh:mm" (for ports 13000 and 13291). Use this parameter if you want to replace the common certificate with the common reserve certificate before the common certificate expires. Specify the time when managed devices must synchronize with Administration Server on a new certificate.
`-i <inputfile>`	Container with the certificate and a private key in the PKCS#12 format (file with the .p12 or .pfx extension).
`-p <password>`	Password used for protection of the p12 container. The certificate and a private key are stored in the container, therefore, the password is required to decrypt the file with the container.
`-o <chkopt>`	Certificate validation parameters (semicolon separated). To use a custom certificate without signing permission, specify `-o NoCA` in the klsetsrvcert utility. This is useful for certificates issued by a public CA. To change encryption key length for certificate types C or CR, specify `-o RsaKeyLen:< key length >` in the klsetsrvcert utility, where `< key length >` parameter is the required key length value. Otherwise, the current certificate key length is used.
`-g <dnsname>`	A new certificate will be created for the specified DNS name.
`-r <calistfile>`	Trusted root Certificate Authority list, format PEM.
`-l <logfile>`	Results output file. By default, the output is redirected into the standard output stream.

For example, to specify the custom Administration Server certificate, use the following command:

```
klsetsrvcert -t C -i <inputfile> -p <password> -o NoCA
```

After the certificate is replaced, all Network Agents connected to Administration Server through SSL lose their connection. To restore it, use the command-line klmover utility.

To avoid losing the Network Agents connections, use the following commands:

1. To install the new certificate,

   ```
   klsetsrvcert -t CR -i <inputfile> -p <password> -o NoCA
   ```

2. To specify the date when the new certificate will be applied,

   ```
   klsetsrvcert -f "DD-MM-YYYY hh:mm"
   ```

where "DD-MM-YYYY hh:mm" is the date 3–4 weeks later than the current date. The time shift for changing the certificate to the new one will allow the new certificate to be distributed to all Network Agents.

Connecting Network Agents to Administration Server by using the klmover utility

After you replace the Administration Server certificate by using the command-line klsetsrvcert utility, you need to establish the SSL connection between Network Agents and Administration Server because the connection is broken.

To specify the new Administration Server certificate and restore the connection:

From the command line, run the following utility:

```
klmover [-address <server address>] [-pn <port number>] [-ps <SSL port number>] [-
nossl] [-cert <path to certificate file>]
```

This utility is automatically copied to the Network Agent installation folder, when Network Agent is installed on a client device.

You cannot use the klmover utility for client devices connected to Administration Server through connection gateways. For such devices you have to either reconfigure Network Agent or reinstall Network Agent and specify connection gateway.

The description of the klmover utility parameters is presented in the table below.

Values of the klmover utility parameters

Parameter	Value
`-address <server address>`	Address of the Administration Server for connection. You can specify an IP address or the DNS name.
`-pn <port number>`	Number of the port through which non-encrypted connection to the Administration Server is established. The default port number is 14000.
`-ps <SSL port number>`	Number of the SSL port through which encrypted connection to the Administration Server is established by using SSL. The default port number is 13000.
`-nossl`	Use non-encrypted connection to the Administration Server. If the key is not in use, Network Agent is connected to the Administration Server by using encrypted SSL protocol.
`-cert <path to certificate file>`	Use the specified certificate file for authentication of access to Administration Server.

Defining a shared folder

After Administration Server installation, you can specify the location of the shared folder, in the Administration Server properties. By default, the shared folder is created on the device with Administration Server. However, in some cases (such as high load or a need for access from an isolated network), it is useful to locate the shared folder on a dedicated file resource.

The shared folder is used occasionally in Network Agent deployment.

Case sensitivity for the shared folder must be disabled.

Upgrading Kaspersky Security Center Linux

You can install version 14 of Administration Server on a device that has an earlier version of Administration Server installed (starting from version 13). When upgrading to version 14, all data and settings from the previous version of Administration Server are preserved.

Before upgrading Kaspersky Security Center, ensure that you use the versions of the operating system and DBMS that are supported by version 15 of Administration Server. If necessary, you can move Administration Server to another device with later versions of the operating system and DBMS.

You can upgrade a version of Administration Server by using one of the following methods:

- By using the Kaspersky Security Center installation file
- By creating the Administration Server data backup, installing a new Administration Server version, and restoring the Administration Server data from the backup

During the upgrade, concurrent use of the DBMS by Administration Server and another application is strictly forbidden.

If your network includes several Administration Servers, you have to upgrade every Server manually. Kaspersky Security Center Linux does not support centralized upgrade.

Also, you have to upgrade Kaspersky Security Center 14 Web Console to a new version.

When you upgrade Kaspersky Security Center Linux from a previous version, all the installed plug-ins of supported Kaspersky applications are kept. Administration Server plug-in and Network Agent plug-in are upgraded automatically. We recommend creating a backup copy of the Administration Server data before starting the upgrade.

Upgrading Kaspersky Security Center Linux by using the installation file

To upgrade Administration Server from a previous version (starting from version 13) to version 14, you can install a new version over an earlier one by using the Kaspersky Security Center installation file.

To upgrade an earlier version of Administration Server to version 14 by using the installation file:

1. Download the Kaspersky Security Center installation file with a full package for version 14 from the Kaspersky website:
   - For devices running an RPM-based operating system—ksc64-<version number>.x86_64.rpm
   - For devices running a Debian-based operating system—ksc64_<version number>_amd64.deb
2. Upgrade the installation package by using a package manager that you use on your Administration Server. For example, you can use the following commands in the command-line terminal under an account with root privileges:
   - For devices running an RPM-based operating system:
     ```
     $ sudo rpm -Uvh --nodeps --force ksc64-<version number>.x86_64.rpm
     ```

- For devices running a Debian-based operating system:
  `$ sudo dpkg -i ksc64_<version number>_amd64.deb`

After the command has been successfully executed, the /opt/kaspersky/ksc64/lib/bin/setup/postinstall.pl script is created. The message about that is displayed in the terminal.

3. Run the /opt/kaspersky/ksc64/lib/bin/setup/postinstall.pl script to configure the upgraded Administration Server.

4. Read the License Agreement and Privacy Policy, which appear in the command-line terminal. If you agree with all of the terms of the License Agreement and Privacy Policy:

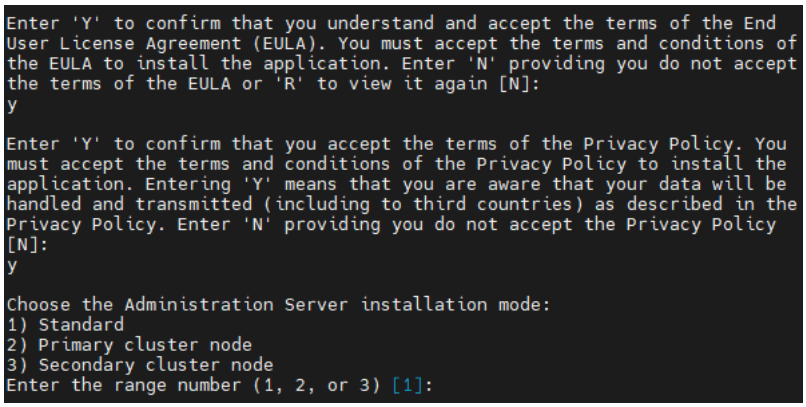
   a. Enter 'Y' to confirm that you have fully read, understood, and accept the terms and conditions of the EULA.

   b. Enter 'Y' again to confirm that you have fully read, understood, and accept the Privacy Policy that describes the handling of data.

   Installation of the application on your device will continue after you have entered 'Y' twice.

5. Enter '1' to select the standard Administration Server installation mode.

   The picture below shows the last two steps.



Accepting the terms of the EULA and the Privacy Policy, and selecting the standard Administration Server installation mode in the command-line terminal

Next, the script configures and finishes upgrading the Administration Server. During the upgrade, you cannot change the Administration Server settings adjusted before the upgrade.

6. For devices on which the earlier version of Network Agent was installed, create and run the task for remote installation of the new version of Network Agent.

   We recommend that you upgrade the Network Agent for Linux to the same version as Kaspersky Security Center Linux.

   After completion of the remote installation task, the Network Agent version is upgraded.

Upgrading Kaspersky Security Center Linux through backup

To upgrade Administration Server from a previous version (starting from version 13) to version 14, you can create a backup of the Administration Server data and restore this data after installing Kaspersky Security Center of a new version. If problems occur during installation, you can restore the previous version of Administration Server by using the backup of the Administration Server data created before the upgrade.

To upgrade an earlier version of Administration Server to version 14 through backup:

1. Before the upgrade, back up the Administration Server data with an older version of the application.
2. Uninstall the older version of Kaspersky Security Center.
3. Install Kaspersky Security Center version 14 on the former Administration Server.
4. Restore the Administration Server data from the backup created before the upgrade.
5. For devices on which the earlier version of Network Agent was installed, create and run the task for remote installation of the new Network Agent version.

   We recommend that you upgrade the Network Agent for Linux to the same version as Kaspersky Security Center Linux.

   After completion of the remote installation task, the Network Agent version is upgraded.

Signing in to Kaspersky Security Center 14 Web Console and signing out

You can sign in to Kaspersky Security Center 14 Web Console after you install the Administration Server and Web Console Server. You must know the web address of the Administration Server and the port number specified during installation (by default, the port is 8080). In your browser, JavaScript must be enabled.

To sign in to Kaspersky Security Center 14 Web Console:

1. In your browser, go to <Administration Server web address>:<Port number>.

   The sign-in page is displayed.

2. If you added several trusted servers, in the Administration Servers list select the Administration Server that you want to connect to.

   If you only added one Administration Server, only the **User name** and **Password** fields are displayed.

3. Do one of the following:

   - To sign in to the physical Administration Server, enter the user name and password of the local Administrator.
   - If one or more virtual Administration Servers are created on the Server and you want to sign in to a virtual Server:

     a. Click **Advanced settings**.

     b. Type the virtual Administration Server name that you specified while creating the virtual Server.

     c. Enter the user name and password of the administrator who has rights on the virtual Administration Server.

After sign-in, the dashboard is displayed, containing the language and theme that you used last time. You can navigate through Kaspersky Security Center 14 Web Console and use it to work with Kaspersky Security Center Linux.

To sign out of Kaspersky Security Center 14 Web Console,

In the main menu, go to your account settings, and then select **Sign out**.

Kaspersky Security Center 14 Web Console is closed, and the sign-in page is displayed.

Quick Start Wizard

Kaspersky Security Center Linux allows you to adjust a minimum selection of settings required to build a centralized management system for protecting your network against security threats. This configuration is performed through the Quick Start Wizard. When the Wizard is running, you can make the following changes to the application:

- Add key files or enter activation codes that can be automatically distributed to devices within administration groups.
- Set up email delivery of notifications of events that occur during operation of Administration Server and managed applications (successful notification delivery requires that the Messenger service run on the Administration Server and all recipient devices).
- Create a protection policy for workstations and servers, as well as virus scan tasks, update download tasks, and data backup tasks, for the top level of the hierarchy of managed devices.

  The Quick Start Wizard creates policies only for those applications whose **MANAGED DEVICES** folder does not contain policies. The Quick Start Wizard does not create tasks if tasks with the same names have already been created for the top level in the hierarchy of managed devices.

The application automatically prompts you to run the Quick Start Wizard after Administration Server installation, at the first connection to it. You can also start the Quick Start Wizard manually at any time.

To start the Quick Start Wizard manually:

1. In the main menu, click the settings icon ( ) next to the name of the Administration Server.

   The Administration Server properties window opens.
2. On the **General** tab, select the **General** section.
3. Click **Start Quick Start Wizard**.

The Wizard prompts you to perform initial configuration of the Administration Server. Follow the instructions of the Wizard. Proceed through the Wizard by using the **Next** button.

Step 1. Specifying the internet connection settings

Specify the internet access settings for Administration Server. You must configure internet access to use Kaspersky Security Network and to download updates of anti-virus databases for Kaspersky Security Center Linux and managed Kaspersky applications.

Enable the **Use proxy server** option if you want to use a proxy server when connecting to the internet. If this option is enabled, the fields are available for entering settings. Specify the following settings for a proxy server connection:

- Address

  Address of the proxy server used for Kaspersky Security Center Linux connection to the internet.

- **Port number**

  Number of the port through which Kaspersky Security Center Linux proxy connection will be established.

- **Bypass proxy server for local addresses**

  No proxy server will be used to connect to devices in the local network.

- **Proxy server authentication**

  If this check box is selected, in the entry fields you can specify the credentials for proxy server authentication.

  This entry field is available if the **Use proxy server** check box is selected.

- **User name**

  User account under which connection to the proxy server is established (this field is available if the **Proxy server authentication** check box is selected).

- **Password**

  Password set by the user under whose account the proxy server connection is established (this field is available if the **Proxy server authentication** check box is selected).

  To see the entered password, click and hold the **Show** button for as long as you require.

You can configure internet access later, separately from the quick start wizard.

Step 2. Selecting the application activation method

Select one of the following Kaspersky Security Center Linux activation options:

- **By entering your activation code**

  Activation code is a unique sequence of 20 alphanumeric characters. You enter an activation code to add a key that activates Kaspersky Security Center Linux. You receive the activation code through the email address that you specified after purchasing Kaspersky Security Center.

  To activate the application by using the activation code, you need internet access to establish connection with Kaspersky activation servers.

  If you have selected this activation option, you can enable the **Automatically deploy license key to managed devices** option.

  If this option is enabled, the license key will be deployed automatically to managed devices.

  If this option is disabled, you can deploy license key to managed devices later in the **OPERATIONS** → **LICENSING** → **KASPERSKY LICENSES** section of the main menu.

- **By specifying a key file**

Key file is a file with the .key extension provided to you by Kaspersky. A key file is intended for adding a key that activates the application.

You receive your key file through the email address that you specified after purchasing Kaspersky Security Center.

To activate the application using a key file, you do not have to connect to Kaspersky activation servers.

If you have selected this activation option, you can enable the **Automatically deploy license key to managed devices** option.

If this option is enabled, the license key will be deployed automatically to managed devices.

If this option is disabled, you can deploy license key to managed devices later in the **OPERATIONS** → **LICENSING** → **KASPERSKY LICENSES** section of the main menu.

- By postponing the application activation

If you chose to postpone application activation, you can add a license key later at any time by selecting **OPERATIONS** → **LICENSING**.

When working with Kaspersky Security Center deployed from a paid AMI or for a usage-based monthly billed SKU, you cannot specify a key file or enter a code.

Step 3. Creating a basic network protection configuration

You can check a list of policies and tasks that are created.

Wait for the creation of policies and tasks to complete before proceeding to the next step of the Wizard.

Step 4. Configuring email notifications

Configure the delivery of notifications about events registered during the operation of Kaspersky applications on client devices. These settings will be used as the default settings for application policies.

To configure the delivery of notifications about events occurring in Kaspersky applications, use the following settings:

- **Recipients (email addresses)**

  The email addresses of users to whom the application will send notifications. You can enter one or more addresses; if you enter more than one address, separate them with a semicolon.

- **SMTP server address**

  The address or addresses of your organization's mail servers.

  If you enter more than one address, separate them with a semicolon. You can use the following values:

  - IPv4 or IPv6 address
  - DNS name of the SMTP server

- **SMTP server port**

  Communication port number of the SMTP server. If you use several SMTP servers, the connection to them is established through the specified communication port. The default port number is 25.

- **Use ESMTP authentication**

  Enables support of ESMTP authentication. When the check box is selected, in the **User name** and **Password** fields you can specify the ESMTP authentication settings. By default, this check box is cleared.

You can test the new email notification settings by clicking the **Send test message** button.

Step 5. Closing the Quick Start Wizard

To close the Wizard, click the **Finish** button.

After you have completed the Quick Start Wizard, you can run the Protection Deployment Wizard to automatically install security programs or Network Agent on devices on your network.

Protection Deployment Wizard

To install Kaspersky applications, you can use the Protection Deployment Wizard. The Protection Deployment Wizard enables remote installation of applications either through specially created installation packages or directly from a distribution package.

Protection Deployment Wizard performs the following actions:

- Downloads an installation package for application installation (if it was not created earlier). The installation package is located at **DISCOVERY & DEPLOYMENT → DEPLOYMENT & ASSIGNMENT → INSTALLATION PACKAGES**. You can use this installation package for the application installation in the future.
- Creates and runs a remote installation task for specific devices or for an administration group. The newly created remote installation task is stored in the **Tasks** section. You can later start this task manually. The task type is **Install application remotely**.

If you want to install Network Agent on devices with the SUSE Linux Enterprise Server 15 operating system, install the insserv-compat package first to configure Network Agent.

Step 1. Starting Protection Deployment Wizard

You can start the Protection Deployment Wizard manually at any time.

To start the Protection Deployment Wizard manually,

In the main menu, click **DISCOVERY & DEPLOYMENT → DEPLOYMENT & ASSIGNMENT → PROTECTION DEPLOYMENT WIZARD**.

The Protection Deployment Wizard starts. Proceed through the Wizard by using the **Next** button.

Step 2. Selecting the installation package

Select the installation package of the application that you want to install.

If the installation package of the required application is not listed, click the **Add** button and then select the application from the list.

Step 3. Selecting a method for distribution of key file or activation code

Select a method for the distribution of the key file or the activation code:

- **Do not add license key to installation package**

The key is automatically distributed to all devices with which it is compatible:

- If automatic distribution has been enabled in the key properties.
- If the **Add key** task has been created.

- **Add license key to installation package**

  The key is distributed to devices together with the installation package.

  We do not recommend that you distribute the key using this method because the shared Read access rights are enabled to the repository of installation packages.

If the installation package already includes a key file or an activation code, this window is displayed, but it only contains the license key information.

Step 4. Selecting Network Agent version

If you selected the installation package of an application other than Network Agent, you also have to install Network Agent, which connects the application with Kaspersky Security Center Administration Server.

Select the latest version of Network Agent.

Step 5. Selecting devices

Specify a list of devices on which the application will be installed:

- **Install on managed devices**

  If this option is selected, the remote installation task is created for a group of devices.

- **Select devices for installation**

  The task is assigned to devices included in a device selection. You can specify one of the existing selections.

  For example, you may want to use this option to run a task on devices with a specific operating system version.

Step 6. Specifying the remote installation task settings

On the **Remote installation task settings** page, specify the settings for remote installation of the application.

In the **Force installation package download** settings group, specify how files that are required for the application installation are distributed to client devices:

- **Using Network Agent**

  If this option is enabled, installation packages are delivered to client devices by Network Agent installed on those client devices.

  If this option is disabled, installation packages are delivered using the operating system tools of client devices.

  We recommend that you enable this option if the task has been assigned to devices with Network Agents installed.

  By default, this option is enabled.

- **Using operating system resources through distribution points**

  If this option is enabled, installation packages are transmitted to client devices using operating system tools through distribution points. You can select this option if there is at least one distribution point on the network.

  If the **Using Network Agent** option is enabled, the files are delivered using operating system tools only if Network Agent tools are unavailable.

  By default, this option is enabled for remote installation tasks that have been created on a virtual Administration Server.

  The only way to install an application for Windows (including Network Agent for Windows) on a device that does not have Network Agent installed is by using a Windows-based distribution point. Therefore, when you install a Windows application:

  - Select this option.
  - Ensure that a distribution point is assigned for the target client devices.
  - Ensure the distribution point is Windows-based.

Define the additional setting:

Do not re-install application if it is already installed

If this option is enabled, the selected application will not be re-installed if it has already been installed on this client device.

If this option is disabled, the application will be installed anyway.

By default, this option is enabled.

Step 7. Removing incompatible applications before installation

This step is only present if the application that you deploy is known to be incompatible with some other applications.

Select the option if you want Kaspersky Security Center Linux to automatically remove applications that are incompatible with the application you deploy.

The list of incompatible applications is also displayed.

If you do not select this option, the application will only be installed on devices that have no incompatible applications.

Step 8. Moving devices to Managed devices

Specify whether devices must be moved to an administration group after Network Agent installation.

- **Do not move devices**

  The devices remain in the groups in which they are currently located. The devices that have not been placed in any group remain unassigned.

- **Move unassigned devices to group**

  The devices are moved to the administration group that you select.

The **Do not move devices** option is selected by default. For security reasons, you might want to move the devices manually.

Step 9. Selecting accounts to access devices

If necessary, add the accounts that will be used to start the remote installation task:

- **No account required (Network Agent installed)**

  If this option is selected, you do not have to specify the account under which the application installer will be run. The task will run under the account under which the Administration Server service is running.

  If Network Agent has not been installed on client devices, this option is not available.

- **Account required (Network Agent is not used)**

Select this option if Network Agent is not installed on the devices for which you assign the remote installation task. In this case, you can specify a user account or an SSH certificate to install the application.

- **Local Account**. If this option is selected, specify the user account under which the application installer will be run. Click the **Add** button, select **Local Account**, and then specify the user account credentials.

  You can specify multiple user accounts if, for example, none of them have all the required rights on all devices for which you assign the task. In this case, all added accounts are used for running the task, in consecutive order, top-down.

- **SSH certificate**. If you want to install an application on a Linux-based client device, you can specify an SSH certificate instead of a user account. Click the **Add** button, select **SSH certificate**, and then specify the private and public keys of the certificate.

  To generate a private key, you can use the ssh-keygen utility. Note that Kaspersky Security Center supports the PEM format of private keys, but the ssh-keygen utility generates SSH keys in the OPENSSH format by default. The OPENSSH format is not supported by Kaspersky Security Center. To create a private key in the supported PEM format, add the -m PEM option in the ssh-keygen command. For example:

  ```
  ssh-keygen -m PEM -t rsa -b 4096 -C "<user email>"
  ```

Step 10. Starting installation

This page is the final step of the Wizard. At this step, the **Remote installation task** has been successfully created and configured.

By default, the **Run the task after the Wizard finishes** option is not selected. If you select this option, the **Remote installation task** will start immediately after you complete the Wizard. If you do not select this option, the **Remote installation task** will not start. You can later start this task manually.

Click **OK** to complete the final step of the Protection Deployment Wizard.

Configuring Administration Server

This section describes the configuration process and properties of Kaspersky Security Center Administration Server.

Configuring the connection of Kaspersky Security Center 14 Web Console to Administration Server

To set the connection ports of Administration Server:

1. At the top of the screen, click the settings icon ( ) next to the name of the required Administration Server.

   The Administration Server properties window opens.

2. On the **General** tab, select the **Connection ports** section.

The application displays the main connection settings of the selected Server.

Configuring an allowlist of IP addresses to connect to Kaspersky Security Center

By default, the connections to Kaspersky Security Center are allowed from any device. For example, you can install Kaspersky Security Center 14 Web Console Server on any device that meets the requirements, and Kaspersky Security Center 14 Web Console Server will communicate with Kaspersky Security Center. However, you can configure Administration Server so that the connections are only allowed from devices with the IP addresses that you specify. In this case, if an intruder tries to connect to Kaspersky Security Center through Kaspersky Security Center 14 Web Console Server installed on a device that is not included in the allowlist, he or she will not be able to log in to Kaspersky Security Center.

The IP address is verified when a user logs in to Kaspersky Security Center or runs an application that interacts with Administration Server via Kaspersky Security Center OpenAPI. At this moment, an application on a device tries to establish a connection with Administration Server. If the IP address of the device is not in the allowlist, an authentication error occurs and the KLAUD_EV_SERVERCONNECT event notifies you that a connection with Administration Server has not been established.

Requirements for an allowlist of IP addresses

IP addresses are verified only when the following applications try to connect to Administration Server:

- Kaspersky Security Center 14 Web Console Server

  If you sign in to Kaspersky Security Center through Kaspersky Security Center 14 Web Console, you can configure a firewall on the device where Kaspersky Security Center 14 Web Console Server is installed using the standard means of operating system. Then, if someone tries to log in to Kaspersky Security Center on one device and Kaspersky Security Center 14 Web Console Server is installed on another device, a firewall helps prevent intruders from interfering.

- Applications interacting with Administration Server via klakaut automation objects

- Applications interacting with Administration Server via OpenAPI, such as Kaspersky Anti Targeted Attack Platform or Kaspersky Security for Virtualization

Therefore, specify addresses of the devices on which the applications listed above are installed.

You can set IPv4 and IPv6 addresses. You cannot specify ranges of IP addresses.

How to establish an allowlist of IP addresses

If you have not set an allowlist earlier, follow the instructions below.

To establish an allowlist of IP addresses to log in to Kaspersky Security Center:

1. On the Administration Server device, run the command prompt under an account with administrator rights.
2. Change your current directory to the Kaspersky Security Center installation folder (usually, /opt/kaspersky/ksc64/sbin).
3. Enter the following command under the root account:
   `klscflag -fset -pv klserver -n KLSRV_FLAG_ALLOWED_IP_ADDRESSES_FOR_GUI -v "<IP addresses>" -t s`

   Specify IP addresses that meet the requirements listed above. Several IP addresses must be separated by a semicolon.

   Example of how to allow only one device to connect to Administration Server:

   `klscflag -fset -pv klserver -n KLSRV_FLAG_ALLOWED_IP_ADDRESSES_FOR_GUI -v "192.0.2.0" -t s`

   Example of how to allow multiple devices to connect to Administration Server:

   `klscflag -fset -pv klserver -n KLSRV_FLAG_ALLOWED_IP_ADDRESSES_FOR_GUI -v "192.0.2.0; 198.51.100.0; 203.0.113.0" -t s`
4. Restart the Administration Server service.

You can find out whether you have successfully configured the allowlist of IP addresses in the Syslog Event Log on the Administration Server.

How to change an allowlist of IP addresses

You can change an allowlist just as you did when you first established it. For this purpose, run the same command and specify a new allowlist:

```
klscflag -fset -pv klserver -n KLSRV_FLAG_ALLOWED_IP_ADDRESSES_FOR_GUI -v "<IP addresses>" -t s
```

If you want to delete some IP addresses from the allowlist, rewrite it. For example, your allowlist includes the following IP addresses: 192.0.2.0; 198.51.100.0; 203.0.113.0. You want to delete the 198.51.100.0 IP address. To do this, enter the following command at the command prompt:

```
klscflag -fset -pv klserver -n KLSRV_FLAG_ALLOWED_IP_ADDRESSES_FOR_GUI -v "192.0.2.0; 203.0.113.0" -t s
```

Do not forget to restart the Administration Server service.

How to reset a configured allowlist of IP addresses

To reset an already configured allowlist of IP addresses:

1. Enter the following command at the command prompt under the root account:
   ```
   klscflag -fset -pv klserver -n KLSRV_FLAG_ALLOWED_IP_ADDRESSES_FOR_GUI -v "" -t s
   ```
2. Restart the Administration Server service.

After that, IP addresses are not verified any more.

Configuring Administration Server connection events logging

The history of connections and attempts to connect to the Administration Server during its operation can be saved to a log file. The information in the file allows you to track not only connections inside your network infrastructure, but unauthorized attempts to access the server as well.

To log events of connection to the Administration Server:

1. In the main menu, click the settings icon ( ) next to the name of the required Administration Server.

   The Administration Server properties window opens.
2. On the **General** tab, select the **Connection ports** section.
3. Enable the **Log Administration Server connection events** option.

   All further events of inbound connections to the Administration Server, authentication results, and SSL errors will be saved to the file /var/opt/kaspersky/klnagent_srv/logs/sc.syslog.

Setting the maximum number of events in the event repository

In the **Events repository** section of the Administration Server properties window, you can edit the settings of events storage in the Administration Server database by limiting the number of event records and record storage term. When you specify the maximum number of events, the application calculates an approximate amount of storage space required for the specified number. You can use this approximate calculation to evaluate whether you have enough free space on the disk to avoid database overflow. The default capacity of the Administration Server database is 400,000 events. The maximum recommended capacity of the database is 45 million events.

The application checks the database every 10 minutes. If the number of events reaches the specified maximum value plus 10,000, the application deletes the oldest events so that only the specified maximum number of events remains.

When the Administration Server deletes old events, it cannot save new events to the database. During this period, information about events that were rejected is written to the operating system log. The new events are queued and then saved to the database after the deletion operation is complete. By default, the event queue is limited to 20,000 events. You can customize the queue limit by editing the KLEVP_MAX_POSTPONED_CNT flag value.

To limit the number of events that can be stored in the events repository on the Administration Server:

1. At the top of the screen, click the settings icon ( ) next to the name of the required Administration Server.

   The Administration Server properties window opens.

2. On the **General** tab, select the **Events repository** section. Specify the maximum number of events stored in the database.

3. Click the **Save** button.

Backup copying and restoration of Administration Server data

Data backup allows you to move Administration Server from one device to another without data loss. Through backup, you can restore data when moving the Administration Server database to another device, or when upgrading to a newer version of Kaspersky Security Center (moving the Administration Server data to be under management of Kaspersky Security Center Windows is not supported).

Note that the installed management plug-ins are not backed up. After you restore Administration Server data from a backup copy, you need to download and reinstall plug-ins for managed applications.

Before you back up the Administration Server data, check whether a virtual Administration Server is added to the administration group. If a virtual Administration Server is added, make sure that an administrator is assigned to this virtual Administration Server before the backup. You cannot grant the administrator access rights to the virtual Administration Server after the backup. Note that if the administrator account credentials are lost, you will not be able to assign a new administrator to the virtual Administrator Server.

You can create a backup copy of Administration Server data in one of the following ways:

- By creating and running a data backup task through Kaspersky Security Center 14 Web Console.
- By running the klbackup utility on the device that has Administration Server installed. This utility is included in the Kaspersky Security Center distribution kit. After the installation of Administration Server, the utility is located in the root of the destination folder specified at the application installation (usually, /opt/kaspersky/ksc64/sbin/klbackup).

The following data is saved in the backup copy of Administration Server:

- Database of Administration Server (policies, tasks, application settings, events saved on the Administration Server).
- Configuration details of the structure of administration groups and client devices.
- Repository of distribution packages of applications for remote installation.
- Administration Server certificate.

Recovery of Administration Server data is only possible using the klbackup utility.

Creating an Administration Server data backup task

Backup tasks are Administration Server tasks; they are created through the Quick Start Wizard. If a backup task created by the Quick Start Wizard has been deleted, you can create one manually.

The *Backup of Administration Server data* task can only be created in a single copy. If the Administration Server data backup task has already been created for the Administration Server, it is not displayed in the task type selection window.

To create an Administration Server data backup task:

1. Go to **DEVICES** → **TASKS**.
2. Click **Add**.

   The Add Task Wizard starts. Proceed through the wizard by using the **Next** button.
3. In the **Application** list, select **Kaspersky Security Center 14**, and in the **Task type** list, select **Backup of Administration Server data**.
4. On the corresponding step, specify the following information:
   - Folder for storage of backup copies
   - Password for the backup (optional)
   - Maximum number of backup copies to save
5. If on the **Finish task creation** step you enable the **Open task details when creation is complete** option, you can modify the default task settings. If you do not enable this option, the task is created with the default settings. You can modify the default settings later, at any time.
6. Click the **Finish** button.

The task is created and displayed in the list of tasks.

Using the klbackup utility to back up and recover data

You can copy Administration Server data for backup and future recovery using the klbackup utility, which is part of the Kaspersky Security Center distribution kit.

If you backed up data of Administration Server included in Kaspersky Security Center 15 or earlier when using the MariaDB DBMS of an earlier version, and then recover data on a device with a later version of MariaDB, an error may occur. For more information, refer to How to restore Administration Server data from a backup created on an earlier DBMS version.

Network agent flags are not restored when you use the klbackup utility. You need to configure network agent flags manually.

To create a backup copy or recover Administration Server data in silent mode,

Run klbackup with the required set of keys from the command line of the device that has Administration Server installed.

Utility command line syntax:

```
klbackup -path BACKUP_PATH [-linux_path LINUX_PATH][-node_cert CERT_PATH] [-logfile
LOGFILE] [-use_ts]|[-restore] [-password PASSWORD]
```

If no password is specified in the command line of the klbackup utility, the utility prompts you to enter the password interactively.

Descriptions of the keys:

- `-path BACKUP_PATH`—Save information in the BACKUP_PATH folder, or use data from the BACKUP_PATH folder for recovery (mandatory parameter).
- `-linux_path LINUX_PATH`—Local path to folder with DBMS backup data.

  The database server account and the klbackup utility should be granted permissions for changing data in the folder LINUX_PATH.
- `-node_cert CERT_PATH`—Server certificate file to configure inactive failover cluster node after recovery. If not set, it will be automatically retrieved from the Server.
- `-logfile LOGFILE`—Save a report about Administration Server data backup and recovery.

  The database server account and the klbackup utility should be granted permissions for changing data in the folder BACKUP_PATH.
- `-use_ts`—When saving data, copy information to the BACKUP_PATH folder, to the subfolder with a name in the `klbackup YYYY-MM-DD # HH-MM-SS` format, which includes the current date and operation time in UTC. If no key is specified, information is saved in the root of the folder BACKUP_PATH.

  During attempts to save information in a folder that already stores a backup copy, an error message appears. No information will be updated.

  Availability of the `-use_ts` key allows an Administration Server data archive to be maintained. For example, if the `-path` key indicates the folder `/tmp/KLBackups`, the folder `klbackup 2022/6/19 # 11-30-18` then stores information about the status of the Administration Server as of June 19, 2022, at 11:30:18 AM.
- `-restore`—Recover Administration Server data. Data recovery is performed based on information contained in the BACKUP_PATH folder. If no key is available, data is backed up in the BACKUP_PATH folder.
- `-password PASSWORD`—Password to protect the sensitive data.

  A forgotten password cannot be recovered. There are no password requirements. The password length is unlimited and zero length (no password) is also possible.

  When restoring data, you must specify the same password that was entered during backup. If the path to a shared folder changed after backup, check the operation of tasks that use restored data (restore tasks and remote installation tasks). If necessary, edit the settings of these tasks. While data is being restored from a backup file, no one must access the shared folder of Administration Server. The account under which the klbackup utility is started must have full access to the shared folder. To restore the Administration Server data from the backup, we recommend that you run the utility on a newly installed Administration Server.

Moving Administration Server to another device

If you need to use Administration Server on a new device, you can move it in one of the following ways:

- Move Administration Server and the database server to a new device (the database server can be installed on the new device together with Administration Server, or on another device).
- Keep the database server on the previous device and move only Administration Server to a new device.

To move Administration Server and the database server to a new device:

1. On the previous device, create a backup of Administration Server data.

   To do this, you can run the data backup task through Kaspersky Security Center 14 Web Console or run the klbackup utility.

2. On the previous device, disconnect Administration Server from the network.

3. Select a new device on which to install the Administration Server. Make sure that the hardware and software on the selected device meet the requirements for Administration Server, Kaspersky Security Center 14 Web Console, and Network Agent. Also, check that ports used on Administration Server are available.

4. Assign the same address to the new device.

   The new Administration Server can be assigned the NetBIOS name, FQDN, and static IP address. It depends on which Administration Server address was set in the Network Agent installation package when Network Agents were deployed. Alternatively, you can use the connection address that determines the Administration Server to which Network Agent connects (you can obtain this address on managed devices by using the klnagchk utility).

5. If needed, on another device, install the database management system (DBMS) that the Administration Server will use.

   The database can be installed on the new device together with Administration Server, or on another device. Ensure that this device meets the hardware and software requirements. When you select a DBMS, consider the number of devices covered by the Administration Server.

6. Install the Administration Server on the new device.

   Note that if you move the database server to another device, specify the local address as the IP address of the device on which the database is installed (the "h" item in the Installing Kaspersky Security Center instruction). If you need to keep the database server on the previous device, enter the IP address of the previous device in the "h" item of the Installing Kaspersky Security Center instruction.

7. After the installation is complete, recover Administration Server data on the new device by using the klbackup utility.

8. Open Kaspersky Security Center 14 Web Console and connect to the Administration Server.

9. Verify that all managed devices are connected to the Administration Server.

10. Uninstall the Administration Server and the database server from the previous device.

Creating a virtual Administration Server

You can create virtual Administration Servers and add them to administration groups.

To create and add a virtual Administration Server:

1. In the main menu, click the settings icon ( ) next to the name of the required Administration Server.

2. On the page that opens, proceed to the **Administration Servers** tab.

3. Select the administration group to which you want to add a virtual Administration Server.
   The virtual Administration Server will manage devices from the selected group (including the subgroups).

4. On the menu line, click **New virtual Administration Server**.

5. On the page that opens, define the properties of the new virtual Administration Server:

   - **Name of virtual Administration Server**.
   - **Administration Server connection address**

     You can specify the name or the IP address of your Administration Server.

   From the list of users, select the virtual Administration Server administrator. If you want, you can edit one of the existing accounts before assigning it the administrator's role, or create a new user account.

6. Click **Save**.

The new virtual Administration Server is created, added to the administration group and displayed on the **Administration Servers** tab.

If you are connected to your primary Administration Server in Kaspersky Security Center 14 Web Console, and can not connect to a virtual Administration Server that is managed by a secondary Administration Server, you can use one of the following ways:

- Modify the existing Kaspersky Security Center 14 Web Console installation to add the secondary Server to the list of trusted Administration Servers. Then you will be able to connect to the virtual Administration Server in Kaspersky Security Center 14 Web Console.

  1. On the device where Kaspersky Security Center 14 Web Console is installed, run the Web Console installation file corresponding to the Linux distribution installed on your device under an account with administrative privileges.

     The Setup Wizard will start. Proceed through the wizard by using the **Next** button.

  2. Select the **Upgrade** option.

  3. On the **Modification type** step, select the **Edit connection settings** option.

  4. On the **Trusted Administration Servers** step, add the required secondary Administration Server.

  5. On the last step, click **Modify** to apply the new settings.

  6. After the application reconfiguration successfully completes, click the **Finish** button.

- Use Kaspersky Security Center 14 Web Console to connect directly to the secondary Administration Server where the virtual Server was created. Then you will be able to switch to the virtual Administration Server in Kaspersky Security Center 14 Web Console.

A hierarchy of Administration Servers

An MSP may run multiple Administration Servers. It can be inconvenient to administer several separate Administration Servers, so a hierarchy can be applied.

In a hierarchy, Kaspersky Security Center Linux Administration Server can only work as a secondary Server managed by a primary Administration Server of Windows-based Kaspersky Security Center or Kaspersky Security Center Cloud Console.

A "primary/secondary" configuration for two Administration Servers provides the following options:

- A secondary Administration Server inherits policies and tasks from the primary Administration Server, thus preventing duplication of settings.
- Selections of devices on the primary Administration Server can include devices from secondary Administration Servers.
- Reports on the primary Administration Server can contain data (including detailed information) from secondary Administration Servers.

The primary Administration Server only receives data from non-virtual secondary Administration Servers within the scope of the options listed above. This limitation does not apply to virtual Administration Servers, which share the database with their primary Administration Server.

Creating a hierarchy of Administration Servers: adding a secondary Administration Server

In a hierarchy, Kaspersky Security Center Linux Administration Server can only work as a secondary Server managed by a primary Administration Server of Windows-based Kaspersky Security Center or Kaspersky Security Center Cloud Console.

Adding secondary Administration Server (performed on the future primary Administration Server)

You can add an Administration Server as a secondary Administration Server, thus establishing a "primary/secondary" hierarchy.

To add a secondary Administration Server that is available for connection through Kaspersky Security Center 14 Web Console:

1. Make sure that port 13000 of the future primary Administration Server is available for receipt of connections from secondary Administration Servers.
2. On the future primary Administration Server, click the settings icon ( ).
3. On the properties page that opens, click the **Administration Servers** tab.
4. Select the check box next to the name of th administration group to which you want to add the Administration Server.
5. In the menu line, click **Connect secondary Administration Server**.

   The Connect secondary Administration Server Wizard starts. Proceed through the wizard by using the **Next** button.
6. Fill in the following fields:
   - Secondary Administration Server display name

A name by which the secondary Administration Server will be displayed in the hierarchy. If you want, you can enter the IP address as a name, or you can use a name like, for example, "Secondary Server for group 1".

- **Secondary Administration Server address (optional)**

  Specify the IP address or the domain name of the secondary Administration Server.

  This parameter is required if the **Connect primary Administration Server to secondary Administration Server in DMZ** option is enabled.

- **Administration Server SSL port**

  Specify the number of the SSL port on the primary Administration Server. The default port number is 13000.

- **Administration Server API port**

  Specify the number of the port on the primary Administration Server for receiving connections over OpenAPI. The default port number is 13299.

- **Connect primary Administration Server to secondary Administration Server in DMZ**

  Select this option if the secondary Administration Server is in a demilitarized zone (DMZ).

  If this option is selected, the primary Administration Server initiates connection to the secondary Administration Server. Otherwise, the secondary Administration Server initiates connection to the primary Administration Server.

- **Use proxy server**

  Select this option if you use a proxy server to connect to the secondary Administration Server.

  In this case, you also have to specify the following settings of the proxy server:

  - **Address**
  - **User name**
  - **Password**

7. Follow the further instructions of the Wizard.

After the Wizard finishes, the "primary/secondary" hierarchy is built. Connection between the primary and secondary Administration Servers is established through port 13000. The tasks and policies from the primary Administration Server are received and applied. The secondary Administration Server is displayed on the primary Administration Server, in the administration group to which it was added.

Adding secondary Administration Server (performed on the future secondary Administration Server)

If you could not connect to the future secondary Administration Server (for example, because it was temporarily disconnected or unavailable), you are still able to add a secondary Administration Server.

To add as secondary an Administration Server that is not available for connection through Kaspersky Security Center 14 Web Console:

1. Send the certificate file of the future primary Administration Server to the system administrator of the office where the future secondary Administration Server is located. (You can, for example, write the file to an external device, such as a flash drive, or send it by email.)

   The certificate file is located on the future primary Administration Server, at /var/opt/kaspersky/klnagent_srv/1093/cert/.

2. Prompt the system administrator in charge of the future secondary Administration Server to do the following:

   a. Click the settings icon ( ).

   b. On the properties page that opens, proceed to the **Hierarchy of Administration Servers** section of the **General** tab.

   c. Select the **This Administration Server is secondary in the hierarchy** option.

   d. In the **Primary Administration Server address** field, enter the network name of the future primary Administration Server.

   e. Select the previously saved file with the certificate of the future primary Administration Server by clicking **Browse**.

   f. If necessary, select the **Connect primary Administration Server to secondary Administration Server in DMZ** check box.

   g. If the connection to the future secondary Administration Server is performed through a proxy server, select the **Use proxy server** option and specify the connection settings.

   h. Click **Save**.

The "primary/secondary" hierarchy is built. The primary Administration Server starts receiving connection from the secondary Administration Server using port 13000. The tasks and policies from the primary Administration Server are received and applied. The secondary Administration Server is displayed on the primary Administration Server, in the administration group where it was added.

Viewing the list of secondary Administration Servers

To view the list of the secondary (including virtual) Administration Servers:

In the main menu, click the name of the Administration Server, which is next to the settings icon ( ).

The drop-down list of the secondary (including virtual) Administration Servers is displayed.

You can proceed to any of these Administration Servers by clicking its name.

The administration groups are shown, too, but they are grayed and not available for management in this menu.

If you are connected to your primary Administration Server in Kaspersky Security Center 14 Web Console, and can not connect to a virtual Administration Server that is managed by a secondary Administration Server, you can use one of the following ways:

- Modify the existing Kaspersky Security Center 14 Web Console installation to add the secondary Server to the list of trusted Administration Servers. Then you will be able to connect to the virtual Administration Server in Kaspersky Security Center 14 Web Console.

  1. On the device where Kaspersky Security Center 14 Web Console is installed, run the Web Console installation file corresponding to the Linux distribution installed on your device under an account with administrative privileges.

     The Setup Wizard will start. Proceed through the wizard by using the **Next** button.

  2. Select the **Upgrade** option.

  3. On the **Modification type** step, select the **Edit connection settings** option.

  4. On the **Trusted Administration Servers** step, add the required secondary Administration Server.

  5. On the last step, click **Modify** to apply the new settings.

  6. After the application reconfiguration successfully completes, click the **Finish** button.

- Use Kaspersky Security Center 14 Web Console to connect directly to the secondary Administration Server where the virtual Server was created. Then you will be able to switch to the virtual Administration Server in Kaspersky Security Center 14 Web Console.

Enabling account protection from unauthorized modification

You can enable an additional option to protect a user account from unauthorized modification. If this option is enabled, modifying user account settings requires authorization of the user with the rights for modification.

To enable or disable account protection from unauthorized modification:

1. In the main menu, go to **USERS & ROLES** → **USERS**.

2. Click the name of the internal user account for which you want to specify account protection from unauthorized modification.

3. In the user settings window that opens, select the **Authentication security** tab.

4. On the **Authentication security** tab, select the **Request authentication to check the permission to modify user accounts** option if you want to request credentials every time when account settings are changed or modified. Otherwise, select the **Allow users to modify this account without additional authentication** option.

5. Click the **Save** button.

Two-step verification

This section describes how you can use two-step verification to reduce the risk of unauthorized access to Kaspersky Security Center 14 Web Console.

About two-step verification for an account

Kaspersky Security Center Linux provides two-step verification for users of Kaspersky Security Center 14 Web Console. When two-step verification is enabled for your own account, every time you log in to Kaspersky Security Center 14 Web Console, you enter your user name, password, and an additional single-use security code. To receive a single-use security code, you must have an authenticator app on the computer or mobile device.

A security code has an identifier referred to as *issuer name*. The security code issuer name is used as an identifier of the Administration Server in the authenticator app. You can change the name of the security code issuer name. The security code issuer name has a default value that is the same as the name of the Administration Server. The issuer name is used as an identifier of the Administration Server in the authenticator app. If you change the security code issuer name, you must issue a new secret key and pass it to the authenticator app. A security code is single-use and valid for up to 90 seconds (the exact time may vary).

Any user for whom two-step verification is enabled can reissue his or her own secret key. When a user authenticates with the reissued secret key and uses it for logging in, Administration Server saves the new secret key for the user account. If the user enters the new secret key incorrectly, Administration Server does not save the new secret key and leaves the current secret key valid for the further authentication.

Any authentication software that supports the Time-based One-time Password algorithm (TOTP) can be used as an authenticator app, for example, Google Authenticator. In order to generate the security code, you must synchronize the time set in the authenticator app with the time set for Administration Server.

To check if Kaspersky Security Center supports the authenticator app that you want to use, enable two-step verification for all users or for a particular user.

One of the steps suggests that you specify the security code generated by the authenticator app. If it succeeds, then Kaspersky Security Center supports the selected authenticator.

An authenticator app generates the security code as follows:

1. Administration Server generates a special secret key and QR code.
2. You pass the generated secret key or QR code to the authenticator app.
3. The authenticator app generates a single-use security code that you pass to the authentication window of Administration Server.

We highly recommend that you save the secret key (or QR code) and keep it in a safe place. This will help you to restore access to Kaspersky Security Center 14 Web Console in case you lose access to the mobile device.

To secure the usage of Kaspersky Security Center, you can enable two-step verification for your own account and enable two-step verification for all users.

You can exclude accounts from two-step verification. This can be necessary for service accounts that cannot receive a security code for authentication.

Two-step verification works according to the following rules:

- Only a user account that has the Modify object ACLs right in the **General features: User permissions** functional area can enable two-step verification for all users.
- Only a user that enabled two-step verification for his or her own account can enable the option of two-step verification for all users.
- Only a user that enabled two-step verification for his or her own account can exclude other user accounts from the list of two-step verification enabled for all users.
- A user can enable two-step verification only for his or her own account.
- A user account that has the Modify object ACLs right in the **General features: User permissions** functional area and is logged in to Kaspersky Security Center 14 Web Console by using two-step verification can disable two-step verification: for any other user only if two-step verification for all users is disabled, for a user excluded from the list of two-step verification that is enabled for all users.
- Any user that logged in to Kaspersky Security Center 14 Web Console by using two-step verification can reissue his or her own secret key.
- You can enable the two-step verification for all users option for the Administration Server you are currently working with. If you enable this option on the Administration Server, you also enable this option for the user accounts of its virtual Administration Servers and do not enable two-step verification for the user accounts of the secondary Administration Servers.

Scenario: Configuring two-step verification for all users

This scenario describes how to enable two-step verification for all users and how to exclude user accounts from two-step verification. If you did not enable two-step verification for your account before you enable it for other users, the application opens the window for enabling two-step verification for your account, first. This scenario also describes how to enable two-step verification for your own account.

If you enabled two-step verification for your account, you may proceed to the stage of enabling of two-step verification for all users.

Prerequisites

Before you start:

- Make sure that your user account has the Modify object ACLs right of the **General features: User permissions** functional area for modifying security settings for other users' accounts.
- Make sure that the other users of Administration Server install an authenticator app on their devices.

Stages

Enabling two-step verification for all users proceeds in stages:

1. **Installing an authenticator app on a device**

   You can install any application that supports the Time-based One-time Password algorithm (TOTP), such as:

   - Google Authenticator
   - Microsoft Authenticator
   - Bitrix24 OTP
   - Yandex Key
   - Avanpost Authenticator
   - Aladdin 2FA

   To check if Kaspersky Security Center supports the authenticator app that you want to use, enable two-step verification for all users or for a particular user.

   One of the steps suggests that you specify the security code generated by the authenticator app. If it succeeds, then Kaspersky Security Center supports the selected authenticator.

   > We strongly do not recommend installing the authenticator app on the same device from which the connection to Administration Server is established.

2. **Synchronizing the authenticator app time with the time of the device on which Administration Server is installed**

   Ensure that the time on the device with the authenticator app and the time on the device with the Administration Server are synchronized to UTC, by using external time sources. Otherwise, failures may occur during authentication and activation of two-step verification.

3. **Enabling two-step verification for your account and receiving the secret key for your account**

   After you enable two-step verification for your account, you can enable two-step verification for all users.

4. **Enabling two-step verification for all users**

   Users with two-step verification enabled must use it to log in to Administration Server.

5. **Editing the name of a security code issuer**

   If you have several Administration Servers with similar names, you may have to change the security code issuer names for better recognition of different Administration Servers.

6. **Excluding user accounts for which you do not need to enable two-step verification**

   If required, you can exclude users from two-step verification. Users with excluded accounts do not have to use two-step verification to log in to Administration Server.

7. **Configuring two-step verification for your own account**

   If the users are not excluded from two-step verification and two-step verification was not configured for their account yet, they need to configure it in the window that opens when they sign-in to Kaspersky Security Center 14 Web Console. Otherwise, they will not be able to access the Administration Server in accordance with their rights.

Results

Upon completion of this scenario:

- Two-step verification is enabled for your account.

Two-step verification is enabled for all user accounts of the Administration Server, except for user accounts that were excluded.

Enabling two-step verification for your own account

You can enable two-step verification only for your own account.

Before you start enabling two-step verification for your account, ensure that an authenticator app is installed on the mobile device. Ensure that the time set in the authenticator app is synchronized with the time set of the device on which Administration Server is installed.

To enable two-step verification for a user account:

1. In the main menu, go to **USERS & ROLES** → **USERS**.
2. Click the name of your account.
3. In the user settings window that opens, select the **Account protection** tab.
4. On the **Authentication security** tab:
   a. Select the **Request user name, password, and security code (two-step verification)** option. Click the **Save** button.
   b. In the two-step verification window that opens, click **View how to set up two-step verification**.
      Enter the secret key in the authenticator app or click **View QR code** and scan the QR code by the authenticator app on the mobile device to receive one-time security code.
   c. In the two-step verification window, specify the security code generated by the authenticator app, and then click the **Check and apply** button.
5. Click the **Save** button.

Two-step verification is enabled for your account.

Enabling required two-step verification for all users

You can enable two-step verification for all users of Administration Server if your account has the Modify object ACLs right in the **General features: User permissions** functional area and if you are authenticated by using two-step verification.

To enable two-step verification for all users:

1. In the main menu, click the settings icon ( ) next to the name of the required Administration Server.

The Administration Server properties window opens.

2. On the **Authentication security** tab of the properties window, switch the toggle button of the **two-step verification for all users** option to the enabled position.

3. If you did not enable two-step verification for your account, the application opens the window for enabling two-step verification for your own account.

   a. In the two-step verification window, click **View how to set up two-step verification**.

   b. Click **View QR code.**

   c. Scan the QR code by the authenticator application on the mobile device to receive one-time security code.

   Alternatively, enter the secret key in the authenticator application manually.

   d. In the two-step verification window, specify the security code generated by the authenticator application, and then click the **Check and apply** button.

Two-step verification is enabled for all users. From now on, users of the Administration Server, including the users that were added after enabling two-step verification for all users, have to configure two-step verification for their accounts, except for users that are excluded from two-step verification.

Disabling two-step verification for a user account

You can disable two-step verification for your own account, as well as for an account of any other user.

> You can disable two-step verification of another user's account if your account has the Modify object ACLs right in the **General features: User permissions** functional area and if you are authenticated by using two-step verification.

To disable two-step verification for a user account:

1. In the main menu, go to **USERS & ROLES** → **USERS**.

2. Click the name of the internal user account for whom you want to disable two-step verification. This may be your own account or an account of any other user.

3. In the user settings window that opens, select the **Account protection** tab.

4. On the **Account protection** tab, select the **Request only user name and password** option if you want to disable two-step verification for a user account.

5. Click the **Save** button.

Two-step verification is disabled for the user account.

> If you want to restore access for a user that cannot log in to Kaspersky Security Center 14 Web Console by using two-step verification, disable two-step verification for this user account, and then select the **Request only user name and password** option as described above. After that, log in to Kaspersky Security Center 14 Web Console under the user account for which you disabled two-step verification, and then enable verification again.

Disabling required two-step verification for all users

You can disable required two-step verification for all users if two-step verification is enabled for your account and your account has the Modify object ACLs right in the **General features: User permissions** functional area. If two-step verification is not enabled for your account, you must enable two-step verification for your account before disabling it for all users.

To disable two-step verification for all users:

1. In the main menu, click the settings icon ( ) next to the name of the required Administration Server.

   The Administration Server properties window opens.

2. On the **Authentication security** tab of the properties window, switch the toggle button of the **two-step verification for all users** option to disabled position.

3. Enter the credentials of your account in the authentication window.

Two-step verification is disabled for all users. Disabling two-step verification for all users does not applied to specific accounts for which two-step verification was previously enabled separately.

Excluding accounts from two-step verification

You can exclude user accounts from two-step verification if you have the Modify object ACLs right in the **General features: User permissions** functional area.

If a user account is excluded from the list of two-step verification for all users, this user does not have to use two-step verification.

> Excluding accounts from two-step verification can be necessary for service accounts that cannot pass the security code during authentication.

If you want to exclude some user accounts from two-step verification:

1. In the main menu, click the settings icon ( ) next to the name of the required Administration Server.

   The Administration Server properties window opens.

2. On the **Authentication security** tab of the properties window, in the two-step verification exclusions table, click the **Add** button.

3. In the window that opens:

   a. Select the user accounts that you want to exclude.

   b. Click the **OK** button.

The selected user accounts are excluded from two-step verification.

Generating a new secret key

You can generate a new secret key for a two-step verification for your account only if you are authorized by using two-step verification.

To generate a new secret key for a user account:

1. In the main menu, go to **USERS & ROLES** → **USERS**.
2. Click the name of the user account for whom you want to generate a new secret key for two-step verification.
3. In the user settings window that opens, select the **Authentication security** tab.
4. On the **Authentication security** tab, click the **Generate a new secret key** link.
5. In the two-step verification window that opens, specify a new security key generated by the authenticator app.
6. Click the **Check and apply** button.

A new secret key is generated for the user.

If you lose the mobile device, you can install an authenticator app on another mobile device and generate a new secret key to restore access to Kaspersky Security Center 14 Web Console.

Editing the name of a security code issuer

You can have several identifiers (they are called issuers) for different Administration Servers. You can change the name of a security code issuer in case, for example, if the Administration Server already uses a similar name of security code issuer for another Administration Server. By default, the name of a security code issuer is the same as the name of the Administration Server.

After you change the security code issuer name you have to reissue a new secret key and pass it to the authenticator app.

To specify a new name of security code issuer:

1. In the main menu, click the settings icon ( ) next to the name of the required Administration Server.
   The Administration Server properties window opens.
2. In the user settings window that opens, select the **Account protection** tab.
3. On the **Account protection** tab, click the **Edit** link.
   The **Edit Security code issuer** section opens.
4. Specify a new security code issuer name.
5. Click the **OK** button.

A new security code issuer name is specified for the Administration Server.

Changing the number of allowed password entry attempts

The Kaspersky Security Center Linux user can enter an invalid password a limited number of times. After the limit is reached, the user account is blocked for one hour.

By default, the maximum number of allowed attempts to enter a password is 10. You can change the number of allowed password entry attempts, as described in this section.

To change the number of allowed password entry attempts:

1. On the Administration Server device, run a Linux command line.
2. For the klscflag utility, run the following command:

   ```
   sudo /opt/kaspersky/ksc64/sbin/klscflag -fset -pv klserver -n SrvSplPpcLogonAttempts -t d -v N
   ```

   where N is a number of attempts to enter a password.
3. To apply the changes, restart the Administration Server service.

The maximum number of allowed password entry attempts is changed.

Changing DBMS credentials

Sometimes, you may need to change DBMS credentials, for example, in order to perform a credential rotation for security purposes.

To change DBMS credentials in a Linux environment by using the klsrvconfig utility:

1. Launch a Linux command line.
2. Specify the klsrvconfig utility in the opened command line window:

   ```
   sudo /opt/kaspersky/ksc64/sbin/klsrvconfig -set_dbms_cred
   ```
3. Specify a new account name. You should specify credentials of an account that exists in the DBMS.
4. Enter a new password.
5. Specify the new password for confirmation.

The DBMS credentials are changed.

Deleting a hierarchy of Administration Servers

If you no longer want to have a hierarchy of Administration Servers, you can disconnect them from this hierarchy.

To delete a hierarchy of Administration Servers:

1. At the top of the screen, click the settings icon () next to the name of the primary Administration Server.

2. On the page that opens, proceed to the **Administration Servers** tab.

3. In the administration group from which you want to delete the secondary Administration Server, select the secondary Administration Server.

4. On the menu line, click **Delete**.

5. In the window that opens, click **OK** to confirm that you want to delete the secondary Administration Server.

The former primary Administration Server and the former secondary Administration Server are now independent of each other. The hierarchy no longer exists.

Configuring the interface

You can configure the Kaspersky Security Center 14 Web Console interface to display and hide sections and interface elements, depending on the features being used.

To configure the Kaspersky Security Center 14 Web Console interface in accordance with the currently used set of features:

1. In the main menu, click the account menu.

2. In the drop-down list, select **Interface options**.

3. In the **Interface options** window that opens, enable or disable the required options.

4. Click **Save**.

After that, the console displays sections in the main menu in accordance with enabled options. For example, if you enable **Show EDR alerts**, the **MONITORING & REPORTING** → **ALERTS** section appears in the main menu.

Discovering networked devices

This section describes search and discovery of networked devices.

Kaspersky Security Center allows you to find devices on the basis of specified criteria. You can save search results to a text file.

The search and discovery feature allows you to find the following devices:

- Managed devices in administration groups of Kaspersky Security Center Administration Server and its secondary Administration Servers.
- Unassigned devices managed by Kaspersky Security Center Administration Server and its secondary Administration Servers.

Scenario: Discovering networked devices

You must perform device discovery before installation of the security applications. When all networked devices are discovered, you can receive information about them and manage them through policies. Regular network polls are needed to discover if there are any new devices and whether previously discovered devices are still on the network.

Discovery of networked devices proceeds in stages:

1. **Initial device discovery**

   When you complete the Quick Start Wizard, perform device discovery manually.

2. **Configuring future polls**

   Make sure that IP range polling is enabled and that the poll schedule meets the needs of your organization. When configuring the poll schedule, use the recommendations for network polling frequency.

   You can also enable Zeroconf polling if your network includes IPv6 devices.

3. **Setting up rules for adding discovered devices to administration groups (optional)**

   If new devices appear on your network, they are discovered during regular polls and are automatically included in the **Unassigned devices** group. If you want, you can set up the rules for automatically moving these devices to the **Managed devices** group. You can also establish retention rules.

   If you skip this rule-setting stage, all the newly discovered devices go to the **Unassigned devices** group and stay there. If you want, you can move these devices to the **Managed devices** group manually. If you move the devices to the **Managed devices** group manually, you can analyze information about each device and decide whether you want to move it to an administration group, and, if so, to which group.

Results

Completion of the scenario yields the following:

- Kaspersky Security Center Linux Administration Server discovers the devices that are on the network and provides you with information about them.
- Future polls are set up and are conducted according to the specified schedule.

The newly discovered devices are arranged according to the configured rules. (Or, if no rules are configured, the devices stay in the **Unassigned devices** group).

IP range polling

Kaspersky Security Center attempts to perform reverse name resolution for every IPv4 address from the specified range to a DNS name using standard DNS requests. If this operation succeeds, the server sends an `ICMP ECHO REQUEST` (the same as the ping command) to the received name. If the device responds, the information about it is added to the Kaspersky Security Center database. The reverse name resolution is necessary to exclude the network devices that can have an IP address but are not computers, for example, network printers or routers.

This polling method relies upon a correctly configured local DNS service. It must have a reverse lookup zone. If this zone is not configured, IP subnet polling will yield no results.

Initially, Kaspersky Security Center gets IP ranges for polling from the network settings of the device on which it is installed. If the device address is 192.168.0.1 and the subnet mask is 255.255.255.0, Kaspersky Security Center includes the network 192.168.0.0/24 in the list of polling address automatically. Kaspersky Security Center polls all addresses from 192.168.0.1 to 192.168.0.254.

If only IP range polling is enabled, Kaspersky Security Center discovers devices only with IPv4 addresses. If your network includes IPv6 devices, turn on Zeroconf polling of devices.

Viewing and modifying the settings for IP range polling

To view and modify the properties of IP range polling:

1. Go to **DISCOVERY & DEPLOYMENT** → **DISCOVERY** → **IP RANGES**.
2. Click the **Properties** button.

   The IP polling properties window opens.
3. Enable or disable IP polling by using the **Allow polling** toggle button.
4. Configure the poll schedule. By default, IP polling runs every 420 minutes (seven hours).

   When specifying the polling interval, make sure that this setting does not exceed the value of the IP address lifetime parameter. If an IP address is not verified by polling during the IP address lifetime, this IP address is automatically removed from the polling results. By default, the life span of the polling results is 24 hours, because dynamic IP addresses (assigned using Dynamic Host Configuration Protocol (DHCP)) change every 24 hours.

   Polling schedule options:

   - **Every N days**

     The polling runs regularly, with the specified interval in days, starting from the specified date and time.

     By default, the polling runs every day, starting from the current system date and time.

   - **Every N minutes**

     The polling runs regularly, with the specified interval in minutes, starting from the specified time.

   - **By days of week**

The polling runs regularly, on the specified days of week, and at the specified time.

- **Every month on specified days of selected weeks**

  The polling runs regularly, on the specified days of each month, and at the specified time.

- **Run missed tasks**

  If the Administration Server is switched off or unavailable during the time for which the poll is scheduled, the Administration Server can either start the poll immediately after it is switched on, or wait for the next time for which the poll scheduled.

  If this option is enabled, the Administration Server starts polling immediately after it is switched on.

  If this option is disabled, the Administration Server waits for the next time for which the polling is scheduled.

  By default, this option is disabled.

5. Click the **Save** button.

The properties are saved and applied to all IP ranges.

Running the poll manually

To run the poll immediately,

click **Start poll**.

Adding and modifying an IP range

Initially, Kaspersky Security Center gets IP ranges for polling from the network settings of the device on which it is installed. If the device address is 192.168.0.1 and the subnet mask is 255.255.255.0, Kaspersky Security Center includes the network 192.168.0.0/24 in the list of polling address automatically. Kaspersky Security Center polls all addresses from 192.168.0.1 to 192.168.0.254. You can modify the automatically defined IP ranges or add custom IP ranges.

You can create a range only for IPv4 addresses. If you enable Zeroconf polling, Kaspersky Security Center will poll the whole network.

To add a new IP range:

1. Go to **DISCOVERY & DEPLOYMENT** → **DISCOVERY** → **IP RANGES**.
2. To add a new IP range, click the **Add** button.
3. In the window that opens, specify the following settings:

   - **IP range name**

A name of the IP range. You might want to specify the IP range itself as its name, for example, "192.168.0.0/24".

- **IP interval or subnet address and mask**

  Set the IP range by specifying either the start and end IP addresses or the subnet address and subnet mask. You can also select one of the already existing IP ranges by clicking the **Browse** button.

- **IP address lifetime (hours)**

  When specifying this parameter make sure that it exceeds the polling interval set in the polling schedule. If an IP address is not verified by polling during the IP address lifetime, this IP address is automatically removed from the polling results. By default, the life span of the polling results is 24 hours, because dynamic IP addresses (assigned using Dynamic Host Configuration Protocol (DHCP)) change every 24 hours.

4. Select **Enable IP range polling** if you want to poll the subnet or interval that you have added. Otherwise, the subnet or interval that you have added will not be polled.
5. Click the **Save** button.

The new IP range is added to the list of IP ranges.

You can run polling of each IP range separately by using the **Start poll** button. When the polling is complete, you can view the list of discovered devices by using the **Devices** button. By default, the life span of the polling results is 24 hours and it is equal to the IP address lifetime setting.

To add a subnet to an existing IP range:

1. Go to **DISCOVERY & DEPLOYMENT** → **DISCOVERY** → **IP RANGES**.
2. Click the name of the IP range to which you want to add a subnet.
3. In the window that opens, click the **Add** button.
4. Specify a subnet by using either its address and mask, or by using the first and last IP address in the IP range. Or, add an existing subnet by clicking the **Browse** button.
5. Click the **Save** button.

   The new subnet is added to the IP range.
6. Click the **Save** button.

The new settings of the IP range are saved.

You can add as many subnets as you need. Named IP ranges are not allowed to overlap, but unnamed subnets inside an IP range have no such restrictions. You can enable and disable polling independently for every IP range.

Zeroconf polling

This polling type is supported only for Linux-based distribution points.

Kaspersky Security Center can poll networks that have devices with IPv6 addresses. In this case, IP ranges are not specified and Kaspersky Security Center polls the whole network by using zero-configuration networking (also referred to as *Zeroconf*). To start using Zeroconf, you must install the avahi-browse utility on the Linux device that polls networks—Administration Server or a distribution point.

To enable Zeroconf polling:

1. Go to **DISCOVERY & DEPLOYMENT → DISCOVERY → IP RANGES**.
2. Click the **Properties** button.
3. In the opened window, turn on the **Use Zeroconf to poll IPv6 networks** toggle button.

After that, Kaspersky Security Center starts to poll your network. In this case, the specified IP ranges are ignored.

Device tags

This section describes device tags, and provides instructions for creating and modifying them as well as for tagging devices manually or automatically.

About device tags

Kaspersky Security Center allows you to *tag* devices. A tag is the label of a device that can be used for grouping, describing, or finding devices. Tags assigned to devices can be used for creating selections, for finding devices, and for distributing devices among administration groups.

You can tag devices manually or automatically. You may use manual tagging when you want to tag an individual device. Auto-tagging is performed by Kaspersky Security Center in accordance with the specified tagging rules.

Devices are tagged automatically when specified rules are met. An individual rule corresponds to each tag. Rules are applied to the network properties of the device, operating system, applications installed on the device, and other device properties. For example, you can set up a rule that will assign the `[CentOS]` tag to all devices running CentOS operating system. Then, you can use this tag when creating a device selection; this will help you sort all CentOS devices and assign them a task.

A tag is automatically removed from a device in the following cases:

- When the device stops meeting conditions of the rule that assigns the tag.
- When the rule that assigns the tag is disabled or deleted.

The list of tags and the list of rules on each Administration Server are independent of all other Administration Servers, including a primary Administration Server or subordinate virtual Administration Servers. A rule is applied only to devices from the same Administration Server on which the rule is created.

Creating a device tag

To create a device tag:

1. In the main menu, go to **DEVICES** → **TAGS** → **DEVICE TAGS**.
2. Click **Add**.

   A new tag window opens.
3. In the **Tag** field, enter the tag name.
4. Click **Save** to save the changes.

The new tag appears in the list of device tags.

Renaming a device tag

To rename a device tag:

1. In the main menu, go to **DEVICES** → **TAGS** → **DEVICE TAGS**.
2. Click the name of the tag that you want to rename.

   A tag properties window opens.
3. In the **Tag** field, change the tag name.
4. Click **Save** to save the changes.

The updated tag appears in the list of device tags.

Deleting a device tag

To delete a device tag:

1. In the main menu, go to **DEVICES** → **TAGS** → **DEVICE TAGS**.
2. In the list, select the device tag that you want to delete.
3. Click the **Delete** button.
4. In the window that opens, click **Yes**.

The device tag is deleted. The deleted tag is automatically removed from all of the devices to which it was assigned.

> The tag that you have deleted is not removed automatically from auto-tagging rules. After the tag is deleted, it will be assigned to a new device only when the device first meets the conditions of a rule that assigns the tag.

The deleted tag is not removed automatically from the device if this tag is assigned to the device by an application or Network Agent. To remove the tag from your device, use the klscflag utility.

Viewing devices to which a tag is assigned

To view devices to which a tag is assigned:

1. In the main menu, go to **DEVICES** → **TAGS** → **DEVICE TAGS**.
2. Click the **View devices** link next to the tag for which you want to view assigned devices.

   The list of devices that appears shows only those devices to which the tag is assigned.

To return to the list of device tags, click the **Back** button of your browser.

Viewing tags assigned to a device

To view tags assigned to a device:

1. In the main menu, go to **DEVICES** → **MANAGED DEVICES**.
2. Click the name of the device whose tags you want to view.
3. In the device properties window that opens, select the **Tags** tab.

   The list of tags assigned to the selected device is displayed. In the **Tag assigned** column you can view how the tag was assigned.

You can assign another tag to the device or remove an already assigned tag. You can also view all device tags that exist on the Administration Server.

You can also view tags assigned to a device in the command line, by using the klscflag utility.

To view tags assigned to a device in the command line, run the following command:

```
/opt/kaspersky/klnagent64/sbin/klscflag -ssvget -pv 1103/1.0.0.0 -s
KLNAG_SECTION_TAGS_INFO -n KLCONN_HOST_TAGS -svt ARRAY_T -ss "|ss_type =
\"SS_PRODINFO\";"
```

Tagging a device manually

To assign a tag to a device manually:

1. View tags assigned to the device to which you want to assign another tag.

2. Click **Add**.
3. In the window that opens, do one of the following:
   - To create and assign a new tag, select **Create new tag**, and then specify the name of the new tag.
   - To select an existing tag, select **Assign existing tag**, and then select the necessary tag in the drop-down list.
4. Click **OK** to apply the changes.
5. Click **Save** to save the changes.

The selected tag is assigned to the device.

Removing an assigned tag from a device

To remove a tag from a device:

1. In the main menu, go to **DEVICES** → **MANAGED DEVICES**.
2. Click the name of the device whose tags you want to view.
3. In the device properties window that opens, select the **Tags** tab.
4. Select the check box next to the tag that you want to remove.
5. At the top of the list, click the **Unassign tag** button.
6. In the window that opens, click **Yes**.

The tag is removed from the device.

The unassigned device tag is not deleted. If you want, you can delete it manually.

You cannot manually remove tags assigned to the device by applications or Network Agent. To remove these tags, use the klscflag utility.

Viewing rules for tagging devices automatically

To view rules for tagging devices automatically,

Do any of the following:

- In the main menu, go to **DEVICES** → **TAGS** → **AUTO-TAGGING RULES**.
- In the main menu, go to **DEVICES** → **TAGS**, and then click the **Set up auto-tagging rules** link.

- View tags assigned to a device and then click the **Settings** button.

The list of rules for auto-tagging devices appears.

Editing a rule for tagging devices automatically

To edit a rule for tagging devices automatically:

1. View rules for tagging devices automatically.
2. Click the name of the rule that you want to edit.

   A rule settings window opens.
3. Edit the general properties of the rule:

   a. In the **Rule name** field, change the rule name.

      The name cannot be more than 256 characters long.

   b. Do any of the following:

      - Enable the rule by switching the toggle button to **Rule enabled**.
      - Disable the rule by switching the toggle button to **Rule disabled**.
4. Do any of the following:

   - If you want to add a new condition, click the **Add** button, and specify the settings of the new condition in the window that opens.
   - If you want to edit an existing condition, click the name of the condition that you want to edit, and then edit the condition settings.
   - If you want to delete a condition, select the check box next to the name of the condition that you want to delete, and then click **Delete**.
5. Click **OK** in the conditions settings window.
6. Click **Save** to save the changes.

The edited rule is shown in the list.

Creating a rule for tagging devices automatically

To create a rule for tagging devices automatically:

1. View rules for tagging devices automatically.
2. Click **Add**.

   A new rule settings window opens.

3. Configure the general properties of the rule:

   a. In the **Rule name** field, enter the rule name.

      The name cannot be more than 256 characters long.

   b. Do one of the following:

      - Enable the rule by switching the toggle button to **Rule enabled**.
      - Disable the rule by switching the toggle button to **Rule disabled**.

   c. In the **Tag** field, enter the new device tag name or select one of the existing device tags from the list.

      The name cannot be more than 256 characters long.

4. In the conditions section, click the **Add** button to add a new condition.

   A new condition settings window open.

5. Enter the condition name.

   The name cannot be more than 256 characters long. The name must be unique within a rule.

6. Set up the triggering of the rule according to the following conditions. You can select multiple conditions.

   - **Network**—Network properties of the device, such as DNS name of the device or device inclusion in an IP subnet.

     If case sensitive collation is set for the database that you use for Kaspersky Security Center, keep case when you specify a device DNS name. Otherwise, the auto-tagging rule will not work.

   - **Applications**—Presence of Network Agent on the device, operating system type, version, and architecture.
   - **Virtual machines**—Device belongs to a specific type of virtual machine.
   - **Applications registry**—Presence of applications of different vendors on the device.

7. Click **OK** to save the changes.

   If necessary, you can set multiple conditions for a single rule. In this case, the tag will be assigned to a device if it meets at least one condition.

8. Click **Save** to save the changes.

The newly created rule is enforced on devices managed by the selected Administration Server. If the settings of a device meet the rule conditions, the device is assigned the tag.

Later, the rule is applied in the following cases:

- Automatically and periodically, depending on the server workload
- After you edit the rule
- When you run the rule manually

- After Administration Server detects a change in the settings of a device that meets the rule conditions or the settings of a group that contains such a device

You can create multiple tagging rules. A single device can be assigned multiple tags if you have created multiple tagging rules and if the respective conditions of these rules are met simultaneously. You can view the list of all assigned tags in the device properties.

Running rules for auto-tagging devices

When a rule is run, the tag specified in properties of this rule is assigned to devices that meet conditions specified in properties of the same rule. You can run only active rules.

To run rules for auto-tagging devices:

1. View rules for tagging devices automatically.
2. Select check boxes next to active rules that you want to run.
3. Click the **Run rule** button.

   The selected rules are run.

Deleting a rule for tagging devices automatically

To delete a rule for tagging devices automatically:

1. View rules for tagging devices automatically.
2. Select the check box next to the rule that you want to delete.
3. Click **Delete**.
4. In the window that opens, click **Delete** again.

   The selected rule is deleted. The tag that was specified in properties of this rule is unassigned from all of the devices that it was assigned to.

> The unassigned device tag is not deleted. If you want, you can delete it manually.

Managing device tags by using the klscflag utility

To assign a set of tags to a device, you need to run the klscflag utility on the client device to which you want to assign tags.

The klscflag utility overwrites the existing tags assigned to the device. This means that you can add or remove tags by specifying the desired set of tags in the command. The utility does not have separate commands for adding or removing individual tags. Instead, you modify the entire set of tags.

When specifying tag names in commands like klscflag, it is recommended to use a consistent-case approach, such as all caps. Using all caps can help avoid potential issues with tags that differ only in case, depending on the DBMS configuration.

To assign one or several tags to your device by using the klscflag utility:

1. Run the command prompt under an account with root privileges, and then change your current directory to the directory with the klscflag utility. The klscflag utility is located in the directory where Network Agent is installed. The default installation directory is /opt/kaspersky/klnagent64/sbin/.

2. Enter one of the following commands:

   - To assign a set of tags:

     ```
     /opt/kaspersky/klnagent64/sbin/klscflag -ssvset -pv 1103/1.0.0.0 -s
     KLNAG_SECTION_TAGS_INFO -n KLCONN_HOST_TAGS -sv "[\" TAG NAME 1 \",\" TAG NAME
     2 \",\" TAG NAME 3 \"]" -svt ARRAY_T -ss "|ss_type = \"SS_PRODINFO\";"
     ```

     where `[\" TAG NAME 1 \",\" TAG NAME 2 \",\" TAG NAME 3 \"]` is the list of tags that you want to assign to your device.

     If you leave the square brackets empty, this will remove all tags from the device:

     ```
     /opt/kaspersky/klnagent64/sbin/klscflag -ssvset -pv 1103/1.0.0.0 -s
     KLNAG_SECTION_TAGS_INFO -n KLCONN_HOST_TAGS -sv "[]" -svt ARRAY_T -ss "|ss_type =
     \"SS_PRODINFO\";"
     ```

   - To assign a new tag to an existing set of tags:

     ```
     /opt/kaspersky/klnagent64/sbin/klscflag -ssvset -pv 1103/1.0.0.0 -s
     KLNAG_SECTION_TAGS_INFO -n KLCONN_HOST_TAGS -sv "[\" NEW TAG NAME \",\" TAG NAME
     1 \",\" TAG NAME 2 \",\" TAG NAME 3 \"]" -svt ARRAY_T -ss "|ss_type = \"SS_PRODINFO\";"
     ```

     where `NEW TAG NAME` is the name of the tag that you want to assign to your device and `TAG NAME 1`, `TAG NAME 2`, `TAG NAME 3` are the names of the tags already assigned to the device.

   - To remove a specific tag without removing other tags already assigned to the device, run the command with the updated set of tags.

     For example, if your current tags are `TAG NAME 1`, `TAG NAME 2`, `TAG NAME 3` and you want to remove `TAG NAME 2`, run the following command:

     ```
     /opt/kaspersky/klnagent64/sbin/klscflag -ssvset -pv 1103/1.0.0.0 -s
     KLNAG_SECTION_TAGS_INFO -n KLCONN_HOST_TAGS -sv "[\" TAG NAME 1 \",\" TAG NAME 3 \"]" -
     svt ARRAY_T -ss "|ss_type = \"SS_PRODINFO\";"
     ```

3. Restart the Network Agent service.

The klscflag utility assigns the specified tags to your device. To make sure that the klscflag utility has assigned the specified tags successfully, view tags assigned to the device.

Alternatively, you can assign device tags manually.

Application tags

This section describes application tags, and provides instructions for creating and modifying them as well as for tagging third-party applications.

Application tags

Kaspersky Security Center Linux enables you to tag the applications from applications registry. A tag is the label of an application that can be used for grouping or finding applications. A tag assigned to applications can serve as a condition in device selections.

For example, you can create the `[Browsers]` tag and assign it to all browsers such as Microsoft Internet Explorer, Google Chrome, Mozilla Firefox.

Creating an application tag

To create an application tag:

1. In the main menu, go to **OPERATIONS → THIRD-PARTY APPLICATIONS → APPLICATION TAGS**.
2. Click **Add**.

   A new tag window opens.
3. Enter the tag name.
4. Click **OK** to save the changes.

The new tag appears in the list of application tags.

Renaming an application tag

To rename an application tag:

1. In the main menu, go to **OPERATIONS → THIRD-PARTY APPLICATIONS → APPLICATION TAGS**.
2. Select the check box next to the tag that you want to rename, and then click **Edit**.

   A tag properties window opens.
3. Change the tag name.
4. Click **OK** to save the changes.

The updated tag appears in the list of application tags.

Assigning tags to an application

To assign one or several tags to an application:

1. In the main menu, go to **OPERATIONS → THIRD-PARTY APPLICATIONS → APPLICATIONS REGISTRY**.
2. Click the name of the application to which you want to assign tags.
3. Select the **Tags** tab.

   The tab displays all application tags that exist on the Administration Server. For tags assigned to the selected application, the check box in the **Tag assigned** column is selected.
4. For tags that you want to assign, select check boxes in the **Tag assigned** column.
5. Click **Save** to save the changes.

The tags are assigned to the application.

Removing assigned tags from an application

To remove one or several tags from an application:

1. In the main menu, go to **OPERATIONS → THIRD-PARTY APPLICATIONS → APPLICATIONS REGISTRY**.
2. Click the name of the application from which you want to remove tags.
3. Select the **Tags** tab.

   The tab displays all application tags that exist on the Administration Server. For tags assigned to the selected application, the check box in the **Tag assigned** column is selected.
4. For tags that you want to remove, clear check boxes in the **Tag assigned** column.
5. Click **Save** to save the changes.

The tags are removed from the application.

The removed application tags are not deleted. If you want, you can delete them manually.

Deleting an application tag

To delete an application tag:

1. In the main menu, go to **OPERATIONS → THIRD-PARTY APPLICATIONS → APPLICATION TAGS**.
2. In the list, select the application tag that you want to delete.
3. Click the **Delete** button.
4. In the window that opens, click **OK**.

The application tag is deleted. The deleted tag is automatically removed from all of the applications to which it was assigned.

Deploying Kaspersky applications

This section describes Kaspersky applications deployment on client devices in your organization by means of Kaspersky Security Center 14 Web Console.

Scenario: Kaspersky applications deployment

This scenario explains how to deploy Kaspersky applications through Kaspersky Security Center 14 Web Console. You can use the Quick Start Wizard and Protection Deployment Wizard, or you can complete all necessary steps manually.

Kaspersky applications deployment proceeds in stages:

1. **Downloading management web plug-in for the application**

   Download the management web plug-in for Kaspersky Endpoint Security for Linux from the Kaspersky website, and then add the plug-in to Kaspersky Security Center 14 Web Console.

2. **Downloading and creating installation package for Network Agent**

   Download the Network Agent distribution package from the Kaspersky website, and then create a Network Agent installation package.

   You can use the downloaded distribution package to install Network Agent locally. To do this, follow the instructions provided in the documentation for Kaspersky Endpoint Security for Linux.

3. **Downloading and creating installation package for Kaspersky Endpoint Security for Linux**

   Download the Kaspersky Endpoint Security for Linux distribution package from the Kaspersky website, and then create a Kaspersky Endpoint Security for Linux installation package.

4. **Creating stand-alone installation packages (optional)**

   If you cannot install Kaspersky applications by means of Kaspersky Security Center Linux on some devices, for example, on remote employees' devices, you can create stand-alone installation packages for applications. If you use stand-alone packages to install Kaspersky applications, stage 5 and stage 6 below can be disregarded.

5. **Creating, configuring, and running the remote installation task**

   This step is part of the Protection Deployment Wizard. If you choose not to run the Protection Deployment Wizard, you must create this task manually and configure it manually.

   You also can manually create several remote installation tasks for different administration groups or different device selections. You can deploy different versions of one application in these tasks.

   Make sure that all the devices on your network are discovered; then run the remote installation task (or tasks).

   > If you want to install Network Agent on devices with the SUSE Linux Enterprise Server 15 operating system, install the insserv-compat package first to configure Network Agent.

6. **Creating and configuring tasks**

   The *Update* task of Kaspersky Endpoint Security for Linux must be configured.

   This step is part of the Quick Start Wizard: the task is created and configured automatically with the default settings. If you did not run the Wizard, you must create this task manually and configure it manually. If you use the Quick Start Wizard, make sure that the schedule for the task meets your requirements. (By default, the scheduled start for the task is set to **Manually**, but you might want to choose another option.)

7. **Creating policies**

   Create the policy for Kaspersky Endpoint Security for Linux manually or through the Quick Start Wizard. You can use the default settings of the policy; you can also modify the default settings of the policy according to your needs at any time.

8. **Verifying the results**

   Make sure that deployment was completed successfully: you have policies and tasks for each application, and these applications are installed on the managed devices.

Results

Completion of the scenario yields the following:

- All required policies and tasks for the selected applications are created.
- The schedules of tasks are configured according to your needs.
- The selected applications are deployed, or scheduled to be deployed, on the selected client devices.

Adding management plug-ins for Kaspersky applications

To deploy a Kaspersky application, such as Kaspersky Endpoint Security for Linux, you must add and install the management web plug-in for the application.

To add and install a management web plug-in for a Kaspersky application:

1. Download the management web plug-in for Kaspersky Endpoint Security for Linux from the Kaspersky website.
2. Open Kaspersky Security Center 14 Web Console.
3. In the **Console settings** drop-down list, select **Web plug-ins**.

   A list of available management plug-ins is displayed.
4. Click the **Add from file** button.

   The **Add from file** window is displayed.
5. Click the **Upload ZIP file** button.
6. Specify the downloaded ZIP file of the web plug-in.
7. Click the **Upload signature** button.
8. Specify the downloaded TXT file of the web plug-in signature.
9. Click the **Add** button.

   Kaspersky Security Center verifies the uploaded files, and then adds and installs the web plug-in.
10. When the installation is complete, click **OK**.

The management web plug-in is installed with the default configuration and displayed in the list of management web plug-ins.

Creating installation packages from a file

You can use custom installation packages to do the following:

- To install any application (such as a text editor) on a client device, for example, by means of a task.
- To create a stand-alone installation package.

A custom installation package is a folder with a set of files. The source to create a custom installation package is an *archive file*. The archive file contains a file or files that must be included in the custom installation package.

While creating a custom installation package, you can specify command-line parameters, for example, to install the application in silent mode.

To create a custom installation package:

1. Do one of the following:
   - Go to **DISCOVERY & DEPLOYMENT** → **DEPLOYMENT & ASSIGNMENT** → **INSTALLATION PACKAGES**.
   - Go to **OPERATIONS** → **REPOSITORIES** → **INSTALLATION PACKAGES**.

   A list of installation packages available on the Administration Server is displayed.
2. Click **Add**.

   The New Package Wizard starts. Proceed through the Wizard by using the **Next** button.
3. Select **Create an installation package from a file**.
4. Specify the package name and click the **Browse** button.
5. In the window that opens, choose an archive file located on the available disks.

   You can upload a ZIP, CAB, TAR, or TAR.GZ archive file. It is not possible to create an installation package from an SFX (self-extracting archive) file.

   File upload to the Administration Server starts.
6. If you specified a file of a Kaspersky application, you may be prompted to read and accept the End User License Agreement (EULA) for the application. To continue, you must accept the EULA. Select the **Accept the terms and conditions of this End User License Agreement** option only if you have fully read, understand and accept the terms of the EULA.

   Additionally, you may be prompted to read and accept the Privacy Policy. To continue, you must accept the Privacy Policy. Select the **I accept the Privacy Policy** option only if you understand and agree that your data will be handled and transmitted (including to third countries) as described in the Privacy Policy.
7. Select a file (from the list of files that are extracted from the chosen archive file) and specify the command-line parameters of an executable file.

   You can specify command-line parameters to install the application from the installation package in a silent mode. Specifying command-line parameters is optional.

   The process to create the installation package is started.

The Wizard informs you when the process is finished.

If the installation package is not created, an appropriate message is displayed.

8. Click the **Finish** button to close the Wizard.

The installation package that you created is downloaded to the Packages subfolder of the Administration Server shared folder. After downloading, the installation package appears in the list of installation packages.

In the list of installation packages available on Administration Server, by clicking the link with the name of a custom installation package, you can:

- View the following properties of an installation package:
  - **Name**. Custom installation package name.
  - **Source**. Application vendor name.
  - **Application**. Application name packed into the custom installation package.
  - **Version**. Application version.
  - **Language**. Language of the application packed into the custom installation package.
  - **Size (MB)**. Size of the installation package.
  - **Operating system**. Type of the operating system for which the installation package is intended.
  - **Created**. Installation package creation date.
  - **Modified**. Installation package modification date.
  - **Type**. Type of the installation package.
- Change the command-line parameters.

Creating stand-alone installation packages

You and device users in your organization can use stand-alone installation packages to install applications on devices manually.

A stand-alone installation package is an executable file that you can store on the Web Server or in the shared folder, send by email, or transfer to a client device by another method. On the client device, the user can run the received file locally to install an application without involving Kaspersky Security Center Linux. You can create stand-alone installation packages for Kaspersky applications and for third-party applications. To create a stand-alone installation package for a third-party application you must create a custom installation package.

Be sure that stand-alone installation package is not available for third persons.

To create a stand-alone installation package:

1. Do one of the following:

- Go to **DISCOVERY & DEPLOYMENT → DEPLOYMENT & ASSIGNMENT → INSTALLATION PACKAGES**.
- Go to **OPERATIONS → REPOSITORIES → INSTALLATION PACKAGES**.

A list of installation packages available on Administration Server is displayed.

2. In the list of installation packages, select an installation package and, above the list, click the **Deploy** button.
3. Select the **Using a stand-alone package** option.

   Stand-alone Installation Package Creation Wizard starts. Proceed through the Wizard by using the **Next** button.
4. Make sure that the **Install Network Agent together with this application** option is enabled if you want to install Network Agent together with the selected application.

   By default, this option is enabled. It is recommended to enable this option if you are not sure whether Network Agent is installed on the device. If Network Agent is already installed on the device, after the stand-alone installation package with Network Agent installed Network Agent will be updated to the newer version.

   If you disable this option, Network Agent will not be installed on the device and the device will be unmanaged.

   If a stand-alone installation package for the selected application already exists on Administration Server, the Wizard informs you about this fact. In this case, you must select one of the following actions:

   - **Create stand-alone installation package**. Select this option, for example, if you want to create a stand-alone installation package for a new application version and also want to retain a stand-alone installation package that you created for a previous application version. The new stand-alone installation package is placed in another folder.
   - **Use existing stand-alone installation package**. Select this option if you want to use an existing stand-alone installation package. The process of package creation will not be started.
   - **Rebuild existing stand-alone installation package**. Select this option if you want to create a stand-alone installation package for the same application again. The stand-alone installation package is placed in the same folder.
5. On the **Move to list of managed devices** step, the **Do not move devices** option is selected by default. If you do not want to move the client device to any administration group after Network Agent installation, do not change choice of option.

   If you want to move client device after Network Agent installation, select the **Move unassigned devices to this group** option and specify an administration group to which you want to move the client device. By default, the device is moved to the **Managed devices** group.
6. When the process of the stand-alone installation package creation is finished, click the **FINISH** button.

   The Stand-alone Installation Package Creation Wizard closes.

The stand-alone installation package is created and placed in the PkgInst subfolder of the Administration Server shared folder. You can view the list of stand-alone packages by clicking the **View the list of stand-alone packages** button above the list of installation packages.

Viewing the list of stand-alone installation packages

You can view the list of stand-alone installation packages and properties of each stand-alone installation package.

To view the list of stand-alone installation packages for all installation packages:

Above the list, click the **View the list of stand-alone packages** button.

In the list of stand-alone installation packages, their properties are displayed as follows:

- **Package name**. Stand-alone installation package name that is automatically formed as the application name included in the package and the application version.
- **Application name**. Application name included in the stand-alone installation package.
- **Application version**.
- **Network Agent installation package name**. The property is displayed only if Network Agent is included in the stand-alone installation package.
- **Network Agent version**. The property is displayed only if Network Agent is included in the stand-alone installation package.
- **Size**. File size in MB.
- **Group**. Name of the group to which the client device is moved after Network Agent installation.
- **Created**. Date and time of the stand-alone installation package creation.
- **Modified**. Date and time of the stand-alone installation package modification.
- **Path**. Full path to the folder where the stand-alone installation package is located.
- **Web address**. Web address of the stand-alone installation package location.
- **File hash**. The property is used to certify that the stand-alone installation package was not changed by third-party persons and a user has the same file you have created and transferred to the user.

To view the list of stand-alone installation packages for specific installation package:

Select the installation package in the list and, above the list, click the **View the list of stand-alone packages** button.

In the list of stand-alone installation packages, you can do the following:

- Publish a stand-alone installation package on the Web Server by clicking the **Publish** button. Published stand-alone installation package is available for downloading for users whom you sent the link to the stand-alone installation package.
- Cancel publication of a stand-alone installation package on the Web Server by clicking the **Unpublish** button. Unpublished stand-alone installation package is available for downloading only for you and other administrators.
- Download a stand-alone installation package to your device by clicking the **Download** button.
- Send email with the link to a stand-alone installation package by clicking the **Send by email** button.
- Remove a stand-alone installation package by clicking the **Remove** button.

Preparing a Linux device and installing Network Agent on a Linux device remotely

Network Agent installation is comprised of two steps:

- A Linux device preparation
- Network Agent remote installation

If you want to install Network Agent on devices that use the operating system RED OS 7.3.4 or later or MSVSPHERE 9.2 or later, install the libxcrypt-compat package for the correct function of Network Agent.

A Linux device preparation

To prepare a device running Linux for remote installation of Network Agent:

1. Make sure that the following software is installed on the target Linux device:
   - Sudo (for Ubuntu 10.04, Sudo version is 1.7.2p1 or later)
   - Perl language interpreter version 5.10 or later
2. Test the device configuration:
   a. Check whether you can connect to the device through an SSH client (such as PuTTY).

      If you cannot connect to the device, open the `/etc/ssh/sshd_config` file and make sure that the following settings have the respective values listed below:

      ```
      PasswordAuthentication no
      ChallengeResponseAuthentication yes
      ```

      Do not modify the /etc/ssh/sshd_config file if you can connect to the device with no issues; otherwise, you may encounter SSH authentication failure when running a remote installation task.

      Save the file (if necessary) and restart the SSH service by using the `sudo service ssh restart` command.

   b. Disable the sudo password for the user account under which the device is to be connected.

   c. Use the `visudo` command in sudo to open the sudoers configuration file.

      In the file you have opened, add the following line to the end of the file: `<username> ALL = (ALL) NOPASSWD: ALL`. In this case, `<username>` is the user account which is to be used for the device connection using SSH. If you are using the Astra Linux operating system, in the /etc/sudoers file, add the last line with the following text: `%astra-admin ALL=(ALL:ALL) NOPASSWD: ALL`

   d. Save the sudoers file and then close it.

e. Connect to the device again through SSH and make sure that the Sudo service does not prompt you to enter a password; you can do this using the `sudo whoami` command.

3. Open the `/etc/systemd/logind.conf` file, and then do one of the following:

   - Specify 'no' as a value for the KillUserProcesses setting: `KillUserProcesses=no`.
   - For the KillExcludeUsers setting, type the user name of the account under which the remote installation is to be performed, for example, `KillExcludeUsers=root`.

   If the target device is running Astra Linux, add `export PATH=/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin` string in the `/home/<username>/.bashrc` file, where `<username>` is the user account which is to be used for the device connection using SSH.

   To apply the changed setting, restart the Linux device or execute the following command:

   ```
   $ sudo systemctl restart systemd-logind.service
   ```

4. If you want to install Network Agent on devices with the SUSE Linux Enterprise Server 15 operating system, install the insserv-compat package first to configure Network Agent.

5. If you want to install Network Agent on devices that have the Astra Linux operating system running in the closed software environment mode, perform additional steps to prepare Astra Linux devices.

Network Agent remote installation

To install Network Agent on Linux devices remotely:

1. Download and create an installation package:

   a. Before installing the package on the device, make sure that it already has all the dependencies (programs and libraries) installed for this package.

   You can view the dependencies for each package on your own, using utilities that are specific for the Linux distribution on which the package is to be installed. For more details about utilities, refer to your operating system documentation.

   b. Download the Network Agent installation package by using the application interface or from the Kaspersky website.

   c. To create a remote installation package, use the following files:

   - klnagent.kpd
   - akinstall.sh
   - .deb or .rpm package of Network Agent

2. Create a remote installation task with the following settings:

   - On the **Settings** page of the New task wizard, select the **Using operating system resources through Administration Server** check box. Clear all other check boxes.
   - On the **Selecting an account to run the task** page specify the settings of the user account that is used for device connection through SSH.

3. Run the remote installation task. Use the option for the `su` command to preserve the environment: `-m, -p, --preserve-environment`.

Installing applications using a remote installation task

Kaspersky Security Center Linux allows you to install applications on devices remotely, using remote installation tasks. Those tasks are created and assigned to devices through a dedicated Wizard. To assign a task to devices more quickly and easily, you can specify devices in the Wizard window in one of the following ways:

- **Select networked devices detected by Administration Server**. In this case, the task is assigned to specific devices. The specific devices can include devices in administration groups as well as unassigned devices.
- **Specify device addresses manually or import addresses from a list**. You can specify DNS names, IP addresses, and IP subnets of devices to which you want to assign the task.
- **Assign task to a device selection**. In this case, the task is assigned to devices included in a selection created earlier. You can specify the default selection or a custom one that you created.
- **Assign task to an administration group**. In this case, the task is assigned to devices included in an administration group created earlier.

For correct remote installation on a device with no Network Agent installed, the following ports must be opened: a) TCP 139 and 445; b) UDP 137 and 138. By default, these ports are opened on all devices included in the domain. They are opened automatically by the remote installation preparation utility.

Installing an application on specific devices

This section contains information on how to install an application remotely on an administration group, devices with specific IP addresses, or a selection of managed devices.

To install an application on specific devices:

1. In the main menu, go to **DEVICES** → **TASKS**.
2. Click **Add**.

   The New task wizard starts.
3. In the **Task type** field, select **Install application remotely**.
4. Select one of the following options:

   - Assign task to an administration group

The task is assigned to devices included in an administration group. You can specify one of the existing groups or create a new one.

For example, you may want to use this option to run a task of sending a message to users if the message is specific for devices included in a specific administration group.

If a task is assigned to an administration group, the **Security** tab is not displayed in the task properties window because group tasks are subject to the security settings of the groups to which they apply.

- Specify device addresses manually or import addresses from a list

  You can specify DNS names, IP addresses, and IP subnets of devices to which you want to assign the task.

  You may want to use this option to execute a task for a specific subnet. For example, you may want to install a certain application on devices of accountants or to scan devices in a subnet that is probably infected.

- Assign task to a device selection

  The task is assigned to devices included in a device selection. You can specify one of the existing selections.

  For example, you may want to use this option to run a task on devices with a specific operating system version.

5. Follow the instructions of the wizard.

   The New task wizard creates a task for remote installation of the application selected in the wizard on specified devices. If you selected the **Assign task to an administration group** option, the task is a group one.

6. Run the task manually or wait for it to launch according to the schedule that you specified in the task settings.

When the remote installation task is completed, the selected application is installed on the specified devices.

Installing applications on secondary Administration Servers

To install an application on secondary Administration Servers:

1. Establish a connection with the Administration Server that controls the relevant secondary Administration Servers.

2. Make sure that the installation package corresponding to the application being installed is available on each of the selected secondary Administration Servers. If you cannot find the installation package on any of the secondary Servers, distribute it. For this purpose, create a task with the **Distribute installation package** task type.

3. Create a task for a remote application installation on secondary Administration Servers. Select the **Install application on secondary Administration Server remotely** task type.

   The Add Task Wizard creates a task for remote installation of the application selected in the Wizard on specific secondary Administration Servers.

4. Run the task manually or wait for it to launch according to the schedule that you specified in the task settings.

When the remote installation task is complete, the selected application is installed on the secondary Administration Servers.

Specifying settings for remote installation on Unix devices

When you install an application on a Unix device by using a remote installation task, you can specify Unix-specific settings for the task. These settings are available in the task properties after the task is created.

To specify Unix-specific settings for a remote installation task:

1. In the main menu, go to **DEVICES** → **TASKS**.
2. Click the name of the remote installation task for which you want to specify the Unix-specific settings.

   The task properties window opens.
3. Go to **Application settings** → **Unix-specific settings**.
4. Specify the following settings:

   - **Set a password for the root account (only for deployment through SSH)**

     If the `sudo` command cannot be used on the target device without specifying the password, select this option, and then specify the password for the root account. Kaspersky Security Center 14 Linux transmits the password in an encrypted form to the target device, decrypts the password, and then starts the installation procedure on behalf of the root account with the specified password.

     Kaspersky Security Center 14 Linux does not use the account or the specified password to create an SSH connection.

   - **Specify the path to a temporary folder with Execute permissions on the target device (only for deployment through SSH)**

     If the /tmp directory on the target device does not have the execute permission, select this option, and then specify the path to the directory with the execute permission. Kaspersky Security Center 14 Linux uses the specified directory as a temporary directory to access via SSH. The application places the installation package in the directory and runs the installation procedure.
5. Click the **Save** button.

The specified task settings are saved.

Starting and stopping Kaspersky applications

You can use the *Start or stop application* task for starting and stopping Kaspersky applications on managed devices.

To create the Start or stop application task:

1. In the main menu, go to **DEVICES** → **TASKS**.
2. Click **Add**.

   The New task wizard starts. Proceed through the wizard by using the **Next** button.
3. In the **Application** drop-down list, select the application for which you want to create the task.

   Kaspersky applications are displayed in the list if you have previously added management web plug-ins for these applications.
4. In the **Task type** list, select the **Application activation** task.
5. In the **Task name** field, specify the name of the new task.

   The task name cannot be more than 100 characters long and cannot include any special characters ("*<>?\:|).
6. Select the devices to which the task will be assigned.
7. In the **Applications** window, do the following:
   - Select the check boxes next to the names of applications for which you want to create the task.
   - Select the **Start application** or the **Stop application** option.
8. If you want to modify the default task settings, enable the **Open task details when creation is complete** option at the **Finish task creation** step. If you do not enable this option, the task is created with the default settings. You can modify the default settings later, at any time.
9. Click the **Finish** button.

   The task is created and displayed in the list of tasks.
10. Click the name of the created task to open the task properties window.
11. In the task properties window, specify the general task settings according to your needs, and then save the settings.

The task is created and configured.

If you want to run the task, select it in the task list, and then click the **Start** button.

Replacing third-party security applications

Installation of Kaspersky security applications through Kaspersky Security Center Linux may require removal of third-party software incompatible with the application being installed. Kaspersky Security Center provides several ways of removing the third-party applications.

Removing incompatible applications when configuring remote installation of an application

You can enable the **Uninstall incompatible applications automatically** option when you configure remote installation of a security application in the Protection Deployment Wizard. When this option is enabled, Kaspersky Security Center removes incompatible applications before installing a security application on a managed device.

How-to instructions: Removing incompatible applications before installation

Removing incompatible applications through a dedicated task

To remove incompatible applications, use the **Uninstall application remotely** task. This task should be run on devices before the security application installation task. For example, in the installation task you can select **On completing another task** as the schedule type where the other task is **Uninstall application remotely**.

This method of uninstallation is useful when the security application installer cannot properly remove an incompatible application.

How-to instructions: Creating a task

Removing applications or software updates remotely

You can remove applications or software updates on managed devices that run Linux remotely only by using Network Agent.

To remove applications or software updates remotely from selected devices:

1. In the main menu, go to **DEVICES** → **TASKS**.
2. Click **Add**.

   The Add Task Wizard starts. Proceed through the Wizard by using the **Next** button.
3. For the Kaspersky Security Center application, select the **Uninstall application remotely** task type.
4. Specify the name for the task that you are creating.

   A task name cannot be more than 100 characters long and cannot include any special characters ("*<>?\:|).
5. Select the devices to which the task will be assigned.
6. Select what kind of software you want to remove, and then select specific applications, updates, or patches that you want to remove:

   - **Uninstall managed application**

     A list of Kaspersky applications is displayed. Select the application that you want to remove.

   - **Uninstall incompatible application**

     A list of applications incompatible with Kaspersky security applications or Kaspersky Security Center is displayed. Select the check boxes next to the applications that you want to remove.

   - **Uninstall application from applications registry**

By default, Network Agents send the Administration Server information about the applications installed on the managed devices. The list of installed applications is stored in the applications registry.

To select an application from the applications registry:

a. Click the **Application to uninstall** field, and then select the application that you want to remove.

If you select Kaspersky Security Center Network Agent, when you run the task, the status *Completed successfully* shows that the process of removing started. If Kaspersky Security Center Network Agent is removed, the status does not change. If the task fails, the status changes to *Failed*.

b. Specify the uninstallation options:

- Uninstallation mode

Select how you want to remove the application:

- **Define uninstallation command automatically**

  If the application has an uninstallation command defined by the application vendor, Kaspersky Security Center uses this command. We recommend that you select this option.

- **Specify uninstallation command**

  Select this option if you want to specify your own command for the application uninstallation.

  We recommend that you first try to remove the application by using the **Define uninstallation command automatically** option. If the uninstallation through the automatically defined command fails, then use your own command.

  Type an installation command into the field, and then specify the following option:

  Use this command for uninstallation only if the default command was not autodetected

  Kaspersky Security Center checks whether or not the selected application has an uninstallation command defined by the application vendor. If the command is found, Kaspersky Security Center will use it instead of the command specified in the **Command for application uninstallation** field.

  We recommend that you enable this option.

- Perform restart after successful application uninstallation

If the application requires the operating system to be restarted on the managed device after successful uninstallation, the operating system is restarted automatically.

7. Specify how client devices will download the Uninstallation utility:

- Using Network Agent

The files are delivered to client devices by Network Agent installed on those client devices.

If this option is disabled, the files are delivered using the Linux operating system tools.

We recommend that you enable this option if the task has been assigned to devices that have Network Agents installed.

- Using operating system resources through Administration Server

  The option is obsolete. Use the **Using Network Agent** or **Using operating system resources through distribution points** option instead.

  The files are transmitted to client devices by using the Administration Server operating system tools. You can enable this option if no Network Agent is installed on the client device, but the client device is on the same network as the Administration Server.

- Using operating system resources through distribution points

  The files are transmitted to client devices by using operating system tools through distribution points. You can enable this option if there is at least one distribution point on the network.

  If the **Using Network Agent** option is enabled, the files are delivered by using operating system tools only if Network Agent tools are unavailable.

- Maximum number of concurrent downloads

  The maximum allowed number of client devices to which Administration Server can simultaneously transmit the files. The larger this number, the faster the application will be uninstalled, but the load on Administration Server is higher.

- Maximum number of uninstallation attempts

  If, when running the *Uninstall application remotely* task, Kaspersky Security Center fails to uninstall an application on a managed device within the number of installer runs specified by the parameter, Kaspersky Security Center stops delivering the Uninstallation utility to this managed device and does not start the installer on the device anymore.

  The **Maximum number of uninstallation attempts** parameter allows you to save the resources of the managed device, as well as reduce traffic (uninstallation, MSI file run, and error messages).

  Recurring task start attempts may indicate a problem on the device and which prevents uninstallation. The administrator should resolve the problem within the specified number of uninstallation attempts and then restart the task (manually or by a schedule).

  If uninstallation is not achieved eventually, the problem is considered unresolvable and any further task starts are seen as costly in terms of unnecessary consumption of resources and traffic.

  When the task is created, the attempts counter is set to `0`. Each run of the installer that returns an error on the device increments the counter reading.

  If the number of attempts specified in the parameter has been exceeded and the device is ready for application uninstallation, you can increase the value of the **Maximum number of uninstallation attempts** parameter and start the task to uninstall the application. Alternatively, you can create a new *Uninstall application remotely* task.

- **Verify operating system type before downloading**

  Before transmitting the files to client devices, Kaspersky Security Center checks if the Installation utility settings are applicable to the operating system of the client device. If the settings are not applicable, Kaspersky Security Center does not transmit the files and does not attempt to install the application. For example, to install some application to devices of an administration group that includes devices running various operating systems, you can assign the installation task to the administration group, and then enable this option to skip devices that run an operating system other than the required one.

8. Specify the operating system restart settings:

- **Do not restart the device**

  Client devices are not restarted automatically after the operation. To complete the operation, you must restart a device (for example, manually or through a device management task). Information about the required restart is saved in the task results and in the device status. This option is suitable for tasks on servers and other devices where continuous operation is critical.

- **Restart the device**

  Client devices are always restarted automatically if a restart is required for completion of the operation. This option is useful for tasks on devices that provide for regular pauses in their operation (shutdown or restart).

- **Force closure of applications in blocked sessions**

  Running applications may prevent a restart of the client device. For example, if a document is being edited in a word processing application and is not saved, the application does not allow the device to restart.

  If this option is enabled, such applications on a locked device are forced to close before the device restart. As a result, users may lose their unsaved changes.

  If this option is disabled, a locked device is not restarted. The task status on this device states that a device restart is required. Users have to manually close all applications running on locked devices and restart these devices.

  By default, this option is disabled.

9. If necessary, add the accounts that will be used to start the remote uninstallation task:

- **No account required (Network Agent installed)**

  If this option is selected, you do not have to specify the account under which the application installer will be run. The task will run under the account under which the Administration Server service is running.

  If Network Agent has not been installed on client devices, this option is not available.

- **Account required (Network Agent is not used)**

Select this option if Network Agent is not installed on the devices for which you assign the *Uninstall application remotely* task. In this case, you can specify a user account or an SSH certificate to uninstall the application.

- **Local Account**. If this option is selected, specify the user account under which the application installer will be run. Click the **Add** button, select **Local Account**, and then specify the user account credentials.

  You can specify multiple user accounts if, for example, none of them have all the required rights on all devices for which you assign the task. In this case, all added accounts are used for running the task, in consecutive order, top-down.

- **SSH certificate**. If you want to uninstall an application from a Linux-based client device, you can specify an SSH certificate instead of a user account. Click the **Add** button, select **SSH certificate**, and then specify the private and public keys of the certificate.

  To generate a private key, you can use the ssh-keygen utility. Note that Kaspersky Security Center supports the PEM format of private keys, but the ssh-keygen utility generates SSH keys in the OPENSSH format by default. The OPENSSH format is not supported by Kaspersky Security Center. To create a private key in the supported PEM format, add the -m PEM option in the ssh-keygen command.

  For example:

  ```
  ssh-keygen -m PEM -t rsa -b 4096 -C "<user email>"
  ```

10. If you want to modify the default task settings, enable the **Open task details when creation is complete** option on the **Finish task creation** page. If you do not enable this option, the task is created with the default settings. You can modify the default settings later, at any time.

11. Click the **Finish** button.

    The task is created and displayed in the list of tasks.

12. Click the name of the created task to open the task properties window.

13. In the task properties window, specify the general task settings.

14. Click the **Save** button.

15. Run the task manually or wait for it to launch according to the schedule you specified in the task settings.

Upon completion of the remote uninstallation task, the selected application will be removed from the selected devices.

Remote uninstallation issues

Sometimes remote uninstallation of third-party applications may finish with the following warning: "Remote uninstallation has finished on this device with warnings: Application for removal is not installed." This issue occurs when the application to be uninstalled has already been uninstalled or was installed only for an individual user. Applications installed for an individual user (also referred to as per-user applications) become invisible and cannot be uninstalled remotely if the user is not logged in.

This behavior differs from applications intended for use by multiple users on the same device (also referred to as per-device applications). Per-device applications are visible and accessible to all users of the device.

Therefore, per-user applications must be uninstalled only when the user is logged in.

Source of information about installed applications

The Network Agent retrieves information about software installed on Windows devices from the following registry keys:

- HKEY_LOCAL_MACHINE\Software\Microsoft\Windows\CurrentVersion\Uninstall
  Contains information about applications installed for all users.
- HKEY_LOCAL_MACHINE\Software\Wow6432Node\Microsoft\Windows\CurrentVersion\Uninstall
  Contains information about applications installed for all users.
- HKEY_CURRENT_USER\Software\Microsoft\Windows\CurrentVersion\Uninstall
  Contains information about applications installed for the current user.
- HKEY_USER<...>\Software\Microsoft\Windows\CurrentVersion\Uninstall
  Contains information about applications installed for specific users.

Preparing a device running SUSE Linux Enterprise Server 15 for installation of Network Agent

To install Network Agent on a device with the SUSE Linux Enterprise Server 15 operating system:

Before the Network Agent installation, run the following command:

```
$ sudo zypper install insserv-compat
```

This enables you to install the insserv-compat package and configure Network Agent properly.

> Run the `rpm -q insserv-compat` command to check whether the package is already installed.

If your network includes a lot of devices running SUSE Linux Enterprise Server 15, you can use the special software for configuring and managing the company infrastructure. By using this software, you can automatically install the insserv-compat package on all necessary devices at once. For example, you can use Puppet, Ansible, Chef, you can make your own script—use any method that is convenient for you.

If the device does not have the GPG signing keys for SUSE Linux Enterprise, you may encounter the following warning: `Package header is not signed!` Select the `i` option to ignore the warning.

After preparing the SUSE Linux Enterprise Server 15 device, deploy and install Network Agent.

Kaspersky applications: licensing and activation

This section describes the features of Kaspersky Security Center related to working with the license keys of managed Kaspersky applications.

Kaspersky Security Center Linux allows you to perform centralized distribution of license keys for Kaspersky applications on client devices, monitor their use, and renew licenses.

When adding a license key using Kaspersky Security Center, the settings of the license key are saved on the Administration Server. Based on this information, the application generates a license key usage report and notifies the administrator of license expirations and violation of license restrictions that are set in the properties of license keys. You can configure notifications of the use of license keys within the Administration Server settings.

Licensing of managed applications

The Kaspersky applications installed on managed devices must be licensed by applying a key file or activation code to each of the applications. A key file or activation code can be deployed in the following ways:

- Automatic deployment
- The installation package of a managed application
- The Add license key task for a managed application
- Manual activation of a managed application

You can add a new active or reserve license key by any of the methods listed above. A Kaspersky application uses an active key at the current moment and stores a reserve key to apply after the active key expires. The application for which you add a license key defines whether the key is active or reserve. The key definition does not depend on the method that you use to add a new license key.

Automatic deployment

If you use different managed applications and you have to deploy a specific key file or activation code to devices, opt for other ways of deploying that activation code or key file.

Kaspersky Security Center allows you to automatically deploy available license keys to devices. For example, three license keys are stored in the Administration Server repository. You have enabled the **Automatically distributed license key** option for all three license keys. A Kaspersky security application—for example, Kaspersky Endpoint Security for Linux—is installed on the organization's devices. A new device is discovered to which a license key must be deployed. The application determines, for instance, that two of the license keys from the repository can be deployed to the device: license key named *Key_1* and license key named *Key_2*. One of these license keys is deployed to the device. In this case, it cannot be predicted which of the two license keys will be deployed to the device because automatic deployment of license keys does not provide for any administrator activity.

When a license key is deployed, the devices are recounted for that license key. You must make sure that the number of devices to which the license key was deployed does not exceed the license limit. If the number of devices exceeds the license limit, all devices that were not covered by the license will be assigned *Critical* status.

Before deployment, the key file or activation code must be added to the Administration Server repository.

How-to instructions:

- Adding a license key to the Administration Server repository
- Automatic distribution of a license key

Note that an automatically distributed license key may not be displayed in the virtual Administration Server repository in the following cases:

- The license key is not valid for the application.
- The virtual Administration Server does not have managed devices.
- The license key has already been used for devices managed by another virtual Administration Server and the limit on the number of devices has been reached.

Adding a key file or activation code to the installation package of a managed application

For security reasons, this option is not recommended. A key file or activation code added to an installation package may be compromised.

If you install a managed application using an installation package, you can specify an activation code or key file in this installation package or in the policy of the application. The license key will be deployed to managed devices at the next synchronization of the device with the Administration Server.

How-to instructions: Adding a license key to an installation package

Deployment through the Add license key task for a managed application

If you opt for using the Add license key task for a managed application, you can select the license key that must be deployed to devices and select the devices in any convenient way—for example, by selecting an administration group or a device selection.

Before deployment, the key file or activation code must be added to the Administration Server repository.

How-to instructions:

- Adding a license key to the Administration Server repository
- Deploying a license key to client devices

Adding an activation code or a key file manually to the devices

You can activate the installed Kaspersky application locally, by using the tools provided in the application interface. Please refer to the documentation of the installed application.

Adding a license key to the Administration Server repository

To add a license key to the Administration Server repository:

1. In the main menu, go to **OPERATIONS** → **KASPERSKY LICENSES**.
2. Click the **Add** button.
3. Choose what you want to add:
   - **Add key file**
     Click the **Select key file** button and browse to the .key file that you want to add.
   - **Enter activation code**
     Specify the activation code in the text field and click the **Send** button.
4. Click the **Close** button.

The license key or several license keys are added to the Administration Server repository.

Deploying a license key to client devices

Kaspersky Security Center 14 Web Console enables you to distribute a license key to client devices automatically or through the add key task.

Before deployment, add the license key to the Administration Server repository.

To distribute a license key to client devices through the add key task:

1. In the main menu, go to **DEVICES** → **TASKS**.
2. Click **Add**.
   The **Add Task Wizard** starts. Proceed through the wizard by using the **Next** button.
3. In the **Application** drop-down list, select the application for which you want to add a license key.
4. In the **Task type** list, select the **Add key** task.
5. In the **Task name** field, specify the name of the new task.
6. Select the devices to which the task will be assigned.
7. At the **Selecting a license key** step of the wizard, click the **Add key** link to add the license key.
8. On the key adding pane, add the license key by using one of the following options:

   You need to add the license key only if you did not add it to the Administration Server repository prior to creating the add key task.

   - Select the **Enter activation code** option to enter an activation code, and then do the following:
     a. Specify the activation code, and then click the **Send** button.
        Information about the license key appears in the key adding pane.

b. Click the **Close** button.

> If you want to distribute the license key to managed devices automatically, enable the **Automatically distribute license key to managed devices** option.

The key adding pane closes.

- Select the **Add key file** option to add a key file, and then do the following:

  a. Click the **Select key file** button.

  b. In the window that opens, select a key file, and then click the **Open** button.

  Information about the license key appears in the key adding pane.

  c. Click the **Close** button.

> If you want to distribute the license key to managed devices automatically, enable the **Automatically distribute license key to managed devices** option.

The key adding pane closes.

9. Select the license key in the table of keys.

10. At the **License information** step of the wizard, clear the default **Use as a reserve key** check box if you want to replace the current active license key.

    For example, this is needed when the organization changes, and another organization's key is required on the device; or if the key was reissued, and a new license expires earlier than the current license. To avoid errors, you have to clear the **Use as a reserve key** check box.

    If you want to find out more information about the issues that may occur when adding a license key to Kaspersky Security Center and the ways to resolve them, refer to the Kaspersky Security Center Knowledge Base.

11. At the **Finish task creation** step of the wizard, enable the **Open task details when creation is complete** option to modify the default task settings.

    If you do not enable this option, the task will be created with the default settings. You can modify the default settings later.

12. Click the **Finish** button.

    The wizard creates the task. If you enabled the **Open task details when creation is complete** option, the task properties window automatically opens. In this window, you can specify the general task settings and, if required, change the settings specified during task creation.

> You can also open the task properties window by clicking the name of the created task in the list of tasks.

    The task is created, configured, and displayed in the list of tasks.

13. To run the task, select it in the task list, and then click the **Start** button.

    You can also set a task start schedule on the **Schedule** tab of the task properties window.

    For a detailed description of scheduled start settings, refer to the general task settings.

After the task is completed, the license key is deployed to the selected devices.

Automatic distribution of a license key

Kaspersky Security Center Linux allows automatic distribution of license keys to managed devices if they are located in the license keys repository on the Administration Server.

To distribute a license key to managed devices automatically:

1. In the main menu, go to **OPERATIONS** → **LICENSING** → **KASPERSKY LICENSES**.
2. Click the name of the license key that you want to distribute to devices automatically.
3. In the license key properties window that opens, select the **Automatically distribute license key to managed devices** check box.
4. Click the **Save** button.

The license key is automatically distributed to all compatible devices.

License key distribution is performed by means of Network Agent. No license key distribution tasks are created for the application.

During automatic distribution of a license key, the licensing limit on the number of devices is taken into account. The licensing limit is set in the properties of the license key. If the licensing limit is reached, distribution of this license key on devices ceases automatically.

Note that an automatically distributed license key may not be displayed in the virtual Administration Server repository in the following cases:

- The license key is not valid for the application.
- The virtual Administration Server does not have managed devices.
- The license key has already been used for devices managed by another virtual Administration Server and the limit on the number of devices has been reached.

The virtual Administration Server automatically distributes license keys from its repository and from the repository of the Administration Server. We recommend that you:

- Use the *Add license key* task to select the license key that must be deployed to devices.
- Avoid disabling the **Allow automatic deployment of license keys from this virtual Administration Server to its devices** option in the virtual Administration Server settings. Otherwise, the virtual Administration Server will not distribute license keys to devices, including the license keys from the Administration Server repository.

If you select the **Automatically distribute license key to managed devices** check box in the license key properties window, a license key is distributed on your network immediately. If you do not select this option, you can use a task to distribute a license key later.

Automatic distribution of license keys configured on the primary Administration Server does not extend to devices managed by non-virtual secondary Administration Servers.

Viewing information about license keys in use

To view the list of the license keys added to the Administration Server repository:

In the main menu, go to **OPERATIONS** → **LICENSING** → **KASPERSKY LICENSES**.

The displayed list contains the key files and activation codes added to the Administration Server repository.

To view detailed information about a license key:

1. In the main menu, go to **OPERATIONS** → **LICENSING** → **KASPERSKY LICENSES**.
2. Click the name of the required license key.

In the license key properties window that opens, you can view:

- On the **General** tab—The main information about the license key
- On the **Devices** tab—The list of client devices where the license key was used for activation of the installed Kaspersky application

To view which license keys are deployed to a specific client device:

1. In the main menu, go to **DEVICES** → **MANAGED DEVICES**.
2. Click the name of the required device.
3. In the device properties window that opens, select the **Applications** tab.
4. Click the name of the application for which you want to view the information about the license key.
5. In the application properties window that opens, select the **General** tab, and then open the **License** section.

The main information about the active and reserve license keys is displayed.

To define the up-to-date settings of virtual Administration Server license keys, the Administration Server sends a request to Kaspersky activation servers at least once per day.

Deleting a license key from the repository

When you delete the active license key deployed to a managed device, the application will continue working on the managed device.

To delete a key file or activation code from the Administration Server repository:

1. Go to **OPERATIONS** → **LICENSING** → **KASPERSKY LICENSES**.
2. Select the key file or activation code that you want to delete from the repository.

3. Click the **Delete** button.

4. Confirm the operation by clicking the **OK** button.

The selected key file or activation code is deleted from the repository.

You can add a deleted license key again or add a new license key.

Revoking consent with an End User License Agreement

If you decide to stop protecting some of your client devices, you can revoke the End User License Agreement (EULA) for any managed Kaspersky application. You must uninstall the selected application before revoking its EULA.

To revoke a EULA for managed Kaspersky applications:

1. Open the Administration Server properties window and on the **General** tab select the **End User License Agreements** section.

   A list of EULAs—accepted upon creation of installation packages, at the seamless installation of updates, or upon deployment of Kaspersky Security for Mobile—is displayed.

2. In the list, select the EULA that you want to revoke.

   You can view the following properties of the EULA:

   - Date when the EULA was accepted
   - Name of the user who accepted the EULA

3. Click the acceptance date of any EULA to open its properties window that displays the following data:

   - Name of the user who accepted the EULA
   - Date when the EULA was accepted
   - Unique identifier (UID) of the EULA
   - Full text of the EULA
   - List of objects (installation packages, seamless updates, mobile apps) linked to the EULA, and their respective names and types

4. In the lower part of the EULA properties window, click the **Revoke License Agreement** button.

   If there exist any objects (installation packages and their respective tasks) that prevent the EULA from being revoked, the corresponding notification is displayed. You cannot proceed with revocation until you delete these objects.

   In the window that opens, you are informed that you must first uninstall the Kaspersky application corresponding to the EULA.

5. Click the button to confirm revocation.

The EULA is revoked. It is no longer displayed in the list of License Agreements in the **End User License Agreements** section. The EULA properties window closes; the application is no longer installed.

Renewing licenses for Kaspersky applications

You can renew a Kaspersky application license that has expired or is about to expire (in less than 30 days).

To renew an expired license or a license that is about to expire:

1. Do either of the following:

   - In the main menu, go to **OPERATIONS** → **LICENSING** → **KASPERSKY LICENSES**.
   - In the main menu, go to **MONITORING & REPORTING** → **DASHBOARD**, and then click the **View expiring licenses** link next to a notification.

   The **KASPERSKY LICENSES** window opens, where you can view and renew licenses.

2. Click the **Renew license** link next to the required license.

   By clicking a license renewal link, you agree to transfer to Kaspersky the following information about Kaspersky Security Center: its version, the localization you are using, the software license ID (that is, the ID of the license you are renewing), and whether you purchased the license via a partner company or not.

3. In the window of the license renewal service that opens follow the instructions to renew a license.

   The license is renewed.

In Kaspersky Security Center 14 Web Console, the notifications are displayed when a license is about to expire, according to the following schedule:

- 30 days before the expiration
- 7 days before the expiration
- 3 days before the expiration
- 24 hours before the expiration
- When a license has expired

Using Kaspersky Marketplace to choose Kaspersky business solutions

MARKETPLACE is a section in the main menu that enables you to view the entire range of Kaspersky business solutions, select the ones you need, and proceed to the purchase at the Kaspersky website. You can use filters to view only those solutions that fit your organization and the requirements for your information security system. When you select a solution, Kaspersky Security Center 14 Linux redirects you to the related webpage at the Kaspersky website to learn more about that solution. Each webpage enables you to proceed to the purchase or contains instructions on the purchase process.

In the **MARKETPLACE** section, you can filter Kaspersky solutions by using the following criteria:

- Number of devices (endpoints, servers, and other types of assets) that you want to protect:
  - 50–250
  - 250–1000
  - More than 1000
- Maturity level of your organization's information security team:
  - **Foundations**

    This level is typical for enterprises that only have an IT team. The maximum possible number of threats is blocked automatically.
  - **Optimum**

    This level is typical for enterprises that have a specific IT security function within the IT team. At this level, companies require solutions that enable them to counter commodity threats and threats that circumvent existing preventive mechanisms.
  - **Expert**

    This level is typical for enterprises with complex and distributed IT environments. The IT security team is mature or the company has an SOC (Security Operations Center) team. The required solutions enable the companies to counter complex threats and targeted attacks.
- Types of assets that you want to protect:
  - **Endpoints**: workstations of employees, physical and virtual machines, embedded systems
  - **Servers**: physical and virtual servers
  - **Cloud**: public, private, or hybrid cloud environments; cloud services
  - **Network**: local area network, IT infrastructure
  - **Service**: security-related services provided by Kaspersky

To find and purchase a Kaspersky business solution:

1. In the main menu, go to **MARKETPLACE**.

   By default, the section displays all available Kaspersky business solutions.
2. To view only those solutions that suit your organization, select the required values in the filters.
3. Click the solution that you want to purchase or you want to learn more about.

You will be redirected to the solution webpage. You can follow the on-screen instructions to proceed to the purchase.

Configuring network protection

This section contains information about manual configuration of policies and tasks, about user roles, about building an administration group structure and hierarchy of tasks.

Scenario: Configuring network protection

The Quick Start Wizard creates policies and tasks with the default settings. These settings may turn out to be sub-optimal or even disallowed by the organization. Therefore, we recommend that you fine-tune these policies and tasks and create other policies and tasks, if they are necessary for your network.

Prerequisites

Before you start, make sure that you have done the following:

- Installed Kaspersky Security Center Administration Server
- Installed Kaspersky Security Center 14 Web Console
- Completed the Kaspersky Security Center main installation scenario
- Completed the Quick Start Wizard or manually created the following policies and tasks in the **Managed devices** administration group:
  - Policy of Kaspersky Endpoint Security
  - Group task for updating Kaspersky Endpoint Security
  - Policy of Network Agent

Configuring network protection proceeds in stages:

1. **Setup and propagation of Kaspersky application policies and policy profiles**

   To configure and propagate settings for Kaspersky applications installed on the managed devices, you can use two different security management approaches—device-centric or user-centric. These two approaches can also be combined.

2. **Configuring tasks for remote management of Kaspersky applications**

   Check the tasks created with the Quick Start Wizard and fine-tune them, if necessary.

   How-to instructions: Setting up the group task for updating Kaspersky Endpoint Security.

   If necessary, create additional tasks to manage the Kaspersky applications installed on the client devices.

3. **Evaluating and limiting the event load on the database**

   Information about events that occur during the operation of managed applications is transferred from a client device and registered in the Administration Server database. To reduce the load on the Administration Server, evaluate and limit the maximum number of events that can be stored in the database.

   How-to instructions: Setting the maximum number of events.

Results

Upon completion of this scenario, your network will be protected by configuration of Kaspersky applications, tasks, and events received by the Administration Server:

- The Kaspersky applications are configured according to the policies and policy profiles.
- The applications are managed through a set of tasks.
- The maximum number of events that can be stored in the database is set.

When the network protection configuration is complete, you can proceed to configuring regular updates to Kaspersky databases and applications.

About device-centric and user-centric security management approaches

You can manage security settings from the standpoint of device features and from the standpoint of user roles. The first approach is called *device-centric security management* and the second is called *user-centric security management*. To apply different application settings to different devices you can use either or both types of management in combination.

Device-centric security management enables you to apply different security application settings to managed devices depending on device-specific features. For example, you can apply different settings to devices allocated in different administration groups.

User-centric security management enables you to apply different security application settings to different user roles. You can create several user roles, assign an appropriate user role to each user, and define different application settings to the devices owned by users with different roles. For example, you may want to apply different application settings to devices of accountants and human resources (HR) specialists. As a result, when user-centric security management is implemented, each department—accounts department and HR department—has its own settings configuration for Kaspersky applications. A settings configuration defines which application settings can be changed by users and which are forcibly set and locked by the administrator.

By using user-centric security management you can apply specific application settings to individual users. This may be required when an employee has a unique role in the company or when you want to monitor security incidents related to devices of a specific person. Depending on the role of this employee in the company, you can expand or limit the rights of this person to change application settings. For example, you might want to expand the rights of a system administrator who manages client devices in a local office.

You can also combine the device-centric and user-centric security management approaches. For example, you can configure a specific application policy for each administration group, and then create policy profiles for one or several user roles of your enterprise. In this case the policies and policy profiles are applied in the following order:

1. The policies created for device-centric security management are applied.
2. They are modified by the policy profiles according to the policy profile priorities.
3. The policies are modified by the policy profiles associated with user roles.

Policy setup and propagation: Device-centric approach

When you complete this scenario, the applications will be configured on all of the managed devices in accordance with the application policies and policy profiles that you define.

Prerequisites

Before you start, make sure that you have installed Kaspersky Security Center Administration Server and Kaspersky Security Center 14 Web Console. You might also want to consider user-centric security management as an alternative or additional option to the device-centric approach. Learn more about two management approaches.

Stages

The scenario of device-centric management of Kaspersky applications consists of the following steps:

1. **Configuring application policies**

   Configure settings for Kaspersky applications installed on the managed devices by creating a policy for each application. The set of policies will be propagated to the client devices.

   When you configure the protection of your network in Quick Start Wizard, Kaspersky Security Center creates the default policy for Kaspersky Endpoint Security for Linux. If you completed the configuration process by using this Wizard, you do not have to create a new policy for this application.

   If you have a hierarchical structure of several Administration Servers and/or administration groups, the secondary Administration Servers and child administration groups inherit the policies from the primary Administration Server by default. You can force the inheritance by the child groups and secondary Administration Servers to prohibit any modifications of the settings configured in the upstream policy. If you want only part of the settings to be forcibly inherited, you can lock them in the upstream policy. The rest unlocked settings will be available for modification in the downstream policies. The created hierarchy of policies will allow you to effectively manage devices in the administration groups.

   How-to instructions: Creating a policy

2. **Creating policy profiles (optional)**

   If you want devices within a single administration group to run under different policy settings, create policy profiles for those devices. A policy profile is a named subset of policy settings. This subset is distributed on target devices together with the policy, supplementing it under a specific condition called the *profile activation condition*. Profiles only contain settings that differ from the "basic" policy, which is active on the managed device.

   By using profile activation conditions, you can apply different policy profiles, for example, to the devices having a specific hardware configuration or marked with specific tags. Use tags to filter devices that meet specific criteria. For example, you can create a tag called *CentOS*, mark all devices running CentOS operating system with this tag, and then specify this tag as an activation condition for a policy profile. As a result, Kaspersky applications installed on all devices running CentOS will be managed by their own policy profile.

   How-to instructions:

   - Creating a policy profile
   - Creating a policy profile activation rule

3. **Propagating policies and policy profiles to the managed devices**

   By default, the Administration Server automatically synchronizes with managed devices every 15 minutes. During the synchronization, the new or changed policies and policy profiles are propagated to the managed devices. You can circumvent auto-synchronization and run the synchronization manually by using the Force synchronization command. When synchronization is complete, the policies and policy profiles are delivered and applied to the installed Kaspersky applications.

You can check whether the policies and policy profiles were delivered to a device. Kaspersky Security Center specifies the delivery date and time in the properties of the device.

How-to instructions: Forced synchronization

Results

When the device-centric scenario is complete, the Kaspersky applications are configured according to the settings specified and propagated through the hierarchy of policies.

The configured application policies and policy profiles will be applied automatically to the new devices added to the administration groups.

Policy setup and propagation: User-centric approach

This section describes the scenario of user-centric approach to the centralized configuration of Kaspersky applications installed on the managed devices. When you complete this scenario, the applications will be configured on all of the managed devices in accordance with the application policies and policy profiles that you define.

Prerequisites

Before you start, make sure that you have successfully installed Kaspersky Security Center Administration Server and Kaspersky Security Center 14 Web Console, and completed the main deployment scenario. You might also want to consider device-centric security management as an alternative or additional option to the user-centric approach. Learn more about two management approaches.

Process

The scenario of user-centric management of Kaspersky applications consists of the following steps:

1. **Configuring application policies**

   Configure settings for Kaspersky applications installed on the managed devices by creating a policy for each application. The set of policies will be propagated to the client devices.

   When you configure the protection of your network in Quick Start Wizard, Kaspersky Security Center creates the default policy for Kaspersky Endpoint Security. If you completed the configuration process by using this Wizard, you do not have to create a new policy for this application.

   If you have a hierarchical structure of several Administration Servers and/or administration groups, the secondary Administration Servers and child administration groups inherit the policies from the primary Administration Server by default. You can force the inheritance by the child groups and secondary Administration Servers to prohibit any modifications of the settings configured in the upstream policy. If you want only part of the settings to be forcibly inherited, you can lock them in the upstream policy. The rest unlocked settings will be available for modification in the downstream policies. The created hierarchy of policies will allow you to effectively manage devices in the administration groups.

   How-to instructions: Creating a policy

2. **Specifying owners of the devices**

   Assign the managed devices to the corresponding users.

   How-to instructions: Assigning a user as a device owner

3. **Defining user roles typical for your enterprise**

   Think about different kinds of work that the employees of your enterprise typically perform. You must divide all employees in accordance with their roles. For example, you can divide them by departments, professions, or positions. After that you will need to create a user role for each group. Keep in mind that each user role will have its own policy profile containing application settings specific for this role.

4. **Creating user roles**

   Create and configure a user role for each group of employees that you defined on the previous step or use the predefined user roles. The user roles will contain set of rights of access to the application features.

   How-to instructions: Creating a user role

5. **Defining the scope of each user role**

   For each of the created user roles, define users and/or security groups and administration groups. Settings associated with a user role apply only to devices that belong to users who have this role, and only if these devices belong to groups associated with this role, including child groups.

   How-to instructions: Editing the scope of a user role

6. **Creating policy profiles**

   Create a policy profile for each user role in your enterprise. The policy profiles define which settings will be applied to the applications installed on users' devices depending on the role of each user.

   How-to instructions: Creating a policy profile

7. **Associating policy profiles with the user roles**

   Associate the created policy profiles with the user roles. After that: the policy profile becomes active for a user that has the specified role. The settings configured in the policy profile will be applied to the Kaspersky applications installed on the user's devices.

   How-to instructions: Associating policy profiles with roles

8. **Propagating policies and policy profiles to the managed devices**

   By default, Kaspersky Security Center automatically synchronizes the Administration Server with the managed devices every 15 minutes. During the synchronization, the new or changed policies and policy profiles are propagated to the managed devices. You can circumvent auto-synchronization and run the synchronization manually by using the Force synchronization command. When synchronization is complete, the policies and policy profiles are delivered and applied to the installed Kaspersky applications.

   You can check whether the policies and policy profiles were delivered to a device. Kaspersky Security Center specifies the delivery date and time in the properties of the device.

   How-to instructions: Forced synchronization

Results

When the user-centric scenario is complete, the Kaspersky applications are configured according to the settings specified and propagated through the hierarchy of policies and policy profiles.

For a new user, you will have to create a new account, assign the user one of the created user roles, and assign the devices to the user. The configured application policies and policy profiles will be automatically applied to the devices of this user.

Manual setup of the group update task for Kaspersky Endpoint Security

The optimal and recommended schedule option for Kaspersky Endpoint Security is **When new updates are downloaded to the repository** when the **Use automatically randomized delay for task starts** check box is selected.

Network Agent policy settings

To configure the Network Agent policy:

1. In the main menu, go to **DEVICES** → **POLICIES & PROFILES**.
2. Click the name of the Network Agent policy.

   The properties window of the Network Agent policy opens.

General

On this tab, you can modify the policy status and specify the inheritance of policy settings:

- In the **Policy status** block, you can select one of the policy modes:
  - **Active policy**

    If this option is selected, the policy becomes active.

    By default, this option is selected.
  - **Inactive policy**

    If this option is selected, the policy becomes inactive, but it is still stored in the **Policies** folder. If required, the policy can be activated.
- In the **Settings inheritance** settings group, you can configure the policy inheritance:
  - **Inherit settings from parent policy**

    If this option is enabled, the policy setting values are inherited from the upper-level group policy and, therefore, are locked.

    By default, this option is enabled.
  - **Force inheritance of settings in child policies**

If this option is enabled, after policy changes are applied, the following actions will be performed:

- The values of the policy settings will be propagated to the policies of administration subgroups, that is, to the child policies.
- In the **Settings inheritance** block of the **General** section in the properties window of each child policy, the **Inherit settings from parent policy** option will be automatically enabled.

If this option is enabled, the child policies settings are locked.

By default, this option is disabled.

Event configuration

On this tab, you can configure event logging and event notification. Events are distributed according to importance level in the following sections on the **Event configuration** tab:

- **Functional failure**
- **Warning**
- **Info**

In each section, the list shows the types of events and the default event storage term on the Administration Server (in days). After you click the event type, you can specify the settings of event logging and notifications about events selected in the list. By default, common notification settings specified for the entire Administration Server are used for all event types. However, you can change specific settings for the required event types.

For example, in the **Warning** section, you can configure the **Incident has occurred** event type. Such events may happen, for instance, when the free disk space of a distribution point is less than 2 GB (at least 4 GB are required to install applications and download updates remotely). To configure the **Incident has occurred** event, click it and specify where to store the occurred events and how to notify about them.

If Network Agent detected an incident, you can manage this incident by using the settings of a managed device.

Application settings

Settings

In the **Settings** section, you can configure the Network Agent policy:

- **Maximum size of event queue, in MB**

  In this field you can specify the maximum space on the drive that an event queue can occupy.

  The default value is 2 megabytes (MB).

- **Application is allowed to retrieve policy's extended data on device**

Network Agent installed on a managed device transfers information about the applied security application policy to the security application (for example, Kaspersky Endpoint Security for Linux). You can view the transferred information in the security application interface.

Network Agent transfers the following information:

- Time of the policy delivery to the managed device
- Name of the active or out-of-office policy at the moment of the policy delivery to the managed device
- Name and full path to the administration group that contained the managed device at the moment of the policy delivery to the managed device
- List of active policy profiles

  You can use the information to ensure the correct policy is applied to the device and for troubleshooting purposes. By default, this option is disabled.

Repositories

In the **Repositories** section, you can select the types of objects whose details will be sent from Network Agent to Administration Server. If modification of some settings in this section is prohibited by the Network Agent policy, you cannot modify these settings.

- **Details of installed applications**

  If this option is enabled, information about applications installed on client devices is sent to the Administration Server.

  By default, this option is enabled.

- **Hardware registry details**

  Network Agent installed on a device sends information about the device hardware to the Administration Server. You can view the hardware details in the device properties.

  Ensure that the lshw utility is installed on Linux devices from which you want to fetch hardware details. Hardware details fetched from virtual machines may be incomplete depending on the hypervisor used.

Network

The **Network** section includes three subsections:

- **Connectivity**
- **Connection profiles**
- **Connection schedule**

In the **Connectivity** subsection, you can configure the connection to Administration Server, enable the use of a UDP port, and specify the UDP port number.

- In the **Connect to Administration Server** settings group, you can configure connection to the Administration Server and specify the time interval for synchronization between client devices and the Administration Server:

  - Synchronization interval (min)

    Network Agent synchronizes the managed device with the Administration Server. We recommend that you set the synchronization interval (also referred to as the heartbeat) to 15 minutes per 10,000 managed devices.

    If the synchronization interval is set to less than 15 minutes, synchronization is performed every 15 minutes. If synchronization interval is set to 15 minutes or more, synchronization is performed at the specified synchronization interval.

  - Compress network traffic

    If this option is enabled, the speed of data transfer by Network Agent is increased by means of a decrease in the amount of information being transferred and a consequent decreased load on the Administration Server.

    The workload on the CPU of the client computer may increase.

    By default, this check box is enabled.

  - Use SSL connection

    If this option is enabled, connection to the Administration Server is established through a secure port via SSL.

    By default, this option is enabled.

  - Use connection gateway on distribution point (if available) under default connection settings

    If this option is enabled, the connection gateway on the distribution point is used under the settings specified in the administration group properties.

    By default, this option is enabled.

- Use UDP port

  If you need Network Agent to connect to Administration Server through a UDP port, enable the **Use UDP port** option and specify a **UDP port number**. By default, this option is enabled. The default UDP port to connect to Administration Server is 15000.

- UDP port number

  In this field you can enter the UDP port number. The default port number is 15000.

  The decimal system is used for records.

In the **Connection profiles** subsection of the **Network** section, you can specify the network location settings and enable out-of-office mode when Administration Server is not available.

- Network location settings

  Network location settings define the characteristics of the network to which the client device is connected and specify rules for Network Agent switching from one Administration Server connection profile to another when those network characteristics are altered.

- Administration Server connection profiles

  Connection profiles are supported only for devices running Windows. We do not recommend to use this option.

  You can view and add profiles for Network Agent connection to the Administration Server. In this section, you can also create rules for switching Network Agent to different Administration Servers when the following events occur:

  - When the client device connects to a different local network
  - When the device loses connection with the local network of the organization
  - When the connection gateway address is changed or the DNS server address is modified

  In the **Connection profiles** settings group, no new items can be added to the **Administration Server connection profiles** list, so the **Add** button is inactive. The preset connection profiles cannot be modified, either.

- Enable out-of-office mode when Administration Server is not available

  If this option is enabled, in case of connection through this profile, applications installed on the client device use policy profiles for devices in out-of-office mode, as well as out-of-office policies. If no out-of-office policy has been defined for the application, the active policy will be used.

  If this option is disabled, applications will use active policies.

  By default, this option is disabled.

In the **Connection schedule** subsection, you can specify the time intervals during which Network Agent sends data to the Administration Server:

- Connect when necessary

  If this option is selected, the connection is established when Network Agent has to send data to the Administration Server.

  By default, this option is selected.

- Connect at specified time intervals

  If this option is selected, Network Agent connects to the Administration Server at a specified time. You can add several connection time periods.

Network polling by distribution points

In the **Network polling by distribution points** section, you can configure automatic polling of the network. You can use the following options to enable the polling and set its frequency:

- **Zeroconf**

  If this option is enabled, the distribution point automatically polls the network with IPv6 devices by using zero-configuration networking (also referred to as *Zeroconf*). In this case, the enabled IP range polling is ignored, because the distribution point polls the whole network.

  To start to use Zeroconf, the following conditions must be fulfilled:

  - The distribution point must run Linux.
  - You must install the avahi-browse utility on the distribution point.

  If this option is disabled, the distribution point does not poll networks with IPv6 devices.

  By default, this option is disabled.

- **IP ranges**

  If the option is enabled, the distribution point automatically polls IP ranges according to the schedule that you configured by clicking the **Set polling schedule** button.

  If this option is disabled, the distribution point does not poll IP ranges.

  The frequency of IP range polling for Network Agent versions prior to 10.2 can be configured in the **Poll interval (min)** field. The field is available if the option is enabled.

  By default, this option is disabled.

Network settings for distribution points

In the **Network settings for distribution points** section, you can specify the internet access settings:

- **Use proxy server**
- **Address**
- **Port number**
- **Bypass proxy server for local addresses**

  If this option is enabled, no proxy server is used to connect to devices on the local network.

  By default, this option is disabled.

- **Proxy server authentication**

  If this check box is selected, in the entry fields you can specify the credentials for proxy server authentication.

  By default, this check box is cleared.

- **User name**

- **Password**

Updates (distribution points)

In the **Updates (distribution points)** section, you can enable the downloading diff files feature, so distribution points take updates in the form of diff files from Kaspersky update servers.

Revision history

On this tab, you can view the list of the policy revisions and roll back changes made to the policy, if necessary.

Tasks

This section describes tasks used by Kaspersky Security Center.

About tasks

Kaspersky Security Center manages Kaspersky security applications installed on devices by creating and running *tasks*. Tasks are required for installing, launching, and stopping applications, scanning files, updating databases and software modules, and performing other actions on applications.

Tasks for a specific application can be created using Kaspersky Security Center 14 Web Console only if the management plug-in for that application is installed on Kaspersky Security Center 14 Web Console Server.

Tasks can be performed on the Administration Server and on devices.

The tasks that are performed on the Administration Server include the following:

- Automatic distribution of reports
- Downloading of updates to the repository
- Backup of Administration Server data
- Maintenance of the database

The following types of tasks are performed on devices:

- *Local tasks*—Tasks that are performed on a specific device

  Local tasks can be modified either by the administrator, using Kaspersky Security Center 14 Web Console, or by the user of a remote device (for example, through the security application interface). If a local task has been modified simultaneously by the administrator and the user of a managed device, the changes made by the administrator will take effect because they have a higher priority.

- *Group tasks*—Tasks that are performed on all devices of a specific group

Unless otherwise specified in the task properties, a group task also affects all subgroups of the selected group. A group task also affects (optionally) devices that have been connected to secondary and virtual Administration Servers deployed in the group or any of its subgroups.

- *Global tasks*—Tasks that are performed on a set of devices, regardless of whether they are included in any group.

For each application, you can create any number of group tasks, global tasks, or local tasks.

You can make changes to the settings of tasks, view the progress of tasks, and copy, export, import, and delete tasks.

A task is started on a device only if the application for which the task was created is running.

Execution results of tasks are saved in the operating system event log on each device, in the operating system event log on the Administration Server, and in the Administration Server database.

Do not include private data in task settings. For example, avoid specifying the domain administrator password.

About task scope

The *scope of a task* is the set of devices on which the task is performed. The types of scope are as follows:

- For a *local task*, the scope is the device itself.
- For an *Administration Server task*, the scope is the Administration Server.
- For a *group task*, the scope is the list of devices included in the group.

When creating a *global task*, you can use the following methods to specify its scope:

- Specifying certain devices manually.

  You can use an IP address (or IP range) or DNS name as the device address.

- Importing a list of devices from a .txt file with the device addresses to be added (each address must be placed on an individual line).

  If you import a list of devices from a file or create a list manually, and if devices are identified by their names, the list can only contain devices for which information has already been entered into the Administration Server database. Moreover, the information must have been entered when those devices were connected or during device discovery.

- Specifying a device selection.

  Over time, the scope of a task changes as the set of devices included in the selection change. A selection of devices can be made on the basis of device attributes, including software installed on a device, and on the basis of tags assigned to devices. Device selection is the most flexible way to specify the scope of a task.

  Tasks for device selections are always run on a schedule by the Administration Server. These tasks cannot be run on devices that lack connection to the Administration Server. Tasks whose scope is specified by using other methods are run directly on devices and therefore do not depend on the device connection to the Administration Server.

Tasks for device selections are not run on the local time of a device; instead, they are run on the local time of the Administration Server. Tasks whose scope is specified by using other methods are run on the local time of a device.

Creating a task

To create a task:

1. In the main menu, go to **DEVICES** → **TASKS**.
2. Click **Add**.

   The New task wizard starts. Follow its instructions.
3. If you want to modify the default task settings, enable the **Open task details when creation is complete** option on the **Finish task creation** page. If you do not enable this option, the task is created with the default settings. You can modify the default settings later, at any time.
4. Click the **Finish** button.

The task is created and displayed in the list of tasks.

To create a new task assigned to the selected devices:

1. In the main menu, go to **DEVICES** → **MANAGED DEVICES**.

   The list of managed devices is displayed.
2. In the list of managed devices, select check boxes next to the devices to run the task for them. You can use the search and filter functions to find the devices you're looking for.
3. Click the **Run Task** button, and then select **Add a new task**.

   The New task wizard starts.

   On the first step of the wizard, you can remove the devices selected to include in the task scope. Follow the wizard instructions.
4. Click the **Finish** button.

The task is created for the selected devices.

Starting a task manually

The application starts tasks according to the schedule settings specified in the properties of each task. You can start a task manually at any time from the task list. Alternatively, you can select devices in the **MANAGED DEVICES** list, and then start an existing task for them.

To start a task manually:

1. In the main menu, go to **DEVICES** → **TASKS**.
2. In the task list, select the check box next to the task that you want to start.

3. Click the **Start** button.

The task starts. You can check the task status in the **Status** column or by clicking the **Result** button.

Viewing the task list

You can view the list of tasks that are created in Kaspersky Security Center Linux.

To view the list of tasks,

Go to **DEVICES** → **TASKS**.

The list of tasks is displayed. The tasks are grouped by the names of applications to which they are related. For example, the *Install application remotely* task is related to the Administration Server, and the *Update* task refers to Kaspersky Endpoint Security for Linux.

To view properties of a task,

Click the name of the task.

The task properties window is displayed with several named tabs. For example, the **Task type** is displayed on the **General** tab, and the task schedule—on the **Schedule** tab.

General task settings

This section contains the settings that you can view and configure for most of your tasks. The list of settings available depends on the task you are configuring.

Settings specified during task creation

You can specify the following settings when creating a task. Some of these settings can also be modified in the properties of the created task.

- Operating system restart settings:
  - **Do not restart the device**

    Client devices are not restarted automatically after the operation. To complete the operation, you must restart a device (for example, manually or through a device management task). Information about the required restart is saved in the task results and in the device status. This option is suitable for tasks on servers and other devices where continuous operation is critical.

  - **Restart the device**

    Client devices are always restarted automatically if a restart is required for completion of the operation. This option is useful for tasks on devices that provide for regular pauses in their operation (shutdown or restart).

- Force closure of applications in blocked sessions

  Running applications may prevent a restart of the client device. For example, if a document is being edited in a word processing application and is not saved, the application does not allow the device to restart.

  If this option is enabled, such applications on a locked device are forced to close before the device restart. As a result, users may lose their unsaved changes.

  If this option is disabled, a locked device is not restarted. The task status on this device states that a device restart is required. Users have to manually close all applications running on locked devices and restart these devices.

  By default, this option is disabled.

- Task scheduling settings:

  - **Scheduled start setting:**

    - Every N hours

      The task runs regularly, with the specified interval in hours, starting from the specified date and time.

      By default, the task runs every 6 hours, starting from the current system date and time.

    - Every N days

      The task runs regularly, with the specified interval in days. Additionally, you can specify a date and time of the first task run. These additional options become available, if they are supported by the application for which you create the task.

      By default, the task runs every day, starting from the current system date and time.

    - Every N weeks

      The task runs regularly, with the specified interval in weeks, on the specified day of week and at the specified time.

      By default, the task runs every Friday at the current system time.

    - Every N minutes

      The task runs regularly, with the specified interval in minutes, starting from the specified time on the day that the task is created.

      By default, the task runs every 30 minutes, starting from the current system time.

    - Daily (daylight saving time is not supported)

      The task runs regularly, with the specified interval in days. This schedule does not support observance of daylight saving time (DST). It means that when clocks jump one hour forward or backward at the beginning or ending of DST, the actual task start time does not change.

      We do not recommend that you use this schedule. It is needed for backward compatibility of Kaspersky Security Center Linux.

      By default, the task starts every day at the current system time.

- **Weekly**

  The task runs every week on the specified day and at the specified time.

- **By days of week**

  The task runs regularly, on the specified days of the week, at the specified time.

  By default, the task runs every Friday at 6:00:00 PM.

- **Monthly**

  The task runs regularly, on the specified day of the month, at the specified time.

  In months that lack the specified day, the task runs on the last day.

  By default, the task runs on the first day of each month, at the current system time.

- **Manually**

  The task does not run automatically. You can only start it manually.

  By default, this option is selected.

- **Every month on specified days of selected weeks**

  The task runs regularly, on the specified days of each month, at the specified time.

  By default, no days of month are selected. The default start time is 18:00.

- **When new updates are downloaded to the repository**

  The task runs after updates are downloaded to the repository. For example, you may want to use this schedule for the *Update* task.

- **On completing another task**

  The current task starts after another task completes. You can select how the previous task must complete (successfully or with error) to trigger the start of the current task. This parameter only works if both tasks are assigned to the same devices.

- **Run missed tasks**

This option determines the behavior of a task if a client device is not visible on the network when the task is about to start.

If this option is enabled, the system attempts to start the task the next time the Kaspersky application is run on the client device. If the task schedule is **Manually**, **Once** or **Immediately**, the task is started immediately after the device becomes visible on the network or immediately after the device is included in the task scope.

If this option is disabled, only scheduled tasks run on client devices. For **Manually**, **Once** and **Immediately** schedule, tasks run only on those client devices that are visible on the network. For example, you may want to disable this option for a resource-consuming task that you want to run only outside of business hours.

By default, this option is disabled.

- Use automatically randomized delay for task starts

  If this option is enabled, the task is started on client devices randomly within a specified time interval, that is, *distributed task start*. A distributed task start helps to avoid a large number of simultaneous requests by client devices to the Administration Server when a scheduled task is running.

  The distributed start time is calculated automatically when a task is created, depending on the number of client devices to which the task is assigned. Later, the task is always started on the calculated start time. However, when task settings are edited or the task is started manually, the calculated value of the task start time changes.

  If this option is disabled, the task starts on client devices according to the schedule.

- Use randomized delay for task starts within an interval of (min)

  If this option is enabled, the task is started on client devices randomly within the specified time interval. A distributed task start helps to avoid a large number of simultaneous requests by client devices to the Administration Server when a scheduled task is running.

  If this option is disabled, the task starts on client devices according to the schedule.

  By default, this option is disabled. The default time interval is one minute.

- Devices to which the task will be assigned:

  - Select networked devices detected by Administration Server

    The task is assigned to specific devices. The specific devices can include devices in administration groups as well as unassigned devices.

    For example, you may want to use this option in a task of installing Network Agent on unassigned devices.

  - Specify device addresses manually or import addresses from list

    You can specify DNS names, IP addresses, and IP subnets of devices to which you want to assign the task.

    You may want to use this option to execute a task for a specific subnet. For example, you may want to install a certain application on devices of accountants or to scan devices in a subnet that is probably infected.

  - Assign task to a device selection

The task is assigned to devices included in a device selection. You can specify one of the existing selections.

For example, you may want to use this option to run a task on devices with a specific operating system version.

- Assign task to an administration group

  The task is assigned to devices included in an administration group. You can specify one of the existing groups or create a new one.

  For example, you may want to use this option to run a task of sending a message to users if the message is specific for devices included in a specific administration group.

  If a task is assigned to an administration group, the **Security** tab is not displayed in the task properties window because group tasks are subject to the security settings of the groups to which they apply.

- Account settings:

  - Default account

    The task will be run under the same account as the application that performs this task.

    By default, this option is selected.

  - Specify an account

    Fill in the **Account** and **Password** fields to specify the details of an account under which the task is run. The account must have sufficient rights for this task.

  - Account

    Account under which the task is run.

  - Password

    Password of the account under which the task will be run.

Settings specified after task creation

You can specify the following settings only after a task is created.

- Group task settings:

  - Distribute to subgroups

This option is only available in the settings of the group tasks.

When this option is enabled, the task scope includes:

- The administration group that you selected while creating the task.
- The administration groups subordinate to the selected administration group at any level down by the group hierarchy.

When this option is disabled, the task scope includes only the administration group that you selected while creating the task.

By default, this option is enabled.

- **Distribute to secondary and virtual Administration Servers**

  When this option is enabled, the task that is effective on the primary Administration Server is also applied on the secondary Administration Servers (including virtual ones). If a task of the same type already exists on the secondary Administration Server, both tasks are applied on the secondary Administration Server—the existing one and the one that is inherited from the primary Administration Server.

  This option is only available when the **Distribute to subgroups** option is enabled.

  By default, this option is disabled.

- Advanced scheduling settings:

  - **Activate the device before the task is started through Wake-on-LAN (min)**

    The operating system on the device starts at the specified time before the task is started. The default time period is five minutes.

    Enable this option if you want the task to run on all of the client devices from the task scope, including those devices that are turned off when the task is about to start.

    If you want the device to be automatically turned off after the task is completed, enable the **Shut down the devices after completing the task** option. This option can be found in the same window.

    By default, this option is disabled.

  - **Turn off device after task completion**

    For example, you may want to enable this option for an install update task that installs updates to client devices each Friday after business hours, and then turns off these devices for the weekend.

    By default, this option is disabled.

  - **Stop task if it has been running longer than (min)**

    After the specified time period expires, the task is stopped automatically, whether it is completed or not.

    Enable this option if you want to interrupt (or stop) tasks that take too long to execute.

    By default, this option is disabled. The default task execution time is 120 minutes.

- Notification settings:
  - **Store task history** block:
    - Store in the Administration Server database for (days)

      Application events related to execution of the task on all client devices from the task scope are stored on the Administration Server during the specified number of days. When this period elapses, the information is deleted from the Administration Server.

      By default, this option is enabled.

    - Store in the OS event log on device

      Application events related to execution of the task are stored locally in the Syslog Event Log of each client device.

      By default, this option is disabled.

    - Store in the OS event log on Administration Server

      Application events related to execution of the task on all client devices from the task scope are stored centrally in the Syslog Event Log of the Administration Server operating system (OS).

      By default, this option is disabled.

    - Save all events

      If this option is selected, all events related to the task are saved to the event logs.

    - Save events related to task progress

      If this option is selected, only events related to the task execution are saved to the event logs.

    - Save only task execution results

      If this option is selected, only events related to the task results are saved to the event logs.

  - Notify administrator of task execution results

    You can select the methods by which administrators receive notifications about task execution results: by email, by SMS, and by running an executable file. To configure notification, click the **Settings** link.

    By default, all notification methods are disabled.

  - Notify of errors only

If this option is enabled, administrators are only notified when a task execution completes with an error.

If this option is disabled, administrators are notified after every task execution completion.

By default, this option is enabled.

- Security settings.
- Task scope settings.

  Depending on how the task scope is determined, the following settings are present:

  - Devices

    If the scope of a task is determined by an administration group, you can view this group. No changes are available here. However, you can set **Exclusions from task scope**.

    If the scope of a task is determined by a list of devices, you can modify this list by adding and removing devices.

  - Device selection

    You can change the device selection to which the task is applied.

  - Exclusions from task scope

    You can specify groups of devices to which the task is not applied. Groups to be excluded can only be subgroups of the administration group to which the task is applied.

- **Revision history**.

Starting the Change Tasks Password Wizard

For a non-local task, you can specify an account under which the task must be run. You can specify the account during task creation or in the properties of an existing task. If the specified account is used in accordance with security instructions of the organization, these instructions might require changing the account password from time to time. When the account password expires and you set a new one, the tasks will not start until you specify the new valid password in the task properties.

The Change Tasks Password Wizard enables you to automatically replace the old password with the new one in all tasks in which the account is specified. Alternatively, you can change this password manually in the properties of each task.

To start the Change Tasks Password Wizard:

1. On the **DEVICES** tab, select **TASKS**.
2. Click **Manage credentials of accounts for starting tasks**.

Follow the instructions of the Wizard.

Step 1. Specifying credentials

Specify new credentials that are currently valid in your system. When you switch to the next step of the Wizard, Kaspersky Security Center checks if the specified account name matches the account name in the properties of each non-local task. If the account names match, the password in the task properties will be automatically replaced with the new one.

To specify the new account, select an option:

- **Use current account**

  The Wizard uses the name of the account under which you are currently signed in to Kaspersky Security Center 14 Web Console. Then manually specify the account password in the **Current password to use in tasks** field.

- **Specify a different account**

  Specify the name of the account under which the tasks must be started. Then specify the account password in the **Current password to use in tasks** field.

If you fill in the **Previous password (optional; if you want to replace it with the current one)** field, Kaspersky Security Center replaces the password only for those tasks in which both the account name and the old password are found. The replacement is performed automatically. In all other cases you have to choose an action to take in the next step of the Wizard.

Step 2. Selecting an action to take

If you did not specify the previous password in the first step of the Wizard or if the specified old password has not matched the passwords in the task properties, you must choose an action to take for the tasks found.

To choose an action for a task:

1. Select the check box next to the task for which you want to choose an action.
2. Perform one of the following:
   - To remove the password in the task properties, click **Delete credentials**.

     The task is switched to run under the default account.
   - To replace the password with a new one, click **Enforce the password change even if the old password is wrong or not provided**.
   - To cancel the password change, click **No action is selected**.

The chosen actions are applied after you move to the next step of the Wizard.

Step 3. Viewing the results

On the last step of the Wizard, view the results for each of the found tasks. To complete the Wizard, click the **Finish** button.

Viewing task run results stored on the Administration Server

Kaspersky Security Center Linux allows you to view the results for group tasks, tasks for specific devices, and Administration Server tasks. No run results can be viewed for local tasks.

To view the task results:

1. In the task properties window, select the **General** section.
2. Click the **Results** link to open the **Task results** window.

Managing client devices

Kaspersky Security Center Linux allows you to manage client devices:

- View settings and statuses of managed devices, including clusters and server arrays.
- Configure distribution points.
- Manage tasks.

You can use administration groups to combine client devices in a set that can be managed as a single unit. A client device can be included in only one administration group. Devices can be allocated to a group automatically based on **Rule conditions**:

- Creating device moving rules.
- Copying device moving rules.
- Conditions for a device moving rule.

You can use device selections to filter devices based on a condition. You can also tag devices for creating selections, for finding devices, and for distributing devices among administration groups.

Settings of a managed device

To view the settings of a managed device:

1. Select **DEVICES** → **MANAGED DEVICES**.

   The list of managed devices is displayed.

2. In the list of managed devices, click the link with the name of the required device.

   The properties window of the selected device is displayed.

The following tabs are displayed in the upper part of the properties window representing the main groups of the settings:

- General

This tab comprises the following sections:

- The **General** section displays general information about the client device. Information is provided on the basis of data received during the last synchronization of the client device with the Administration Server:

  - Name

    In this field, you can view and modify the client device name in the administration group.

  - Description

    In this field, you can enter an additional description for the client device.

  - Full group name

    Administration group, which includes the client device.

  - Protection last updated

    Date the anti-virus databases or applications were last updated on the device.

  - Last visible

    Date and time the device was last visible on the network.

  - Connected to Administration Server

    Date and time Network Agent installed on the client device last connected to the Administration Server.

  - Do not disconnect from the Administration Server

    If this option is enabled, continuous connectivity between the managed device and the Administration Server is maintained. You may want to use this option if you are not using push servers, which provide such connectivity.

    If this option is disabled and push servers are not in use, the managed device only connects to the Administration Server to synchronize data or to transmit information.

    The maximum total number of devices with the **Do not disconnect from the Administration Server** option selected is 300.

    This option is disabled by default on managed devices. This option is enabled by default on the device where the Administration Server is installed and stays enabled even if you try to disable it.

- The **Network** section displays the following information about the network properties of the client device:

  - IP address

Device IP address.

- Windows domain

  Workgroup that contains the device.

- DNS name

  Name of the DNS domain of the client device.

- NetBIOS name

  Name of the client device.

- The **System** section provides information about the operating system installed on the client device.
- The **Protection** section provides the following information about the current status of anti-virus protection on the client device:

  - Device status

    Status of the client device assigned on the basis of the criteria defined by the administrator for the status of anti-virus protection on the device and the activity of the device on the network.

  - All problems

    This table contains a complete list of problems detected by the managed applications installed on the client device. Each problem is accompanied by a status, which the application suggests you assign to the device for this problem.

  - Real-time protection

    This field shows the current status of real-time protection on the client device.

    When the status changes on the device, the new status is displayed in the device properties window only after the client device is synchronized with the Administration Server.

  - Last on-demand scan

    Date and time the last malware scan was performed on the client device.

  - Total number of threats detected

    Total number of threats detected on the client device since installation of the security application (first scan), or since the last reset of the threat counter.

  - Active threats

Number of unprocessed files on the client device.

This field ignores the number of unprocessed files on mobile devices.

- The **Device status defined by application** section provides information about the device status that is defined by the managed application installed on the device. This device status can differ from the one defined by Kaspersky Security Center Linux.

- Applications

  This tab lists all Kaspersky applications installed on the client device.This tab contains the **Start** and **Stop** buttons that allow you to start and stop the selected Kaspersky application (excluding Network Agent). You can use these buttons if port 15000 UDP is available on the managed device for receipt push-notifications from Administration Server. If the managed device is unavailable for push-notifications, but the mode of continuous connection to Administration Server is enabled (the **Do not disconnect from the Administration Server** option in the **General** section is enabled), the **Start** and **Stop** buttons are available too. Otherwise, when you try to start or stop the application, an error message is displayed. Also you can click the application name to view general information about the application, a list of events that have occurred on the device, and the application settings.

- Active policies and policy profiles

  This tab lists the policies and policy profiles that are currently assigned to the managed device.

- Tasks

  On the **Tasks** tab, you can manage client device tasks: view the list of existing tasks, create new ones, remove, start and stop tasks, modify their settings, and view execution results. The list of tasks is provided based on data received during the last session of client synchronization with the Administration Server. The Administration Server requests the task status details from the client device. If port 15000 UDP is available on the managed device for receipt push-notifications from Administration Server, the task status is displayed and buttons for managing the task are enabled. If the managed device is unavailable for push-notifications, but the mode of continuous connection to Administration Server is enabled (the **Do not disconnect from the Administration Server** option in the **General** section is enabled), the actions with tasks are available too.

  If connection is not established, the status is not displayed and buttons are disabled.

- Events

  The **Events** tab displays events logged on the Administration Server for the selected client device.

- Tags

  In the **Tags** tab, you can manage the list of keywords that are used for finding client devices: view the list of existing tags, assign tags from the list, configure auto-tagging rules, add new tags and rename old tags, and remove tags.

- Advanced

This tab comprises the following sections:

- **Applications registry**. In this section, you can view the registry of applications installed on the client device and their updates; you can also set up the display of the applications registry.

  Information about installed applications is provided if Network Agent installed on the client device sends required information to the Administration Server. You can configure sending of information to the Administration Server in the properties window of Network Agent or its policy, in the **Repositories** section.

  Clicking an application name opens a window that contains the application details and a list of the update packages installed for the application.

- **Executable files**. This section displays executable files found on the client device.

- **Distribution points**. This section provides a list of distribution points with which the device interacts.

  - Export to file

    Click the **Export to file** button to save to a file a list of distribution points with which the device interacts. By default, the application exports the list of devices to a CSV file.

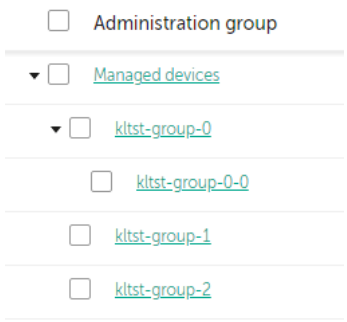
  - Properties

    Click the **Properties** button to view and configure the distribution point with which the device interacts.

- **Hardware registry**. In this section, you can view information about hardware installed on the client device.

Creating administration groups

Immediately after Kaspersky Security Center installation, the hierarchy of administration groups contains only one administration group called **Managed devices**. When creating a hierarchy of administration groups, you can add devices and virtual machines to the **Managed devices** group, and add nested groups (see the figure below).



Viewing administration groups hierarchy

To create an administration group:

1. Go to **DEVICES** → **HIERARCHY OF GROUPS**.

2. In the administration group structure, select the administration group that is to include the new administration group.

3. Click the **Add** button.

4. In the **Name of the new administration group** window that opens, enter a name for the group, and then click the **Add** button.

A new administration group with the specified name appears in the hierarchy of administration groups.

To create a structure of administration groups:

1. Go to **DEVICES** → **HIERARCHY OF GROUPS**.

2. Click the **Import** button.

The New Administration Group Structure Wizard starts. Follow the instructions of the Wizard.

Device moving rules

We recommend that you automate the allocation of devices to administration groups through *device moving rules*. A device moving rule consists of three main parts: a name, an execution condition (logical expression with the device attributes), and a target administration group. A rule moves a device to the target administration group if the device attributes meet the rule execution condition.

All device moving rules have priorities. The Administration Server checks the device attributes as to whether they meet the execution condition of each rule, in ascending order of priority. If the device attributes meet the execution condition of a rule, the device is moved to the target group, so the rule processing is complete for this device. If the device attributes meet the conditions of multiple rules, the device is moved to the target group of the rule with the highest priority (that is, has the highest rank in the list of rules).

Device moving rules can be created implicitly. For example, in the properties of an installation package or a remote installation task, you can specify the administration group to which the device must be moved after Network Agent is installed on it. Also, device moving rules can be created explicitly by the administrator of Kaspersky Security Center Linux, in the **DEVICES** → **MOVING RULES** section.

By default, a device moving rule is intended for one-time initial allocation of devices to administration groups. The rule moves devices from the unassigned devices group only once. If a device once was moved by this rule, the rule will never move it again, even if you return the device to the unassigned devices group manually. This is the recommended way of applying moving rules.

You can move devices that have already been allocated to some of the administration groups. To do this, in the properties of a rule, clear the **Move only devices that do not belong to an administration group** check box.

Applying moving rules to devices that have already been allocated to some of the administration groups, significantly increases the load on the Administration Server.

The **Move only devices that do not belong to an administration group** check box is locked in the properties of automatically created moving rules. Such rules are created when you add the *Install application remotely* task or create a stand-alone installation package.

You can create a moving rule that would affect a single device repeatedly.

We strongly recommend that you avoid moving a single device from one group to another repeatedly (for example, in order to apply a special policy to that device, run a special group task, or update the device through a specific distribution point).

Such scenarios are not supported, because they increase the load on Administration Server and network traffic to an extreme degree. These scenarios also conflict with the operating principles of Kaspersky Security Center Linux (particularly in the area of access rights, events, and reports). Another solution must be found, for example, through the use of policy profiles, tasks for device selections, assignment of Network Agents according to the standard scenario.

Creating device moving rules

You can set up device moving rules, that is, rules that automatically allocate devices to administration groups.

To create a moving rule:

1. In the main menu, go to **DEVICES** → **MOVING RULES**.
2. Click **Add**.
3. In the window that opens, specify the following information on the **General** tab:

- **Rule name**

  Enter a name for the new rule.

  If you are copying a rule, the new rule gets the same name as the source rule, but an index in () format is added to the name, for example: (1).

- **Administration group**

  Select the administration group into which the devices are to be moved automatically.

- **Apply rule**

  You can select one of the following options:

  - **Run once for each device**

    The rule is applied once for each device that matches your criteria.

  - **Run once for each device, then at every Network Agent reinstallation**

    The rule is applied once for each device that matches your criteria, then only when Network Agent is reinstalled on these devices.

  - **Apply rule continuously**

    The rule is applied according to the schedule which the Administration Server sets up automatically (usually every several hours).

- **Move only devices that do not belong to an administration group**

If this option is enabled, only unassigned devices will be moved to the selected group.

If this option is disabled, devices that already belong to other administration groups, as well as unassigned devices, will be moved to the selected group.

- **Enable rule**

  If this option is enabled, the rule is enabled and starts working after it is saved.

  If this option is disabled, the rule is created, but not enabled. It will not work until you enable this option.

4. On the **Rule conditions** tab, specify at least one criterion by which the devices are moved to an administration group.

5. Click **Save**.

The moving rule is created. It is displayed in the list of moving rules.

The higher the position is on the list, the higher the priority of the rule. To increase or decrease the priority of a moving rule, move the rule up or down in the list, respectively, using the mouse.

If the **Apply rule continuously** option is selected, the moving rule is applied regardless of the priority settings. Such rules are applied according to the schedule which the Administration Server sets up automatically.

If the device attributes meet the conditions of multiple rules, the device is moved to the target group of the rule with the highest priority (that is, has the highest rank in the list of rules).

Copying device moving rules

You can copy moving rules, for example, if you want to have several identical rules for different target administration groups.

To copy an existing a moving rule:

1. Do one of the following:

   - In the main menu, go to **DEVICES** → **MOVING RULES**.
   - In the main menu, go to **DISCOVERY & DEPLOYMENT** → **DEPLOYMENT & ASSIGNMENT** → **MOVING RULES**.

   The list of moving rules is displayed.

2. Select the check box next to the rule you want to copy.

3. Click **Copy**.

4. In the window that opens, change the following information on the **General** tab—or make no changes if you only want to copy the rule without changing its settings:

   - Rule name

     Enter a name for the new rule.

     If you are copying a rule, the new rule gets the same name as the source rule, but an index in () format is added to the name, for example: (1).

   - Administration group

     Select the administration group into which the devices are to be moved automatically.

   - Apply rule

     You can select one of the following options:

     - **Run once for each device**

       The rule is applied once for each device that matches your criteria.

     - **Run once for each device, then at every Network Agent reinstallation**

       The rule is applied once for each device that matches your criteria, then only when Network Agent is reinstalled on these devices.

     - **Apply rule continuously**

       The rule is applied according to the schedule which the Administration Server sets up automatically (usually every several hours).

   - Move only devices that do not belong to an administration group

     If this option is enabled, only unassigned devices will be moved to the selected group.

     If this option is disabled, devices that already belong to other administration groups, as well as unassigned devices, will be moved to the selected group.

   - Enable rule

     If this option is enabled, the rule is enabled and starts working after it is saved.

     If this option is disabled, the rule is created, but not enabled. It will not work until you enable this option.

5. On the **Rule conditions** tab, specify at least one criterion for the devices that you want to be moved automatically.

6. Click **Save**.

The new moving rule is created. It is displayed in the list of moving rules.

Conditions for a device moving rule

When you create or copy a rule to move client devices to administration groups, on the **Rule conditions** tab you set conditions for moving the devices. To determine which devices to move, you can use the following criteria:

- Tags assigned to client devices.
- Network parameters. For example, you can move devices with IP addresses from a specified range.
- Managed applications installed on client devices, for instance, Network Agent or Administration Server.
- Virtual machines, which are the client devices.

Below, you can find the description on how to specify this information in a device moving rule.

If you specify several conditions in the rule, the AND logical operator works and all the conditions apply at the same time. If you do not select any options or keep some fields blank, such conditions do not apply.

Tags tab

On this tab, you can configure a device moving rule based on device tags that were previously added to the descriptions of client devices. To do this, select the required tags. Also, you can enable the following options:

- **Apply to devices without the specified tags**

  If this option is enabled, all devices with the specified tags are excluded from a device moving rule. If this option is disabled, the device moving rule applies to devices with all the selected tags.

  By default, this option is disabled.

- **Apply if at least one specified tag matches**

  If this option is enabled, a device moving rule applies to client devices with at least one of the selected tags. If this option is disabled, the device moving rule applies to devices with all the selected tags.

  By default, this option is disabled.

Network tab

On this tab, you can specify the network data of devices that a device moving rule considers:

- **DNS name of the device**

  DNS domain name of the client device that you want to move. Fill this field if your network includes a DNS server.

  If case sensitive collation is set for the database that you use for Kaspersky Security Center, keep case when you specify a device DNS name. Otherwise, the device moving rule will not work.

- **DNS domain**

A device moving rule applies to all devices included in the specified main DNS suffix. Fill this field if your network includes a DNS server.

- **IP range**

  If this option is enabled, you can enter the initial and final IP addresses of the IP range in which the relevant devices must be included.

  By default, this option is disabled.

- **IP address for connection to Administration Server**

  If this option is enabled, you can set the IP addresses by which client devices are connected to Administration Server. To do this, specify the IP range that includes all necessary IP addresses.

  By default, this option is disabled.

- **Connection profile changed**

  Select one of the following values:

  - **Yes**. A device moving rule only applies to client devices with a changed connection profile.
  - **No**. The device moving rule only applies to the client devices whose connection profile has not changed.
  - **No value is selected**. The condition does not apply.

- **Managed by a different Administration Server**

  Select one of the following values:

  - **Yes**. A device moving rule only applies to client devices managed by other Administration Servers. These Servers are different from the Server on which you configure the device moving rule.
  - **No**. The device moving rule only applies to client devices managed by the current Administration Server.
  - **No value is selected**. The condition does not apply.

Applications tab

On this tab, you can configure a device moving rule based on the managed applications and operating systems installed on client devices:

- **Network Agent is installed**

Select one of the following values:

- **Yes**. A device moving rule only applies to client devices with Network Agent installed.
- **No**. The device moving rule only applies to client devices on which Network Agent is not installed.
- **No value is selected**. The condition does not apply.

- Applications

  Specify what managed applications should be installed on client devices, so a device moving rule applies to these devices. For example, you can select **Kaspersky Security Center 14 Network Agent** or **Kaspersky Security Center 14 Administration Server**.

  If you do not select any managed application, the condition does not apply.

- Operating system version

  You can cull client devices based on the operating system version. For this purpose, specify operating systems that should be installed on the client devices. As a result, a device moving rule applies to the client devices with the selected operating systems.

  If you do not enable this option, the condition does not apply. By default, the option is disabled.

- Operating system bit size

  You can cull client devices by the operating system bit sizes. In the **Operating system bit size** field, you can select one of the following values:

  - **Unknown**
  - **x86**
  - **AMD64**
  - **IA64**

  To check the operating system bit size of the client devices:

  1. In the main menu, go to the **DEVICES** → **MANAGED DEVICES** section.
  2. Click the **Columns settings** button ( ) on the right.
  3. Select the **Operating system bit size** option, and then click the **Save** button.

     After that, the operating system bit size is displayed for every managed device.

- Operating system service pack version

  In this field, you can specify the package version of the operating system (in the *X.Y* format), which will determine how the moving rule is applied to the device. By default, no version value is specified.

- User certificate

Select one of the following values:

- **Installed**. A device moving rule only applies to mobile devices with a mobile certificate.
- **Not installed**. The device moving rule only applies to mobile devices without a mobile certificate.
- **No value is selected**. The condition does not apply.

- Operating system build

  This setting is applicable to Windows operating systems only.

  You can specify whether the selected operating system must have an equal, earlier, or later build number. You can also configure a device moving rule for all build numbers except the specified one.

- Operating system release number

  This setting is applicable to Windows operating systems only.

  You can specify whether the selected operating system must have an equal, earlier, or later release number. You can also configure a device moving rule for all release numbers except the specified one.

Virtual machines tab

On this tab, you can configure a device moving rule according to whether client devices are virtual machines or part of a virtual desktop infrastructure (VDI):

- This is a virtual machine

  In the drop-down list, you can select one of the following:

  - **N/A**. The condition does not apply.
  - **No**. Move devices that are not virtual machines.
  - **Yes**. Move devices that are virtual machines.

- **Virtual machine type**
- Part of Virtual Desktop Infrastructure

In the drop-down list, you can select one of the following:

- **N/A**. The condition does not apply.
- **No**. Move devices that are not part of VDI.
- **Yes**. Move devices that are part of VDI.

Adding devices to an administration group manually

You can move devices to administration groups automatically by creating device moving rules or manually by moving devices from one administration group to another or by adding devices to a selected administration group. This section describes how to manually add devices to an administration group.

To add manually one or more devices to a selected administration group:

1. Go to **DEVICES** → **MANAGED DEVICES**.
2. Click the **Current path:** `<current path>` link above the list.
3. In the window that opens, select the administration group to which you want to add the devices.
4. Click the **Add devices** button.
   The Move Devices Wizard starts.
5. Make a list of the devices that you want to add to the administration group.

   You can add only devices for which information has already been added to the Administration Server database either upon connection of the device or after device discovery.

   Select how you want to add devices to the list:

   - Click the **Add devices** button, and then specify the devices in one of the following ways:
     - Select devices from the list of devices detected by the Administration Server.
     - Specify a device IP address or an IP range.
     - Specify a device DNS name.

       The device name field must not contain space characters, backspace characters, or the following prohibited characters: , \ / * ' " ; : & ` ~ ! @ # $ ^ ( ) = + [ ] { } | < > %
   - Click the **Import devices from file** button to import a list of devices from a .txt file. Each device address or name must be specified on a separate line.

The file must not contain space characters, backspace characters, or the following prohibited characters: , \ / * ' " ; : & ` ~ ! @ # $ ^ ( ) = + [ ] { } | < > %

6. View the list of devices to be added to the administration group. You can edit the list by adding or removing devices.

7. After making sure that the list is correct, click the **Next** button.

The Wizard processes the device list and displays the result. The successfully processed devices are added to the administration group and are displayed in the list of devices under names generated by Administration Server.

Moving devices or clusters to an administration group manually

You can move devices from one administration group to another, or from the group of unassigned devices to an administration group.

You can also move clusters or server arrays from one administration group to another. When you move a cluster or server array to another group, all of its nodes move with it, because a cluster and any of its nodes always belong to the same administration group. When you select a single cluster node on the **DEVICES** tab, the **Move to group** button becomes unavailable.

To move one or several devices or clusters to a selected administration group:

1. Open the administration group from which you want to move the devices. To do this, perform one of the following:

   - To open an administration group, in the main menu, go to **DEVICES** → **MANAGED DEVICES**, click the path link in the **Current path** field, and select an administration group in the left-side pane that opens.

   - To open the **UNASSIGNED DEVICES** group, in the main menu, go to **DISCOVERY & DEPLOYMENT** → **UNASSIGNED DEVICES**.

2. If the administration group contains clusters or server arrays, the **MANAGED DEVICES** section is divided into two tabs—the **DEVICES** tab and the **Clusters and server arrays** tab. Open the tab for the object that you want to move.

3. Select the check boxes next to the devices or clusters that you want to move to a different group.

4. Click the **Move to group** button.

5. In the hierarchy of administration groups, select the check box next to the administration group to which you want to move the selected devices or clusters.

6. Click the **Move** button.

The selected devices or clusters are moved to the selected administration group.

Changing the Administration Server for client devices

You can change the Administration Server to a different one for specific client devices. For this purpose, use the *Change Administration Server* task.

To change the Administration Server that manages client devices to a different Server:

1. Connect to the Administration Server that manages the devices.
2. Create the Administration Server change task.

   The Add Task Wizard starts. Follow the instructions of the Wizard. In the **New task** window of the Add Task Wizard, select the **Kaspersky Security Center 14** application and the **Change Administration Server** task type. After that, specify the devices for which you want to change the Administration Server:

   - **Assign task to an administration group**

     The task is assigned to devices included in an administration group. You can specify one of the existing groups or create a new one.

     For example, you may want to use this option to run a task of sending a message to users if the message is specific for devices included in a specific administration group.

     If a task is assigned to an administration group, the **Security** tab is not displayed in the task properties window because group tasks are subject to the security settings of the groups to which they apply.

   - **Specify device addresses manually or import addresses from a list**

     You can specify DNS names, IP addresses, and IP subnets of devices to which you want to assign the task.

     You may want to use this option to execute a task for a specific subnet. For example, you may want to install a certain application on devices of accountants or to scan devices in a subnet that is probably infected.

   - **Assign task to a device selection**

     The task is assigned to devices included in a device selection. You can specify one of the existing selections.

     For example, you may want to use this option to run a task on devices with a specific operating system version.

3. Run the created task.

After the task is completed, the client devices for which it was created are put under the management of the Administration Server specified in the task settings.

Moving devices connected to Administration Server through connection gateways to another Administration Server

You can move devices connected to the Administration Server through connection gateways to another Administration Server. For example, this may be required if you install another version of Administration Server and do not want to reinstall Network Agent on the devices as it may be time consuming.

The commands described in the instruction must be run on client devices under an account with administrator rights.

To move a device connected through the connection gateway to another Administration Server:

1. Run the klmover utility with the `-address <server address>` parameter, to switch to the new Administration Server.
2. Run the `klnagchk -nagwait -tl 4` command.
3. Run the following commands to set a new connection gateway:
   - `klscflag -ssvset -pv klnagent -s FileTransfer -n ft_gateway_mode -sv false -svt BOOL_T -ss "|ss_type = \"SS_SETTINGS\";"`
   - `klscflag -ssvset -pv klnagent -s FileTransfer -n ft_gateway_loc -sv "gateway_ip_or_name" -svt STRING_T -ss "|ss_type = \"SS_SETTINGS\";"`

     Here `gateway_ip_or_name` is the address of the connection gateway accessible from the internet.
   - `klscflag -ssvset -pv klnagent -s FileTransfer -n ft_gateway_ssl_port -sv 13000 -svt INT_T -ss "|ss_type = \"SS_SETTINGS\";"`

     The `13000` is the number of the TCP port that the connection gateway is listening to.
4. Run the `klnagchk -restart -tl 4` command to start the Network Agent service.

The device is moved to the new Administration Server and connected through the new connected gateway.

Viewing and configuring the actions when devices show inactivity

If client devices within a group are inactive, you can get notifications about it. You can also automatically delete such devices.

To view or configure the actions when the devices in the group show inactivity:

1. In the main menu, go to **DEVICES** → **HIERARCHY OF GROUPS**.
2. Click the name of the required administration group.

   The administration group properties window opens.
3. In the properties window, go to the **Settings** tab.
4. In the **Inheritance** section, enable or disable the following options:
   - **Inherit from parent group**

     The settings in this section will be inherited from the parent group in which the client device is included. If this option is enabled, the settings under **Device activity on the network** are locked from any changes.

     This option is available only if the administration group has a parent group.

     By default, this option is enabled.

- Force inheritance of settings in child groups

  The setting values will be distributed to child groups but in the properties of the child groups these settings are locked.

  By default, this option is disabled.

5. In the **Device activity** section, enable or disable the following options:

   - Notify the administrator if the device has been inactive for longer than (days)

     If this option is enabled, the administrator receives notifications about inactive devices. You can specify the time interval after which the **Device has remained inactive on the network in a long time** event is created. The default time interval is 7 days.

     By default, this option is enabled.

   - Remove the device from the group if it has been inactive for longer than (days)

     If this option is enabled, you can specify the time interval after which the device is automatically removed from the group. The default time interval is 60 days.

     By default, this option is enabled.

6. Click **Save**.

   Your changes are saved and applied.

About device statuses

Kaspersky Security Center Linux assigns a status to each managed device. The particular status depends on whether the conditions defined by the user are met. In some cases, when assigning a status to a device, Kaspersky Security Center Linux takes into consideration the device's visibility flag on the network (see the table below). If Kaspersky Security Center Linux does not find a device on the network within two hours, the visibility flag of the device is set to *Not Visible*.

The statuses are the following:

- *Critical* or *Critical/Visible*
- *Warning* or *Warning/Visible*
- *OK* or *OK/Visible*

The table below lists the default conditions that must be met to assign the *Critical* or *Warning* status to a device, with all possible values.

Conditions for assigning a status to a device

Condition	Condition description	Available values
Security application is not installed	Network Agent is installed on the device, but a security application is not installed.	• Toggle button is on.

		• Toggle button is off.
Too many viruses detected	Some viruses have been found on the device by a task for virus detection, for example, the Virus scan task, and the number of viruses found exceeds the specified value.	More than 0.
Real-time protection level differs from the level set by the Administrator	The device is visible on the network, but the real-time protection level differs from the level set (in the condition) by the administrator for the device status.	• Stopped. • Paused. • Running.
Virus scan has not been performed in a long time	The device is visible on the network and a security application is installed on the device, but neither the *Malware scan* task nor a local scan task has been run within the specified time interval. The condition is applicable only to devices that were added to the Administration Server database 7 days ago or earlier.	More than 1 day.
Databases are outdated	The device is visible on the network and a security application is installed on the device, but the anti-virus databases have not been updated on this device within the specified time interval. The condition is applicable only to devices that were added to the Administration Server database 1 day ago or earlier.	More than 1 day.
Not connected in a long time	Network Agent is installed on the device, but the device has not connected to an Administration Server within the specified time interval, because the device was turned off.	More than 1 day.
Active threats are detected	The number of unprocessed objects in the **ACTIVE THREATS** folder exceeds the specified value.	More than 0 items.
Restart is required	The device is visible on the network, but an application requires the device restart longer than the specified time interval and for one of the selected reasons.	More than 0 minutes.
Incompatible applications are installed	The device is visible on the network, but software inventory performed through Network Agent has detected incompatible applications installed on the device.	• Toggle button is off. • Toggle button is on.
License expired	The device is visible on the network, but the license has expired.	• Toggle button is off. • Toggle button is on.
License expires soon	The device is visible on the network, but the license will expire on the device in less than the specified number of days.	More than 0 days.
Unprocessed incidents detected	Some unprocessed incidents have been found on the device. Incidents can be created either automatically, through managed Kaspersky applications installed on the client device, or manually by the administrator.	• Toggle button is off. • Toggle button is on.
Device status defined by application	The status of the device is defined by the managed application.	• Toggle button is off. • Toggle button is on.
Device is out of disk space	Free disk space on the device is less than the specified value or the device could not be synchronized with the Administration Server. The *Critical* or *Warning* status is changed to the *OK* status when the device is successfully synchronized with the Administration Server and free space on the device is greater than or equal to the specified value.	More than 0 MB
Device has	During device discovery, the device was recognized as visible on the network, but more than three	

become unmanaged	attempts to synchronize with the Administration Server failed.	• Toggle button is off. • Toggle button is on.
Protection is disabled	The device is visible on the network, but the security application on the device has been disabled for longer than the specified time interval. In this case, the state of the security application is *stopped* or *failure*, and differs from the following: *starting*, *running*, or *suspended*.	More than 0 minutes.
Security application is not running	The device is visible on the network and a security application is installed on the device but is not running.	• Toggle button is off. • Toggle button is on.

Kaspersky Security Center Linux allows you to set up automatic switching of the status of a device in an administration group when specified conditions are met. When specified conditions are met, the client device is assigned one of the following statuses: *Critical* or *Warning*. When specified conditions are not met, the client device is assigned the *OK* status.

Different statuses may correspond to different values of one condition. For example, by default, if the **Databases are outdated** condition has the **More than 3 days** value, the client device is assigned the *Warning* status; if the value is **More than 7 days**, the *Critical* status is assigned.

If you upgrade Kaspersky Security Center Linux from the previous version, the values of the **Databases are outdated** condition for assigning the status to *Critical* or *Warning* do not change.

When Kaspersky Security Center Linux assigns a status to a device, for some conditions (see the Condition description column) the visibility flag is taken into consideration. For example, if a managed device was assigned the *Critical* status because the Databases are outdated condition was met, and later the visibility flag was set for the device, then the device is assigned the *OK* status.

Configuring the switching of device statuses

You can change conditions to assign the *Critical* or *Warning* status to a device.

To enable changing the device status to Critical:

1. In the main menu, go to **DEVICES** → **HIERARCHY OF GROUPS**.
2. In the list of groups that opens, click the link with the name of a group for which you want to change switching the device statuses.
3. In the properties window that opens, select the **Device status** tab.
4. In the left pane, select **Critical**.
5. In the right pane, in the **Set to Critical if these are specified** section, enable the condition to switch a device to the *Critical* status.

You can change only settings that are not locked in the parent policy.

6. Select the radio button next to the condition in the list.
7. In the upper-left corner of the list, click the **Edit** button.
8. Set the required value for the selected condition.
   Values cannot be set for every condition.
9. Click **OK**.

When specified conditions are met, the managed device is assigned the *Critical* status.

To enable changing the device status to Warning:

1. In the main menu, go to **DEVICES** → **HIERARCHY OF GROUPS**.
2. In the list of groups that opens, click the link with the name of a group for which you want to change switching the device statuses.
3. In the properties window that opens, select the **Device status** tab.
4. In the left pane, select **Warning**.
5. In the right pane, in the **Set to Warning if these are specified** section, enable the condition to switch a device to the *Warning* status.

   You can change only settings that are not locked in the parent policy.

6. Select the radio button next to the condition in the list.
7. In the upper-left corner of the list, click the **Edit** button.
8. Set the required value for the selected condition.
   Values cannot be set for every condition.
9. Click **OK**.

When specified conditions are met, the managed device is assigned the *Warning* status.

Policies and policy profiles

In Kaspersky Security Center 14 Web Console, you can create policies for Kaspersky applications. This section describes policies and policy profiles, and provides instructions for creating and modifying them.

About policies and policy profiles

A *policy* is a set of Kaspersky application settings that are applied to an administration group and its subgroups. You can install several Kaspersky applications on the devices of an administration group. Kaspersky Security Center provides a single policy for each Kaspersky application in an administration group. A policy has one of the following statuses:

The status of the policy

Status	Description
Active	The current policy that is applied to the device. Only one policy may be active for a Kaspersky application in each administration group. Devices apply the settings values of an active policy for a Kaspersky application.
Inactive	A policy that is not currently applied to a device.
Out-of-office	If this option is selected, the policy becomes active when the device leaves the corporate network.

Policies function according to the following rules:

- Multiple policies with different values can be configured for a single application.
- Only one policy can be active for the current application.
- A policy can have child policies.

Generally, you can use policies as preparations for emergency situations, such as a virus attack. For example, if there is an attack via flash drives, you can activate a policy that blocks access to flash drives. In this case, the current active policy automatically becomes inactive.

In order to prevent maintaining multiple policies, for example, when different occasions assume changing of several settings only, you may use policy profiles.

A *policy profile* is a named subset of policy settings values that replaces the settings values of a policy. A policy profile affects the effective settings formation on a managed device. *Effective settings* are a set of policy settings, policy profile settings, and local application settings that are currently applied for the device.

Policy profiles function according to the following rules:

- A policy profile takes effect when a specific activation condition occurs.
- Policy profiles contain values of settings that differ from the policy settings.
- Activation of a policy profile changes the effective settings of the managed device.
- A policy can include a maximum of 100 policy profiles.

About lock and locked settings

Each policy setting has a lock button icon (). The table below shows lock button statuses:

Lock button statuses

Status	Description
Undefined	If an open lock is displayed next to a setting and the toggle button is disabled, the setting is not specified in the policy. A user can change these settings in the managed application interface. These type of settings are called *unlocked*.
Enforce	If a closed lock is displayed next to a setting and the toggle button is enabled, the setting is applied to the devices where the policy is enforced. A user cannot modify the values of these settings in the managed application interface. These type of settings are called *locked*.

We highly recommend that you close locks for the policy settings that you want to apply on the managed devices. The unlocked policy settings can be reassigned by Kaspersky application settings on a managed device.

You can use a lock button for performing the following actions:

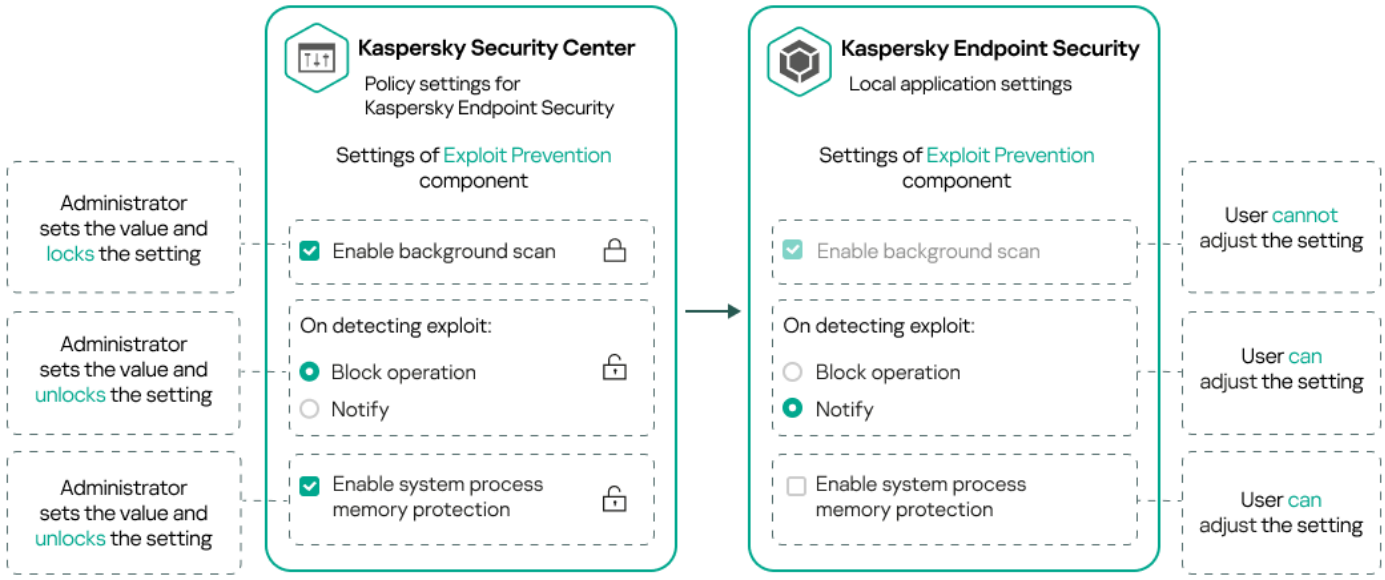
- Locking settings for an administration subgroup policy
- Locking settings of a Kaspersky application on a managed device

Thus, a locked setting is used for implementing effective settings on a managed device.

A process of effective settings implementation includes the following actions:

- Managed device applies settings values of Kaspersky application.
- Managed device applies locked settings values of a policy.

A policy and managed Kaspersky application contain the same set of settings. When you configure policy settings, the Kaspersky application settings change values on a managed device. You cannot adjust locked settings on a managed device (see the figure below):



Locks and Kaspersky application settings

Inheritance of policies and policy profiles

This section provides information about the hierarchy and inheritance of policies and policy profiles.

Hierarchy of policies

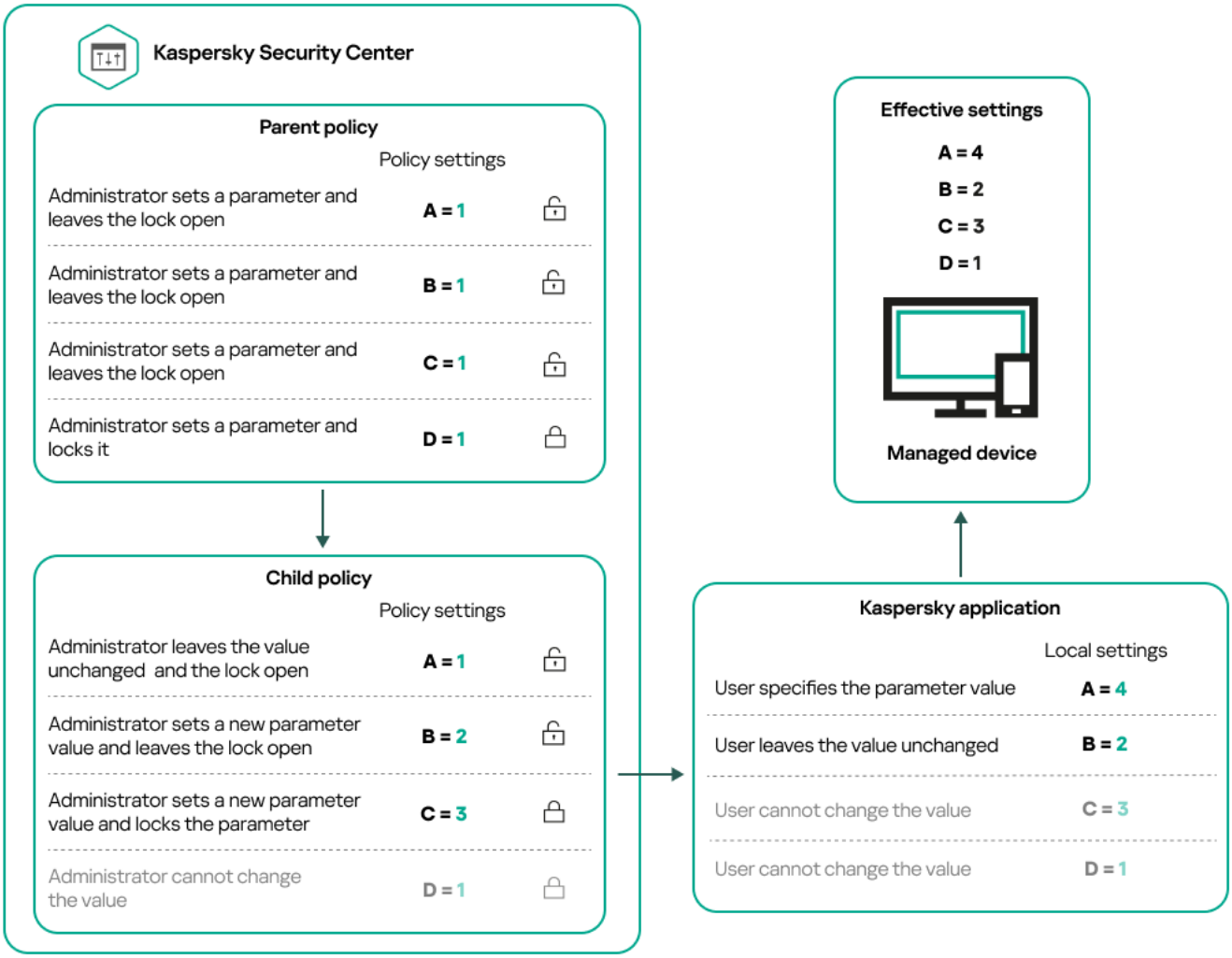
If different devices need different settings, you can organize devices into administration groups.

You can specify a policy for a single administration group. Policy settings can be *inherited*. Inheritance means receiving policy settings values in subgroups (child groups) from a policy of a higher-level (parent) administration group.

Hereinafter, a policy for a parent group is also referred to as a *parent policy*. A policy for a subgroup (child group) is also referred to as a *child policy*.

By default, at least one managed devices group exists on Administration Server. If you want to create custom groups, they are created as subgroups (child groups) within the managed devices group.

Policies of the same application act on each other, according to a hierarchy of administration groups. Locked settings from a policy of a higher-level (parent) administration group will reassign policy settings values of a subgroup (see the figure below).

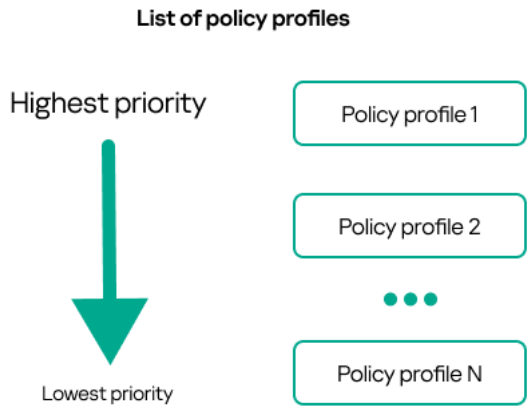


Hierarchy of policies

Policy profiles in a hierarchy of policies

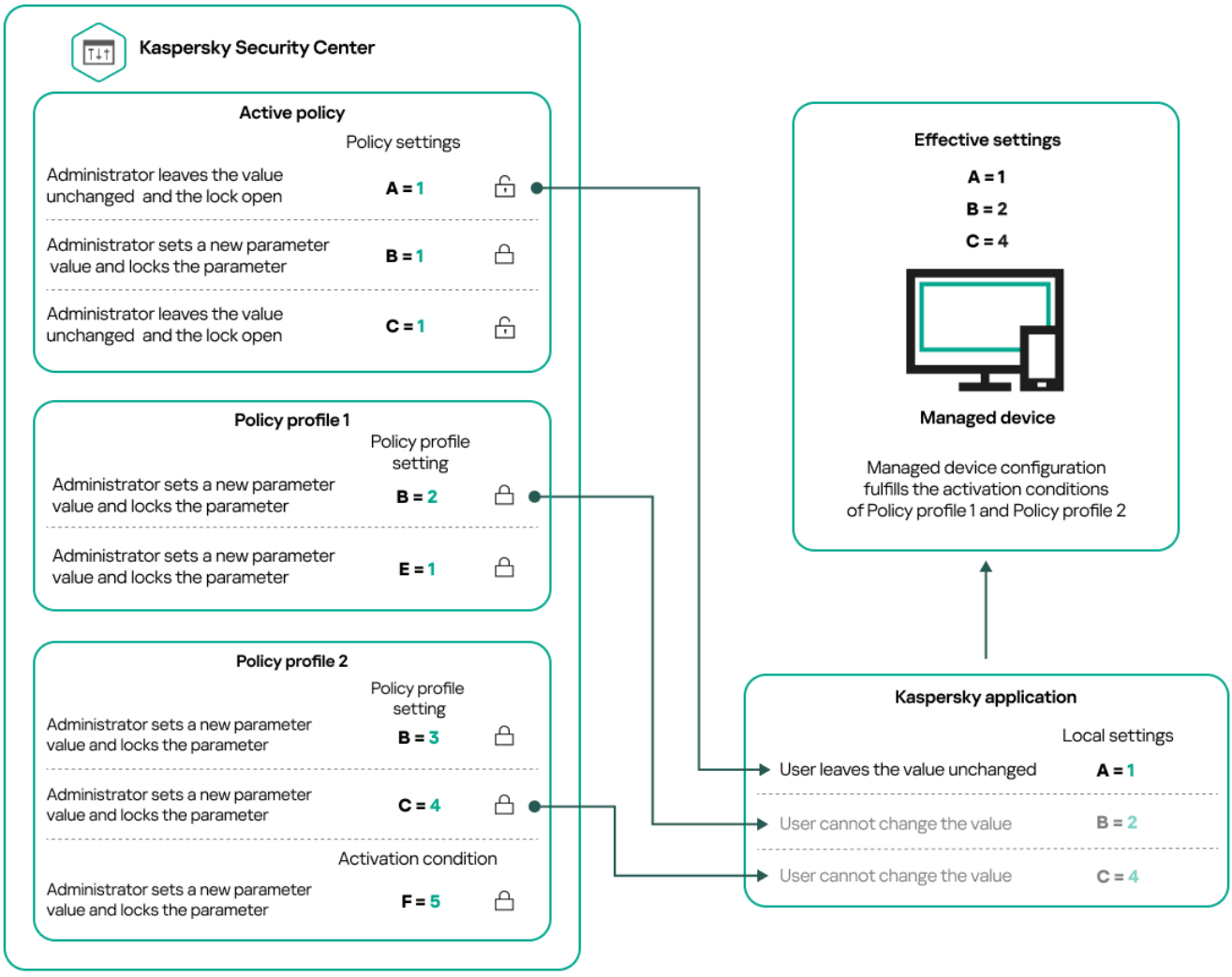
Policy profiles have the following priority assignment conditions:

- A profile's position in a policy profile list indicates its priority. You can change a policy profile priority. The highest position in a list indicates the highest priority (see the figure below).



Priority definition of a policy profile

- Activation conditions of policy profiles do not depend on each other. Several policy profiles can be activated simultaneously. If several policy profiles affect the same setting, the device takes the setting value from the policy profile with the highest priority (see the figure below).

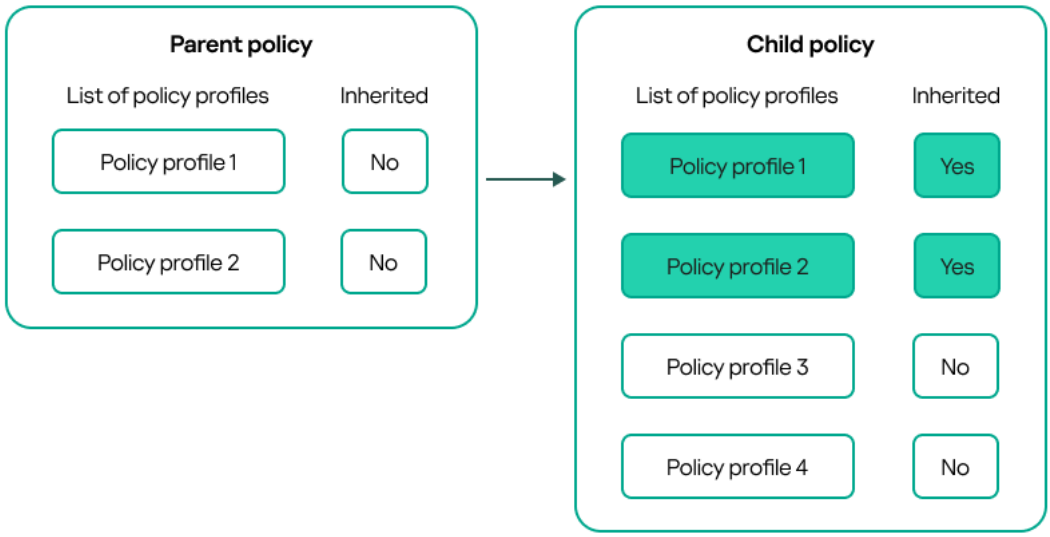


Managed device configuration fulfills activation conditions of several policy profiles

Policy profiles in a hierarchy of inheritance

Policy profiles from different hierarchy level policies comply with the following conditions:

- A lower-level policy inherits policy profiles from a higher-level policy. A policy profile inherited from a higher-level policy obtains higher priority than the original policy profile's level.
- You cannot change a priority of an inherited policy profile (see the figure below).



Inheritance of policy profiles

Policy profiles with the same name

If there are two policies with the same names in different hierarchy levels, these policies function according to the following rules:

- Locked settings and the profile activation condition of a higher-level policy profile changes the settings and profile activation condition of a lower-level policy profile (see the figure below).

- Unlocked settings and the profile activation condition of a higher-level policy profile do not change the settings and profile activation condition of a lower-level policy profile.

How settings are implemented on a managed device

Implementation of effective settings on a managed device can be described as follows:

- The values of all settings that have not been locked are taken from the policy.
- Then they are overwritten with the values of managed application settings.
- And then the locked settings values from the effective policy are applied. Locked settings values change the values of unlocked effective settings.

Managing policies

This section describes managing policies and provides information about viewing the list of policies, creating a policy, modifying a policy, copying a policy, moving a policy, forced synchronization, viewing the policy distribution status chart, and deleting a policy.

Viewing the list of policies

You can view lists of policies created for the Administration Server or for any administration group.

To view a list of policies:

1. In the main menu, go to **DEVICES** → **HIERARCHY OF GROUPS**.
2. In the administration group structure, select the administration group for which you want to view the list of policies.

The list of policies appears in tabular format. If there are no policies, the table is empty. You can show or hide the columns of the table, change their order, view only lines that contain a value that you specify, or use search.

Creating a policy

You can create policies; you can also modify and delete existing policies.

To create a policy:

1. Go to **DEVICES** → **POLICIES & PROFILES**.
2. Select the administration group for which the policy is to be created:

- For the root group.

  In this case you can proceed to the next step.

- For a subgroup:

  a. Click the current path link at the top of the window.

  b. In the panel that opens, click the link with the name of the required subgroup.

  The current path changes to reflect the selected subgroup.

3. Click **Add**.

   The **Select application** window opens.

4. Select the application for which you want to create a policy.

5. Click **Next**.

   The new policy settings window opens with the **General** tab selected.

6. If you want, change the default name, default status, and default inheritance settings of the policy.

7. Select the **Application settings** tab.

   Or, you can click **Save** and exit. The policy will appear in the list of policies, and you can edit its settings later.

8. On the **Application settings** tab, in the left pane select the category that you want and in the results pane on the right, edit the settings of the policy. You can edit policy settings in each category (section).

   The set of settings depends on the application for which you create a policy. For details, refer to the following:

   - Administration Server configuration
   - Network Agent policy settings
   - Kaspersky Endpoint Security for Linux Help

   For details about settings of other security applications, refer to the documentation for the corresponding application.

   When editing the settings, you can click **Cancel** to cancel the last operation.

9. Click **Save** to save the policy.

The policy will appear in the list of policies.

General policy settings

General

In the **General** tab, you can modify the policy status and specify the inheritance of policy settings:

- In the **Policy status** block, you can select one of the policy modes:

- Active

  If this option is selected, the policy becomes active.

  By default, this option is selected.

- Out-of-office

  If this option is selected, the policy becomes active when the device leaves the corporate network.

- Inactive

  If this option is selected, the policy becomes inactive, but it is still stored in the **Policies** folder. If required, the policy can be activated.

- In the **Settings inheritance** settings group, you can configure the policy inheritance:

  - Inherit settings from parent policy

    If this option is enabled, the policy setting values are inherited from the upper-level group policy and, therefore, are locked.

    By default, this option is enabled.

  - Force inheritance of settings in child policies

    If this option is enabled, after policy changes are applied, the following actions will be performed:

    - The values of the policy settings will be propagated to the policies of administration subgroups, that is, to the child policies.
    - In the **Settings inheritance** block of the **General** section in the properties window of each child policy, the **Inherit settings from parent policy** option will be automatically enabled.

    If this option is enabled, the child policies settings are locked.

    By default, this option is disabled.

Event configuration

The **Event configuration** tab allows you to configure event logging and event notification. Events are distributed by importance level on the following tabs:

- **Critical**

  The **Critical** section is not displayed in the Network Agent policy properties.

- **Functional failure**
- **Warning**
- **Info**

In each section, the list shows the types of events and the default event storage term on the Administration Server (in days). Clicking an event type lets you specify the following settings:

- **Event registration**

  You can specify how many days to store the event and select where to store the event:

  - **Export to SIEM system using Syslog**
  - **Store in the OS event log on device**
  - **Store in the OS event log on Administration Server**

- **Event notifications**

  You can select if you want to be notified about the event in one of the following ways:

  - **Notify by email**
  - **Notify by SMS**
  - **Notify by running an executable file or script**
  - **Notify by SNMP**

  By default, the notification settings specified on the Administration Server properties tab (such as recipient address) are used. If you want, you can change these settings in the **Email**, **SMS**, and **Executable file to be run** tabs.

Revision history

The **Revision history** tab allows you to view the list of the policy revisions and roll back changes made to the policy, if necessary.

Modifying a policy

To modify a policy:

1. Go to **DEVICES** → **POLICIES & PROFILES**.
2. Click the policy that you want to modify.

   The policy settings window opens.
3. Specify the general settings and settings of the application for which you create a policy. For details, refer to the following:

   - Administration Server configuration
   - Network Agent policy settings
   - Kaspersky Endpoint Security for Linux Help

   For details about settings of other security applications, refer to the documentation for that application.

4. Click **Save**.

   The changes made to the policy will be saved in the policy properties, and will appear in the **Revision history** section.

Enabling and disabling a policy inheritance option

To enable or disable the inheritance option in a policy:

1. Open the required policy.
2. Open the **General** tab.
3. Enable or disable policy inheritance:

   - If you enable **Inherit settings from parent policy** in a child policy and an administrator locks some settings in the parent policy, then you cannot change these settings in the child policy.
   - If you disable **Inherit settings from parent policy** in a child policy, then you can change all of the settings in the child policy, even if some settings are locked in the parent policy.
   - If you enable **Force inheritance of settings in child policies** in the parent group, this enables the **Inherit settings from parent policy** option for each child policy. In this case, you cannot disable this option for any child policy. All of the settings that are locked in the parent policy are forcibly inherited in the child groups, and you cannot change these settings in the child groups.

4. Click the **Save** button to save changes or click the **Cancel** button to reject changes.

By default, the **Inherit settings from parent policy** option is enabled for a new policy.

If a policy has profiles, all of the child policies inherit these profiles.

Copying a policy

You can copy policies from one administration group to another.

To copy a policy to another administration group:

1. In the main menu, go to **DEVICES → POLICIES & PROFILES**.
2. Select the check box next to the policy (or policies) that you want to copy.
3. Click the **Copy** button.

   On the right side of the screen, the tree of the administration groups appears.
4. In the tree, select the target group, that is, the group to which you want to copy the policy (or policies).
5. Click the **Copy** button at the bottom of the screen.
6. Click **OK** to confirm the operation.

The policy (policies) will be copied to the target group with all its profiles. The status of each copied policy in the target group will be **Inactive**. You can change the status to **Active** at any time.

If a policy with the name identical to that of the newly moved policy already exists in the target group, the name of the newly moved policy is expanded with the (<next sequence number>) index, for example: (1).

Moving a policy

You can move policies from one administration group to another. For example, you want to delete a group, but you want to use its policies for another group. In this case, you may want move the policy from the old group to the new one before deleting the old group.

To move a policy to another administration group:

1. In the main menu, go to **DEVICES → POLICIES & PROFILES**.
2. Select the check box next to the policy (or policies) that you want to move.
3. Click the **Move** button.

   On the right side of the screen, the tree of the administration groups appears.
4. In the tree, select the target group, that is, the group to which you want to move the policy (or policies).
5. Click the **Move** button at the bottom of the screen.
6. Click **OK** to confirm the operation.

   If a policy is not inherited from the source group, it is moved to the target group with all its profiles. The status of the policy in the target group is **Inactive**. You can change the status to **Active** at any time.

   If a policy is inherited from the source group, it remains in the source group. It is copied to the target group with all its profiles. The status of the policy in the target group is **Inactive**. You can change the status to **Active** at any time.

If a policy with the name identical to that of the newly moved policy already exists in the target group, the name of the newly moved policy is expanded with the (<next sequence number>) index, for example: (1).

Forced synchronization

Although Kaspersky Security Center Linux automatically synchronizes the status, settings, tasks, and policies for managed devices, in some cases the administrator must know for certain, at a given moment, whether synchronization has already been performed for a specified device.

Synchronizing a single device

To force synchronization between the Administration Server and a managed device:

1. Go to **DEVICES → MANAGED DEVICES**.

2. Click the name of the device that you want to synchronize with the Administration Server.

   A property window opens with the **General** section selected.

3. Click the **Force synchronization** button.

The application synchronizes the selected device with the Administration Server.

Synchronizing multiple devices

To force synchronization between the Administration Server and multiple managed devices:

1. Open the device list of an administration group or a device selection:

   - In the main menu, go to **DEVICES** → **MANAGED DEVICES**, click the path link in the **Current path** field above the list of managed devices, then select the administration group that contains devices to synchronize.
   - Run a device selection to view the device list.

2. Select the check boxes next to the devices that you want to synchronize with the Administration Server.

3. Above the list of managed devices, click the ellipsis button (...), and then click the **Force synchronization** button.

   The application synchronizes the selected devices with the Administration Server.

4. In the device list, check that the time of last connection to the Administration Server has changed, for the selected devices, to the current time. If the time has not changed, update the page content by clicking the **Refresh** button.

The selected devices are synchronized with the Administration Server.

Viewing the time of a policy delivery

After changing a policy for a Kaspersky application on the Administration Server, the administrator can check whether the changed policy has been delivered to a specific managed device. A policy can be delivered during a regular synchronization or a forced synchronization.

To view the date and time that an application policy was delivered to a managed device:

1. Go to **DEVICES** → **MANAGED DEVICES**.

2. Click the name of the device that you want to synchronize with the Administration Server.

   A property window opens with the **General** section selected.

3. Click the **Applications** tab.

4. Select the application for which you want to view the policy synchronization date.

   The application policy window opens with the **General** section selected and the policy delivery date and time displayed.

Viewing the policy distribution status chart

In Kaspersky Security Center, you can view the status of policy application on each device in a policy distribution status chart.

To view the policy distribution status on each device:

1. Go to **DEVICES** → **POLICIES & PROFILES**.
2. Select check box next to the name of the policy for which you want to view the distribution status on devices.
3. In the menu that appears, select the **Distribution** link.

   The **<Policy name> distribution results** window opens.
4. In the **<Policy name> distribution results** window that opens, the **Status description** of the policy is displayed.

You can change number of results displayed in the list with policy distribution. The maximum number of devices is 100,000.

To change the number of devices displayed in the list with policy distribution results:

1. Go to the **Interface options** section in the toolbar.
2. In the **Limit of devices displayed in policy distribution results**, enter the number of devices (up to 100,000).

   By default, the number is 5000.
3. Click **Save**.

   The settings are saved and applied.

Deleting a policy

You can delete a policy if you do not need it anymore. You can delete only a policy that is not inherited in the specified administration group. If a policy is inherited, you can only delete it in the upper-level group for which it was created.

To delete a policy:

1. In the main menu, go to **DEVICES** → **POLICIES & PROFILES**.
2. Select the check box next to the policy that you want to delete, and click **Delete**.

   The **Delete** button becomes unavailable (dimmed) if you select an inherited policy.
3. Click **OK** to confirm the operation.

The policy is deleted together with all its profiles.

Managing policy profiles

This section describes managing policy profiles and provides information about viewing the profiles of a policy, changing a policy profile priority, creating a policy profile, copying a policy profile, creating a policy profile activation rule, and deleting a policy profile.

Viewing the profiles of a policy

To view profiles of a policy:

1. In the main menu, go to **DEVICES** → **POLICIES & PROFILES**.
2. Click the name of the policy whose profiles you want to view.

   The policy properties window opens with the **General** tab selected.
3. Open the **Policy profiles** tab.

The list of policy profiles appears in tabular format. If the policy does not have profiles, an empty table appears.

Changing a policy profile priority

To change a policy profile priority:

1. Proceed to the list of profiles of a policy that you want.

   The list of policy profiles appears.
2. On the **Policy profiles** tab, select the check box next to the policy profile for which you want to change priority.
3. Set a new position of the policy profile in the list by clicking **Prioritize** or **Deprioritize**.

   The higher a policy profile is located in the list, the higher its priority.
4. Click the **Save** button.

Priority of the selected policy profile is changed and applied.

Creating a policy profile

To create a policy profile:

1. Proceed to the list of profiles of the policy that you want.

   The list of policy profiles appears. If the policy does not have profiles, an empty table appears.
2. Click **Add**.

3. If you want, change the default name and default inheritance settings of the profile.

4. Select the **Application settings** tab.

   Alternatively, you can click **Save** and exit. The profile that you have created appears in the list of policy profiles, and you can edit its settings later.

5. On the **Application settings** tab, in the left pane, select the category that you want and in the results pane on the right, edit the settings for the profile. You can edit policy profile settings in each category (section).

   When editing the settings, you can click **Cancel** to cancel the last operation.

6. Click **Save** to save the profile.

The profile will appear in the list of policy profiles.

Copying a policy profile

You can copy a policy profile to the current policy or to another, for example, if you want to have identical profiles for different policies. You can also use copying if you want to have two or more profiles that differ in only a small number of settings.

To copy a policy profile:

1. Proceed to the list of profiles of a policy that you want.

   The list of policy profiles appears. If the policy does not have profiles, an empty table appears.

2. On the **Policy profiles** tab, select the policy profile that you want to copy.

3. Click **Copy**.

4. In the window that opens, select the policy to which you want to copy the profile.

   You can copy a policy profile to the same policy or to a policy that you specify.

5. Click **Copy**.

The policy profile is copied to the policy that you selected. The newly copied profile gets the lowest priority. If you copy the profile to the same policy, the name of the newly copied profile will be expanded with the () index, for example: (1), (2).

Later, you can change the settings of the profile, including its name and its priority; the original policy profile will not be changed in this case.

Creating a policy profile activation rule

To create a policy profile activation rule:

1. Proceed to the list of profiles of a policy that you want.

   The list of policy profiles appears.

2. On the **Policy profiles** tab, click the policy profile for which you need to create an activation rule.

   If the list of policy profiles is empty, you can create a policy profile.

3. On the **Activation rules** tab, click the **Add** button.

   The window with policy profile activation rules opens.

4. Specify a name for the rule.

5. Select the check boxes next to the conditions that must affect activation of the policy profile that you are creating:

   - **General rules for policy profile activation**

     Select this check box to set up policy profile activation rules on the device depending on the status of the device offline mode, rule for connection to Administration Server, and tags assigned to the device.

     For this option, specify at the next step:

     - **Device status**

       Defines the condition for device presence on the network:

       - **Online**—The device is on the network, and so the Administration Server is available.
       - **Offline**—The device is on an external network, which means that the Administration Server is not available.
       - **N/A**—The criterion will not be applied.

     - **Rule for Administration Server connection is active on this device**

       Choose the condition of policy profile activation (whether the rule is executed or not) and select the rule name.

       The rule defines the network location of the device for connection to the Administration Server, whose conditions must be met (or must not be met) for activation of the policy profile.

       A network location description of devices for connection to an Administration Server can be created or configured in a Network Agent switching rule.

   - **Rules for specific device owner**

     For this option, specify at the next step:

     - **Device owner**

Enable this option to configure and enable the rule for profile activation on the device according to its owner. In the drop-down list under the check box, you can select a criterion for the profile activation:

- The device belongs to the specified owner ("=" sign).
- The device does not belong to the specified owner ("#" sign).

  If this option is enabled, the profile is activated on the device in accordance with the criterion configured. You can specify the device owner when the option is enabled. If this option is disabled, the profile activation criterion is not applied. By default, this option is disabled.

- Device owner is included in an internal security group

  Enable this option to configure and enable the rule of profile activation on the device by the owner's membership in an internal security group of Kaspersky Security Center Linux. In the drop-down list under the check box, you can select a criterion for the profile activation:

  - The device owner is a member of the specified security group ("=" sign).
  - The device owner is not a member of the specified security group ("#" sign).

    If this option is enabled, the profile is activated on the device in accordance with the criterion configured. You can specify a security group of Kaspersky Security Center Linux. If this option is disabled, the profile activation criterion is not applied. By default, this option is disabled.

- Rules for hardware specifications

  Select this check box to set up rules for policy profile activation on the device depending on the memory volume and the number of logical processors.

  For this option, specify at the next step:

  - RAM size, in MB

    Enable this option to configure and enable the rule of profile activation on the device by the RAM volume available on that device. In the drop-down list under the check box, you can select a criterion for the profile activation:

    - The device RAM size is less than the specified value ("<" sign).
    - The device RAM size is greater than the specified value (">" sign).

    If this option is enabled, the profile is activated on the device in accordance with the criterion configured. You can specify the RAM volume on the device. If this option is disabled, the profile activation criterion is not applied. By default, this option is disabled.

  - Number of logical processors

Enable this option to configure and enable the rule of profile activation on the device by the number of logical processors on that device. In the drop-down list under the check box, you can select a criterion for the profile activation:

- The number of logical processors on the device is less than or equal to the specified value ("<" sign).
- The number of logical processors on the device is greater than or equal to the specified value (">" sign).

If this option is enabled, the profile is activated on the device in accordance with the criterion configured. You can specify the number of logical processors on the device. If this option is disabled, the profile activation criterion is not applied. By default, this option is disabled.

- **Rules for role assignment**

  For this option, specify at the next step:

  - Activate policy profile by specific role of device owner

    Select this option to configure and enable the rule of profile activation on the device depending on the owner's role. Add the role manually from the list of existing roles.

    If this option is enabled, the profile is activated on the device in accordance with the criterion configured.

- Rules for tag usage

  Select this check box to set up rules for policy profile activation on the device depending on the tags assigned to the device. You can activate the policy profile to the devices that either have the selected tags or do not have them.

  For this option, specify at the next step:

  - Tag list

    In the list of tags, specify the rule for device inclusion in the policy profile by selecting the check boxes next to the relevant tags.

    You can add new tags to the list by entering them in the field over the list and clicking the **Add** button.

    The policy profile includes devices with descriptions containing all the selected tags. If check boxes are cleared, the criterion is not applied. By default, these check boxes are cleared.

  - Apply to devices without the specified tags

    Enable this option if you have to invert your selection of tags.

    If this option is enabled, the policy profile includes devices with descriptions that contain none of the selected tags. If this option is disabled, the criterion is not applied.

    By default, this option is disabled.

The number of additional pages of the Wizard depends on the settings that you select at the first step. You can modify policy profile activation rules later.

6. Check the list of the configured parameters. If the list is correct, click **Create**.

   The profile will be saved. The profile will be activated on the device when activation rules are triggered.

Policy profile activation rules created for the profile are displayed in the policy profile properties on the **Activation rules** tab. You can modify or remove any policy profile activation rule.

> Multiple activation rules can be triggered simultaneously.

Deleting a policy profile

To delete a policy profile:

1. Proceed to the list of profiles of a policy that you want.

   The list of policy profiles appears.

2. On the **Policy profiles** tab, select the check box next to the policy profile that you want to delete, and click **Delete**.

3. In the window that opens, click **Delete** again.

   The policy profile is deleted. If the policy is inherited by a lower-level group, the profile remains in that group, but becomes the policy profile of that group. This is done to eliminate significant change in settings of the managed applications installed on the devices of lower-level groups.

Users and user roles

This section describes users and user roles, and provides instructions for creating and modifying them, for assigning roles and groups to users, and for associating policy profiles with roles.

About user roles

A *user role* (also referred to as a *role*) is an object containing a set of rights and privileges. A role can be associated with settings of Kaspersky applications installed on a user device. You can assign a role to a set of users or to a set of security groups at any level in the hierarchy of administration groups.

You can associate user roles with policy profiles. If a user is assigned a role, this user gets security settings necessary to perform job functions.

A user role can be associated with users of devices in a specific administration group.

User role scope

A *user role scope* is a combination of users and administration groups. Settings associated with a user role apply only to devices that belong to users who have this role, and only if these devices belong to groups associated with this role, including child groups.

Advantage of using roles

An advantage of using roles is that you do not have to specify security settings for each of the managed devices or for each of the users separately. The number of users and devices in a company may be quite large, but the number of different job functions that require different security settings is considerably smaller.

Differences from using policy profiles

Policy profiles are properties of a policy that is created for each Kaspersky application separately. A role is associated with many policy profiles created for different applications. Therefore, a role is a method of uniting settings for a certain user type in one place.

Configuring access rights to application features. Role-based access control

Kaspersky Security Center Linux provides facilities for role-based access to the features of Kaspersky Security Center Linux and managed Kaspersky applications.

You can configure access rights to application features for Kaspersky Security Center Linux users in one of the following ways:

- By configuring the rights for each user or group of users individually.
- By creating standard user roles with a predefined set of rights and assigning those roles to users depending on their scope of duties.

Application of user roles is intended to simplify and shorten routine procedures of configuring users' access rights to application features. Access rights within a role are configured in accordance with the standard tasks and the users' scope of duties.

User roles can be assigned names that correspond to their respective purposes. You can create an unlimited number of roles in the application.

You can use the predefined user roles with already configured set of rights, or create new roles and configure the required rights yourself.

Access rights to application features

The table below shows the Kaspersky Security Center Linux features with the access rights to manage the associated tasks, reports, settings, and perform the associated user actions.

To perform the user actions listed in the table, a user has to have the right specified next to the action.

Read, **Modify**, and **Execute** rights are applicable to any task, report, or setting. In addition to these rights, a user has to have the **Perform operations on device selections** right to manage tasks, reports, or settings on device selections.

All tasks, reports, settings, and installation packages that are missing in the table belong to the **General features: Basic functionality** functional area.

Access rights to application features

Functional area	Right	User action: right required to perform the action	Task	Report	Other
General features: Management of administration groups	**Modify**	• Add device to an administration group: **Modify** • Delete device from an administration group: **Modify** • Add an administration group to another administration group: **Modify** • Delete an administration group from another administration group: **Modify**	None	None	None
General features: Access objects regardless of their ACLs	**Read**	Get read access to all objects: **Read**	None	None	None
General features: Basic functionality	• **Read** • **Modify** • **Execute** • **Perform operations on device selections**	• Device moving rules (create, modify, or delete) for the virtual Server: **Modify**, **Perform operations on device selections** • Get Mobile (LWNGT) protocol custom certificate: **Read** • Set Mobile (LWNGT) protocol custom certificate: **Write** • Get NLA-defined network list: **Read** • Add, modify, or delete NLA-defined network list: **Modify** • View Access Control List of groups: **Read** • View the operating system log: **Read**	• "Download updates to the Administration Server repository" • "Deliver reports" • "Distribute installation package" • "Install application on secondary Administration Servers remotely"	• "Report on protection status" • "Report on threats" • "Report on most heavily infected devices" • "Report on status of anti-virus databases" • "Report on errors" • "Report on network attacks" • "Summary report on perimeter defense applications installed" • "Summary report on types of applications installed" • "Report on users of	None

				infected devices" • "Report on incidents" • "Report on events" • "Report on activity of distribution points" • "Report on secondary Administration Servers" • "Report on Device Control events" • "Report on prohibited applications" • "Report on Web Control" • "Report on effective user permissions" • "Report on rights"	
General features: **Deleted objects**	• **Read** • **Modify**	• View deleted objects in the Recycle Bin: **Read** • Delete objects from the Recycle Bin: **Modify**	None	None	None
General features: **Event processing**	• **Delete events** • **Edit event notification settings** • **Edit event logging settings** • **Modify**	• Change events registration settings: **Edit event logging settings** • Change events notification settings: **Edit event notification settings** • Delete events: **Delete events**	None	None	Settings: • The maximum number of events stored in the database • Period of time for storing events from the deleted devices
General features: **Operations on Administration Server**	• **Read** • **Modify** • **Execute** • **Modify object ACLs** • **Perform operations on**	• Specify ports of Administration Server for the network agent connection: **Modify** • Specify ports of Activation Proxy launched on the Administration Server: **Modify** • Specify ports of Activation Proxy for Mobile launched on the Administration Server: **Modify**	• "Backup of Administration Server data" • "Databases maintenance"	None	None

	device selections	• Specify ports of the Web Server for distribution of standalone packages: **Modify** • Specify ports of the Web Server for distribution of MDM profiles: **Modify** • Specify SSL-ports of the Administration Server for connection via Web Console: **Modify** • Specify ports of the Administration Server for mobile connection: **Modify** • Specify the maximum number of events stored in the Administration Server database: **Modify** • Specify the maximum number of events that can be sent by the Administration Server: **Modify** • Specify time period during which events can be sent by the Administration Server: **Modify**			
General features: **Kaspersky software deployment**	• **Manage Kaspersky patches** • **Read** • **Modify** • **Execute** • **Perform operations on device selections**	Approve or decline installation of the patch: **Manage Kaspersky patches**	None	• "Report on license key usage by virtual Administration Server" • "Report on Kaspersky software versions" • "Report on incompatible applications" • "Report on versions of Kaspersky software module updates" • "Report on protection deployment"	Installation package: "Kaspersky"
General features: **Key management**	• **Export key file** • **Modify**	• Export key file: **Export key file** • Modify Administration Server license key settings: **Modify**	None	None	None
General features: **Enforced report management**	• **Read** • **Modify**	• Create reports regardless of their ACLs: **Write** • Execute reports regardless of their ACLs: **Read**	None	None	None
General features: **Hierarchy of**	**Configure hierarchy of**	• Register, update, or delete secondary Administration	None	None	None

Administration Servers	**Administration Servers**	Servers: **Configure hierarchy of Administration Servers**			
General features: **User permissions**	**Modify object ACLs**	• Change Security properties of any object: **Modify object ACLs** • Manage user roles: **Modify object ACLs** • Manage internal users: **Modify object ACLs** • Manage security groups: **Modify object ACLs** • Manage aliases: **Modify object ACLs**	None	None	None
General features: **Virtual Administration Servers**	• **Manage virtual Administration Servers** • **Read** • **Modify** • **Execute** • **Perform operations on device selections**	• Get list of virtual Administration Servers: **Read** • Get information on the virtual Administration Server: **Read** • Create, update, or delete a virtual Administration Server: **Manage virtual Administration Servers** • Move a virtual Administration Server to another group: **Manage virtual Administration Servers** • Set administration virtual Server permissions: **Manage virtual Administration Servers**	None	None	None

Predefined user roles

User roles assigned to Kaspersky Security Center Linux users provide them with sets of access rights to application features.

You can use the predefined user roles with already configured set of rights, or create new roles and configure the required rights yourself. Some of the predefined user roles available in Kaspersky Security Center Linux can be associated with specific job positions, for example, **Auditor**, **Security Officer**, **Supervisor**. Access rights of these roles are pre-configured in accordance with the standard tasks and scope of duties of the associated positions. The table below shows how roles can be associated with specific job positions.

Examples of roles for specific job positions

Role	Comment
Auditor	Permits all operations with all types of reports, all viewing operations, including viewing deleted objects (grants the **Read** and **Write** permissions in the **Deleted objects** area). Does not permit other operations. You can assign this role to a person who performs the audit of your organization.
Supervisor	Permits all viewing operations; does not permit other operations. You can assign this role to a security officer and other managers in charge of the IT security in your organization.
Security Officer	Permits all viewing operations, permits reports management; grants limited permissions in the **System management**: **Connectivity** area. You can assign this role to an officer in charge of the IT security in your organization.

The table below shows the access rights assigned to each predefined user role.

Features of the functional areas **Mobile Device Management: General** and **System management** are not available in Kaspersky Security Center Linux. A user with the roles **Vulnerability and Patch Management Administrator/Operator**, and **Mobile Device Management Administrator/Operator** have access only for rights from the **General features**: **Basic** functional area.

Access rights of predefined user roles

Role	Description
Administration Server Administrator	Permits all operations in the following functional areas, in **General features**: • **Basic functionality** • **Event processing** • **Hierarchy of Administration Servers** • **Virtual Administration Servers**
Administration Server Operator	Grants the **Read** and **Execute** rights in all of the following functional areas, in **General features**: • **Basic functionality** • **Virtual Administration Servers**
Auditor	Permits all operations in the following functional areas, in **General features**: • **Access objects regardless of their ACLs** • **Deleted objects** • **Enforced report management** You can assign this role to a person who performs the audit of your organization.
Installation Administrator	Permits all operations in the following functional areas, in **General features**: • **Basic functionality** • **Kaspersky software deployment** • **License key management** Grants **Read** and **Execute** rights in the **General features: Virtual Administration Servers** functional area.
Installation Operator	Grants the **Read** and **Execute** rights in all of the following functional areas, in **General features**: • **Basic functionality** • **Kaspersky software deployment** (also grants the **Manage Kaspersky Lab patches** right in this area) • **Virtual Administration Servers**
Kaspersky Endpoint Security Administrator	Permits all operations in the following functional areas: • **General features: Basic functionality** • Kaspersky Endpoint Security area, including all features
Kaspersky Endpoint Security Operator	Grants the **Read** and **Execute** rights in all of the following functional areas: • **General features: Basic functionality** • Kaspersky Endpoint Security area, including all features
Main Administrator	Permits all operations in functional areas, *except* for the following areas, in **General features**: • **Access objects regardless of their ACLs** • **Enforced report management**
Main Operator	Grants the **Read** and **Execute** (where applicable) rights in all of the following functional areas:

	• **General features**: • **Basic functionality** • **Deleted objects** • **Operations on Administration Server** • **Kaspersky Lab software deployment** • **Virtual Administration Servers** • Kaspersky Endpoint Security area, including all features
Mobile Device Management Administrator	Permits all operations in the **General features: Basic functionality** functional area.
Security Officer	Permits all operations in the following functional areas, in **General features**: • **Access objects regardless of their ACLs** • **Enforced report management** Grants the **Read**, **Modify**, **Execute**, **Save files from devices to the administrator's workstation**, and **Perform operations on device selections** rights in the **System management: Connectivity** functional area. You can assign this role to an officer in charge of the IT security in your organization.
Self Service Portal User	Permits all operations in the **Mobile Device Management: Self Service Portal** functional area. This feature is not supported in Kaspersky Security Center 11 and later version.
Supervisor	Grants the **Read** right in the **General features**: **Access objects regardless of their ACLs** and **General features**: **Enforced report management** functional areas. You can assign this role to a security officer and other managers in charge of the IT security in your organization.

Adding an account of an internal user

To add a new internal user account to Kaspersky Security Center Linux:

1. In the main menu, go to **USERS & ROLES**, and then select the **Users** tab.
2. Click **Add**.
3. In the **Add user** window that opens, specify the settings of the new user account:
   - **Name**.
   - **Password** for the user connection to Kaspersky Security Center Linux.
     The password must comply with the following rules:
     - The password must be 8 to 16 characters long.
     - The password must contain characters from at least three of the groups listed below:
       - Uppercase letters (A-Z)
       - Lowercase letters (a-z)
       - Numbers (0-9)
       - Special characters (@ # $ % ^ & * - _ ! + = [ ] { } | : ' , . ? / \ ` ~ " ( ) ;)

- The password must not contain any whitespaces, Unicode characters, or the combination of "." and "@", when "." is placed before "@".

To see the characters that you entered, click and hold the **Show** button.

The number of attempts for entering the password is limited. By default, the maximum number of allowed password entry attempts is 10. You can change the allowed number of attempts to enter a password, as described in "Changing the number of allowed password entry attempts".

If the user enters an invalid password the specified number of times, the user account is blocked for one hour. You can unblock the user account only by changing the password.

4. Click **Save** to save the changes.

A new user account is added to the user list.

Creating a security group

To create a security group:

1. In the main menu, go to **USERS & ROLES** → **USERS**.
2. Click **Add**.
3. In the **New entity** window opens, select **Group**.
4. Specify the following settings for the new security group:
   - **Group name**
   - **Description**
5. Click **OK** to save the changes.

The new security group appears in the list of users and security groups.

Editing an account of an internal user

To edit an internal user account in Kaspersky Security Center Linux:

1. In the main menu, go to **USERS & ROLES**, and then select the **Users** tab.
2. Click the name of the user account that you want to edit.
3. In the user settings window that opens, on the **General** tab, change the settings of the user account:
   - **Description**

- **Full name**
- **Email address**
- **Main phone**
- **Set new password** for the user connection to Kaspersky Security Center Linux.
  The password must comply with the following rules:
  - The password must be 8 to 16 characters long.
  - The password must contain characters from at least three of the groups listed below:
    - Uppercase letters (A-Z)
    - Lowercase letters (a-z)
    - Numbers (0-9)
    - Special characters (@ # $ % ^ & * - _ ! + = [ ] { } | : ' , . ? / \ ` ~ " ( ) ;)
  - The password must not contain any whitespaces, Unicode characters, or the combination of "." and "@", when "." is placed before "@".

  To see the entered password, click and hold the **Show** button.

  The number of attempts for entering the password is limited. By default, the maximum number of allowed password entry attempts is 10. You can change the allowed number of attempts; however, for security reasons, we do not recommend that you decrease this number. If the user enters an invalid password the specified number of times, the user account is blocked for one hour. You can unblock the user account only by changing the password.

- If necessary, switch the toggle button to **Disabled** to prohibit the user from connecting to the application. You can disable an account, for example, after an employee leaves the company.

4. On the **Authentication security** tab, you can specify the security settings for this account.
5. On the **Groups** tab, you can add the user to security groups.
6. On the **Devices** tab, you can assign devices to the user.
7. On the **Roles** tab, you can assign roles to the user.
8. Click **Save** to save the changes.

The updated user account appears in the list of users.

Editing a security group

You can edit only internal groups.

To edit a security group:

1. In the main menu, go to **USERS & ROLES** → **USERS**.
2. Click the name of the security group that you want to edit.
3. In the group settings window that opens, change the settings of the security group:
   - **Name**
   - **Description**
4. Click **Save** to save the changes.

The updated security group appears in the list of users and security groups.

Adding user accounts to an internal group

You can add only accounts of internal users to an internal group.

To add user accounts to an internal group:

1. In the main menu, go to **USERS & ROLES** → **USERS**.
2. Select check boxes next to user accounts that you want to add to a group.
3. Click the **Assign group** button.
4. In the **Assign group** window that opens, select the group to which you want to add user accounts.
5. Click the **Assign** button.

The user accounts are added to the group.

Assigning a user as a device owner

For information about assigning a user as a mobile device owner, see Kaspersky Security for Mobile Help.

To assign a user as a device owner:

1. In the main menu, go to **USERS & ROLES** → **USERS**.
2. Click the name of the user account that you want to assign as a device owner.
3. In the user settings window that opens, select the **Devices** tab.
4. Click **Add**.

5. From the device list, select the device that you want to assign to the user.
6. Click **OK**.

The selected device is added to the list of devices assigned to the user.

You can perform the same operation at **DEVICES → MANAGED DEVICES**, by clicking the name of the device that you want to assign, and then clicking the **Manage device owner** link.

Deleting a user or a security group

You can delete only internal users or internal security groups.

To delete a user or a security group:

1. In the main menu, go to **USERS & ROLES → USERS**.
2. Select the check box next to the user or the security group that you want to delete.
3. Click **Delete**.
4. In the window that opens, click **OK**.

The user or the security group is deleted.

Creating a user role

To create a user role:

1. In the main menu, go to **USERS & ROLES → Roles**.
2. Click **Add**.
3. In the **New role name** window that opens, enter the name of the new role.
4. Click **OK** to apply the changes.
5. In the role properties window that opens, change the settings of the role:
   - On the **General** tab, edit the role name.
     You cannot edit the name of a predefined role.
   - On the **Settings** tab, edit the role scope and policies and profiles associated with the role.
   - On the **Access rights** tab, edit the rights for access to Kaspersky applications.
6. Click **Save** to save the changes.

The new role appears in the list of user roles.

Editing a user role

To edit a user role:

1. In the main menu, go to **USERS & ROLES** → **Roles**.
2. Click the name of the role that you want to edit.
3. In the role properties window that opens, change the settings of the role:
   - On the **General** tab, edit the role name.
     You cannot edit the name of a predefined role.
   - On the **Settings** tab, edit the role scope and policies and profiles associated with the role.
   - On the **Access rights** tab, edit the rights for access to Kaspersky applications.
4. Click **Save** to save the changes.

The updated role appears in the list of user roles.

Editing the scope of a user role

A *user role scope* is a combination of users and administration groups. Settings associated with a user role apply only to devices that belong to users who have this role, and only if these devices belong to groups associated with this role, including child groups.

To add users, security groups, and administration groups to the scope of a user role, you can use either of the following methods:

Method 1:

1. In the main menu, go to **USERS & ROLES** → **USERS**.
2. Select check boxes next to the users and security groups that you want to add to the user role scope.
3. Click the **Assign role** button.
   The Role Assignment Wizard starts. Proceed through the Wizard by using the **Next** button.
4. On the **Select role** step, select the user role that you want to assign.
5. On the **Define scope** step, select the administration group that you want to add to the user role scope.
6. Click the **Assign role** button to close the Wizard.

The selected users or security groups and the selected administration group are added to the scope of the user role.

Method 2:

1. In the main menu, go to **USERS & ROLES** → **Roles**.
2. Click the name of the role for which you want to define the scope.
3. In the role properties window that opens, select the **Settings** tab.
4. In the **Role scope** section, click **Add**.

   The Role Assignment Wizard starts. Proceed through the Wizard by using the **Next** button.
5. On the **Define scope** step, select the administration group that you want to add to the user role scope.
6. On the **Select users** step, select users and security groups that you want to add to the user role scope.
7. Click the **Assign role** button to close the Wizard.
8. Close the role properties window.

The selected users or security groups and the selected administration group are added to the scope of the user role.

Method 3:

1. In the main menu, click the settings icon ( ) next to the name of the required Administration Server.

   The Administration Server properties window opens.
2. On the **Access rights** tab, select the check box next to the name of the user or the security group that you want to add to the user role scope, and then click the **Roles** button.

   You cannot select multiple users or security groups at the same time. If you select more than one item, the **Roles** button will be disabled.
3. In the **Roles** window, select the user role that you want to assign, and then click **OK** and save changes.

   The selected users or security groups are added to the scope of the user role.

Deleting a user role

To delete a user role:

1. In the main menu, go to **USERS & ROLES** → **Roles**.
2. Select the check box next to the name of the role that you want to delete.
3. Click **Delete**.
4. In the window that opens, click **OK**.

The user role is deleted.

Associating policy profiles with roles

You can associate user roles with policy profiles. In this case, the activation rule for this policy profile is based on the role: the policy profile becomes active for a user that has the specified role.

For example, the policy bars any GPS navigation software on all devices in an administration group. GPS navigation software is necessary only on a single device in the Users administration group—the device owned by a courier. In this case, you can assign a "Courier" role to its owner, and then create a policy profile allowing GPS navigation software to run only on the devices whose owners are assigned the "Courier" role. All the other policy settings are preserved. Only the user with the role "Courier" will be allowed to run GPS navigation software. Later, if another worker is assigned the "Courier" role, the new worker also can run navigation software on your organization's device. Running GPS navigation software will still be prohibited on other devices in the same administration group.

To associate a role with a policy profile:

1. In the main menu, go to **USERS & ROLES** → **Roles**.
2. Click the name of the role that you want to associate with a policy profile.

   The role properties window opens with the **General** tab selected.
3. Select the **Settings** tab, and scroll down to the **Policies & Profiles** section.
4. Click **Edit**.
5. To associate the role with:

   - **An existing policy profile**—Click the chevron icon (>) next to the required policy name, and then select the check box next to the profile with which you want to associate the role.
   - **A new policy profile**:

     a. Select the check box next to the policy for which you want to create a profile.

     b. Click **New policy profile**.

     c. Specify a name for the new profile and configure the profile settings.

     d. Click the **Save** button.

     e. Select the check box next to the new profile.
6. Click **Assign to role**.

The profile is associated with the role and appears in the role properties. The profile applies automatically to any device whose owner is assigned the role.

Propagating user roles to secondary Administration Servers

By default, the lists of user roles of the primary and secondary Administration Servers are independent. You can configure the application to automatically propagate the user roles created on the primary Administration Server to all of the secondary Administration Servers. The user roles can also be propagated from a secondary Administration Server to its own secondary Administration Servers.

To propagate user roles from the primary Administration Server to the secondary Administration Servers:

1. In the main menu, click the settings icon ( ) next to the name of the required Administration Server.

   The Administration Server properties window opens with the **General** tab selected.

2. Go to the **Hierarchy of Administration Servers** section.

3. Enable the **Relay list of roles to secondary Administration Servers** option, and then click the **Save** button.

   The application copies the user roles of the primary Administration Server to the secondary Administration Servers.

When the **Relay list of roles to secondary Administration Servers** option is enabled and the user roles are propagated, they cannot be edited or deleted on the secondary Administration Servers. When you create a new role or edit an existing one on the primary Administration Server, the changes are automatically copied to the secondary Administration Servers. When you delete a user role on the primary Administration Server, this role remains on the secondary Administration Servers afterward, but it can be edited or deleted.

The roles that are propagated to the secondary Administration Server from the primary Server are displayed with green check marks (✓). You cannot edit these roles on the secondary Administration Server.

If you create a role on the primary Administration Server, and there is a role with the same name on its secondary Administration Server, the new role is copied to the secondary Administration Server with the index added to its name, for example, ~~1, ~~2 (the index can be random).

If you disable the **Relay list of roles to secondary Administration Servers** option, all the user roles remain on the secondary Administration Servers, but they become independent from those on the primary Administration Server. After becoming independent, the user roles on the secondary Administration Servers can be edited or deleted.

Managing object revisions

This section contains information about object revision management. Kaspersky Security Center Linux allows you to track object modification. Every time you save changes made to an object, a *revision* is created. Each revision has a number.

Application objects that support revision management include:

- Administration Server properties
- Policies
- Tasks
- Administration groups
- User accounts
- Installation packages

You can view the revision list and roll back changes made to an object to a selected revision.

In the properties window of any object that supports revision management, the **Revision history** section displays a list of object revisions with the following details:

- **Revision**—Object revision number.
- **Time**—Date and time the object was modified.
- **User**—Name of the user who modified the object.
- **Action**—Action performed on the object.
- **Description**—Description of the revision related to the change made to the object settings.

  By default, the object revision description is blank. To add a description to a revision, select the relevant revision and click the **Edit description** button. In the opened window, enter some text for the revision description.

Rolling back an object to a previous revision

You can roll back changes made to an object, if necessary. For example, you may have to revert the settings of a policy to their state on a specific date.

To roll back changes made to an object:

1. In the object's properties window, open the **Revision history** tab.
2. In the list of object revisions, select the revision that you want to roll back changes for.
3. Click the **Roll back** button.
4. Click **OK** to confirm the operation.

   The object is now rolled back to the selected revision. The list of object revisions displays a record of the action that was taken. The revision description displays information about the number of the revision to which you reverted the object.

Rolling back operation is available only for policy and task objects.

Deletion of objects

This section provides information about deleting objects and viewing information about objects after they are deleted.

You can delete objects, including the following:

- Policies
- Tasks

- Installation packages
- Virtual Administration Servers
- Users
- Security groups
- Administration groups

When you delete an object, information about it remains in the database. The storage term for information about the deleted objects is the same as the storage term for object revisions (the recommended term is 90 days). You can change the storage term only if you have the **Modify** permission in the **Deleted objects** area of rights.

About deletion of client devices

When you delete a managed device from an administration group, the application moves the device to the Unassigned devices group. After device deletion, the installed Kaspersky applications—Network Agent and any security application, for example Kaspersky Endpoint Security—remain on the device.

Kaspersky Security Center 14 Linux handles the devices in the Unassigned devices group according to the following rules:

- If you have configured device moving rules and a device meets the criteria of a moving rule, the device is automatically moved to an administration group according to the rule.
- The device is stored in the Unassigned devices group and automatically removed from the group according to the device retention rules.

When you delete a device from the Unassigned devices group manually, the application removes the device from the list. After device deletion, the installed Kaspersky applications (if any) remain on the device. Then, if the device is still visible to Administration Server and you have configured regular network polling, Kaspersky Security Center 14 Linux discovers the device during the network polling and adds it back to the Unassigned devices group. Therefore, it is reasonable to delete a device manually only if the device is invisible to Administration Server.

Using the klscflag utility to open port 13291

You can automate the Kaspersky Security Center operation using the klakaut utility. The klakaut utility and a Help system for it are located in the Kaspersky Security Center installation folder. If you want to use the klakaut utility, open the 13291 port by using the klscflag utility.

The klscflag utility changes the value of the KLSRV_SP_SERVER_SSL_PORT_GUI_OPEN parameter.

To open port 13291:

1. Execute the following command in the command line:
   ```
   $ /opt/kaspersky/ksc64/sbin/klscflag -ssvset -pv klserver -s 87 -n
   KLSRV_SP_SERVER_SSL_PORT_GUI_OPEN -sv true -svt BOOL_T -ss "|ss_type =
   \"SS_SETTINGS\";"
   ```
2. Restart the Kaspersky Security Center Administration Server service by executing the following command:
   ```
   $ sudo systemctl restart kladminserver_srv
   ```

Port 13291 is open.

To check if port 13291 has been successfully open:

Execute the following command in the command line:

```
$ /opt/kaspersky/ksc64/sbin/klscflag -ssvget -pv klserver -s 87 -n
KLSRV_SP_SERVER_SSL_PORT_GUI_OPEN -svt BOOL_T -ss "|ss_type = \"SS_SETTINGS\";"
```

This command returns the following result:

```
+--- (PARAMS_T)
+---KLSRV_SP_SERVER_SSL_PORT_GUI_OPEN = (BOOL_T)true
```

The `true` value means that the port is open. Otherwise, the `false` value is displayed.

Using the klscflag utility to open the OpenAPI port

The OpenAPI port is used by Kaspersky Security Center 14 Web Console to connect to the Administration Server. The default value for the OpenAPI port is 13299.

To open the OpenAPI port:

1. Execute the following command in the command line:
   ```
   $ /opt/kaspersky/ksc64/sbin/klscflag -ssvset -pv klserver -s 87 -n
   KLSRV_SP_OPEN_OAPI_PORT -sv true -svt BOOL_T -ss "|ss_type = \"SS_SETTINGS\";"
   ```
2. Restart the Kaspersky Security Center Administration Server service by executing the following command:
   ```
   $ sudo systemctl restart kladminserver_srv
   ```

The OpenAPI port is open.

To check if the OpenAPI port has been opened successfully, execute the following command in the command line:

```
$ /opt/kaspersky/ksc64/sbin/klscflag -ssvget -pv klserver -s 87 -n
KLSRV_SP_OPEN_OAPI_PORT -svt BOOL_T -ss "|ss_type = \"SS_SETTINGS\";"
```

This command returns the following result:

```
+--- (PARAMS_T)
+---KLSRV_SP_OPEN_OAPI_PORT = (BOOL_T)true
```

The `true` value means that the port is open. Otherwise, the `false` value is displayed.

Updating Kaspersky databases and applications

This section describes steps you must take to regularly update the following:

- Kaspersky databases and software modules
- Installed Kaspersky applications, including Kaspersky Security Center components and security applications

Updates functionality (including providing anti-virus signature updates and codebase updates), as well as KSN functionality may not be available in the software in the U.S.

Scenario: Regular updating Kaspersky databases and applications

This section provides a scenario for regular updating of Kaspersky databases, software modules, and applications. After you complete the Configuring network protection scenario, you must maintain the reliability of the protection system to make sure that the Administration Servers and managed devices are kept protected against various threats, including viruses, network attacks, and phishing attacks.

Network protection is kept up-to-date by regular updates of the following:

- Kaspersky databases and software modules
- Installed Kaspersky applications, including Kaspersky Security Center components and security applications

When you complete this scenario, you can be sure of the following:

- Your network is protected by the most recent Kaspersky software, including Kaspersky Security Center Linux components and security applications.
- The anti-virus databases and other Kaspersky databases critical for the network safety are always up-to-date.

Prerequisites

The managed devices must have a connection to the Administration Server. If they do not have a connection, consider updating Kaspersky databases and software modules manually or directly from the Kaspersky update servers.

Administration Server must have a connection to the internet.

Before you start, make sure that you have done the following:

1. Deployed the Kaspersky security applications to the managed devices according to the scenario of deploying Kaspersky applications through Kaspersky Security Center 14 Web Console.
2. Created and configured all required policies, policy profiles, and tasks according to the scenario of configuring network protection.
3. Assigned an appropriate amount of distribution points in accordance with the number of managed devices and the network topology.

Updating Kaspersky databases and applications proceeds in stages:

1. **Choosing an update scheme**

   There are several schemes that you can use to install updates to Kaspersky Security Center components and security applications. Choose the scheme or several schemes that meet the requirements of your network best.

2. **Creating the task for downloading updates to the repository of the Administration Server**

   This task is created automatically by Kaspersky Security Center Quick Start Wizard. If you did not run the Wizard, create the task now.

   This task is required to download updates from Kaspersky update servers to the repository of the Administration Server, as well as to update Kaspersky databases and software modules for Kaspersky Security Center. After the updates are downloaded, they can be propagated to the managed devices.

   If your network has assigned distribution points, the updates are automatically downloaded from the Administration Server repository to the repositories of the distribution points. In this case the managed devices included in the scope of a distribution point download the updates from the repository of the distribution point instead of the Administration Server repository.

   How-to instructions: Creating the task for downloading updates to the repository of the Administration Server

3. **Creating the task for downloading updates to the repositories of distribution points (optional)**

   By default, the updates are downloaded to the distribution points from the Administration server. You can configure Kaspersky Security Center to download the updates to the distribution points directly from Kaspersky update servers. Download to the repositories of distribution points is preferable if the traffic between the Administration Server and the distribution points is more expensive than the traffic between the distribution points and Kaspersky update servers, or if your Administration Server does not have internet access.

   When your network has assigned distribution points and the *Download updates to the repositories of distribution points* task is created, the distribution points download updates from Kaspersky update servers, and not from the Administration Server repository.

   How-to instructions: Creating the task for downloading updates to the repositories of distribution points

4. **Configuring distribution points**

   When your network has assigned distribution points, make sure that the **Deploy updates** option is enabled in the properties of all required distribution points. When this option is disabled for a distribution point, the devices included in the scope of the distribution point download updates from the repository of the Administration Server.

5. **Optimizing the update process by using the diff files (optional)**

   You can optimize traffic between the Administration Server and the managed devices by using diff files. When this feature is enabled, the Administration Server or a distribution point downloads diff files instead of entire files of Kaspersky databases or software modules. A diff file describes the differences between two versions of a file of a database or software module. Therefore, a diff file occupies less space than an entire file. This results in decrease in the traffic between the Administration Server or distribution points and the managed devices. To use this feature, enable the **Download diff files** option in the properties of the *Download updates to the Administration Server repository* task and/or the *Download updates to the repositories of distribution points* task.

   How-to instructions: Using diff files for updating Kaspersky databases and software modules

6. **Configuring automatic installation of updates for the security applications**

   Create the *Update* tasks for the managed applications to provide timely updates to the software modules and Kaspersky databases, including anti-virus databases. To ensure timely updates, we recommend that you select the **When new updates are downloaded to the repository** option when configuring the task schedule.

   If your network includes IPv6-only devices and you want to regularly update the security applications installed on these devices, make sure that the Administration Server version 13.2 and the Network Agent version 13.2 are installed on managed devices.

If an update requires reviewing and accepting the terms of the End User License Agreement, then you first need to accept the terms. After that the update can be propagated to the managed devices.

Results

Upon completion of the scenario, Kaspersky Security Center Linux is configured to update Kaspersky databases after the updates are downloaded to the repository of the Administration Server. You can then proceed to monitoring the network status.

About updating Kaspersky databases, software modules, and applications

To be sure that the protection of your Administration Servers and managed devices is up-to-date, you must provide timely updates of the following:

- Kaspersky databases and software modules

  Before downloading Kaspersky databases and software modules, Kaspersky Security Center checks if Kaspersky servers are accessible. If access to the servers using system DNS is not possible, the application uses public DNS. This is necessary to make sure anti-virus databases are updated and the level of security is maintained for the managed devices.

- Installed Kaspersky applications, including Kaspersky Security Center components and security applications

  Kaspersky Security Center cannot update Kaspersky applications automatically. To update the applications, download the latest application versions from the Kaspersky website, and install them manually:

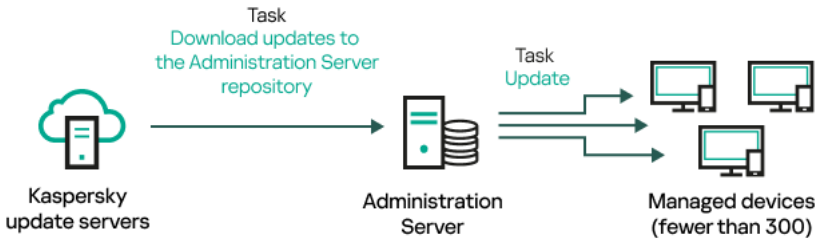
  - Kaspersky Security Center Administration Server, Kaspersky Security Center 14 Web Console
  - Network Agent, Kaspersky Endpoint Security for Linux, management web plug-in

Depending on the configuration of your network, you can use the following schemes of downloading and distributing the required updates to the managed devices:

- By using a single task: *Download updates to the Administration Server repository*
- By using two tasks:
  - The *Download updates to the Administration Server repository* task
  - The *Download updates to the repositories of distribution points* task
- Manually through a local folder, a shared folder, or an FTP server
- Directly from Kaspersky update servers to Kaspersky Endpoint Security for Linux on the managed devices
- Through a local or network folder if Administration Server has no internet connection

Using the Download updates to the Administration Server repository task

In this scheme, Kaspersky Security Center downloads updates through the *Download updates to the Administration Server repository* task. In small networks that contain less than 300 managed devices in a single network segment or less than 10 managed devices in each network segment, the updates are distributed to the managed devices directly from the Administration Server repository (see figure below).



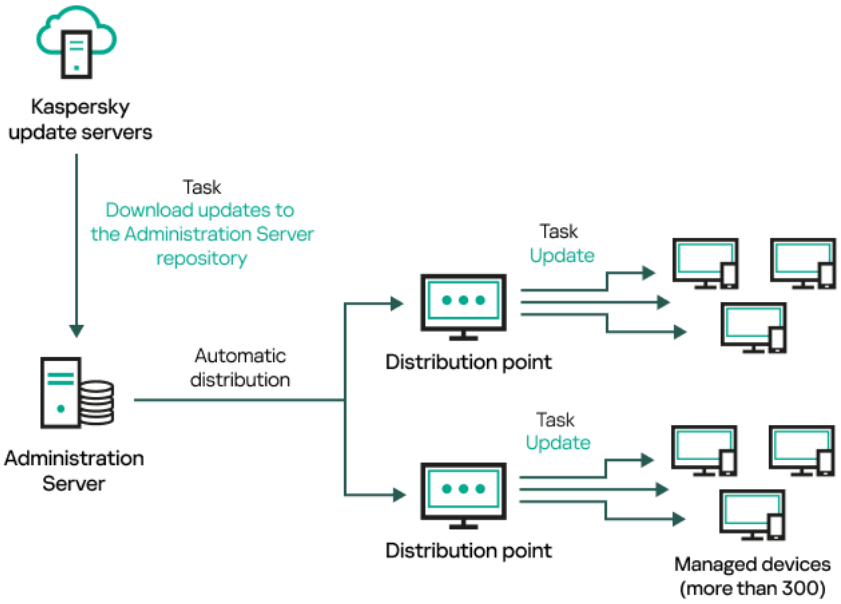
Updating by using the Download updates to the Administration Server repository task without distribution points

As a source of updates, you can use not only Kaspersky update servers, but also a local or network folder.

By default, the Administration Server communicates with Kaspersky update servers and downloads updates by using the HTTPS protocol. You can configure the Administration Server to use the HTTP protocol instead of HTTPS.

If your network contains 300 managed devices or more in a single network segment or if your network consists of several network segments with more than 9 managed devices in each network segment, we recommend that you use distribution points to propagate the updates to the managed devices (see figure below). Distribution points reduce the load on the Administration Server and optimize traffic between the Administration Server and the managed devices. You can calculate the number and configuration of distribution points required for your network.

In this scheme, the updates are automatically downloaded from the Administration Server repository to the repositories of the distribution points. The managed devices included in the scope of a distribution point download the updates from the repository of the distribution point instead of the Administration Server repository.



Updating by using the Download updates to the Administration Server repository task with distribution points

When the *Download updates to the Administration Server repository* task is complete, the updates for Kaspersky databases and software modules for Kaspersky Endpoint Security for Linux are downloaded to the Administration Server repository. These updates are installed through the Update task for Kaspersky Endpoint Security for Linux.

The Download updates to the repository of the Administration Server task is not available on virtual Administration Servers. The repository of the virtual Administration Server displays updates downloaded to the primary Administration Server.

You can configure the updates to be verified for operability and errors on a set of test devices. If the verification is successful, the updates are distributed to other managed devices.

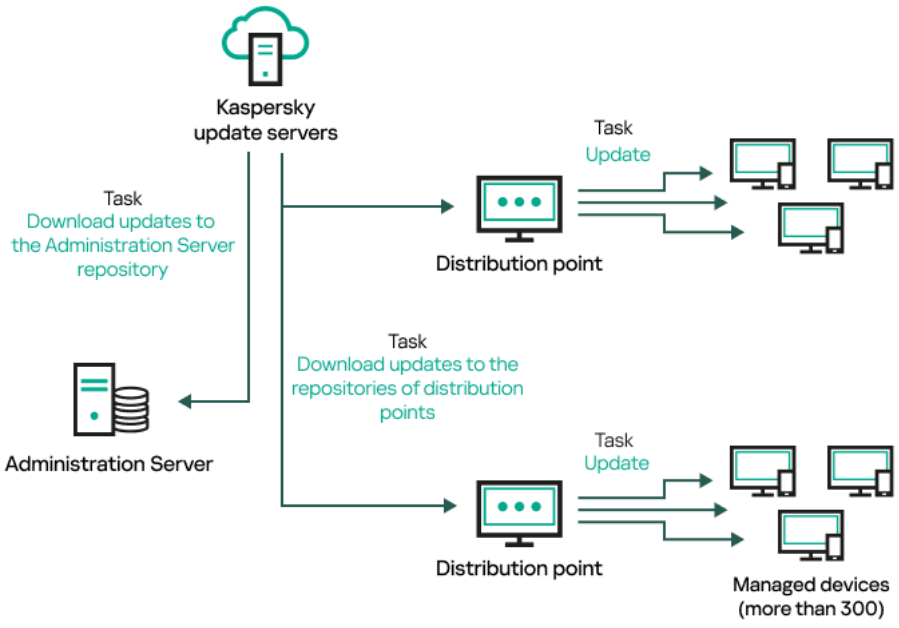
Each Kaspersky application requests required updates from Administration Server. Administration Server aggregates these requests and downloads only those updates that are requested by any application. This ensures that the same updates are not downloaded multiple times and that unnecessary updates are not downloaded at all. When running the *Download updates to the Administration Server repository* task, Administration Server sends the following information to Kaspersky update servers automatically in order to ensure the downloading of relevant versions of Kaspersky databases and software modules:

- Application ID and version
- Application setup ID
- Active key ID
- *Download updates to the repository of the Administration Server* task run ID

None of the transmitted information contains personal or other confidential data. AO Kaspersky Lab protects information in accordance with requirements established by law.

Using two tasks: the Download updates to the Administration Server repository task and the Download updates to the repositories of distribution points task

You can download updates to the repositories of distribution points directly from the Kaspersky update servers instead of the Administration Server repository, and then distribute the updates to the managed devices (see figure below). Download to the repositories of distribution points is preferable if the traffic between the Administration Server and the distribution points is more expensive than the traffic between the distribution points and Kaspersky update servers, or if your Administration Server does not have internet access.



Updating by using the Download updates to the Administration Server repository task and the Download updates to the repositories of distribution points task

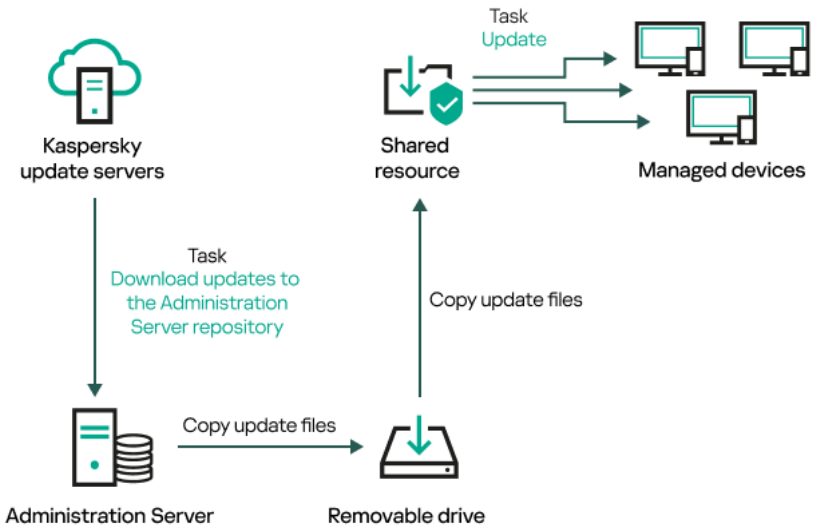
By default, the Administration Server and distribution points communicate with Kaspersky update servers and download updates by using the HTTPS protocol. You can configure the Administration Server and/or distribution points to use the HTTP protocol instead of HTTPS.

To implement this scheme, create the *Download updates to the repositories of distribution points* task in addition to the *Download updates to the Administration Server repository* task. After that the distribution points will download updates from Kaspersky update servers, and not from the Administration Server repository.

The *Download updates to the Administration Server repository* task is also required for this scheme, because this task is used to download Kaspersky databases and software modules for Kaspersky Security Center.

Manually through a local folder, a shared folder, or an FTP server

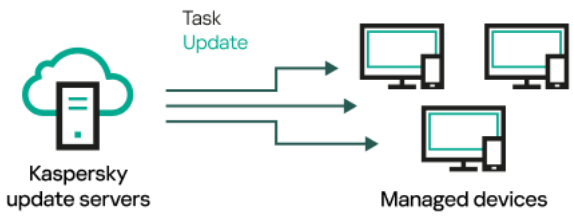
If the client devices do not have a connection to the Administration Server, you can use a local folder or a shared resource as a source for updating Kaspersky databases, software modules, and applications. In this scheme, you need to copy required updates from the Administration Server repository to a removable drive, then copy the updates to the local folder or the shared resource specified as an update source in the settings of Kaspersky Endpoint Security for Linux (see figure below).



Updating through a local folder, a shared folder, or an FTP server

Directly from Kaspersky update servers to Kaspersky Endpoint Security for Linux on the managed devices

On the managed devices, you can configure Kaspersky Endpoint Security for Linux to receive updates directly from Kaspersky update servers (see figure below).



Updating security applications directly from Kaspersky update servers

In this scheme, the security application does not use the repository provided by Kaspersky Security Center. To receive updates directly from Kaspersky update servers, specify Kaspersky update servers as an update source in the security application. For a full description of these settings, please refer to the Kaspersky Endpoint Security for Linux documentation.

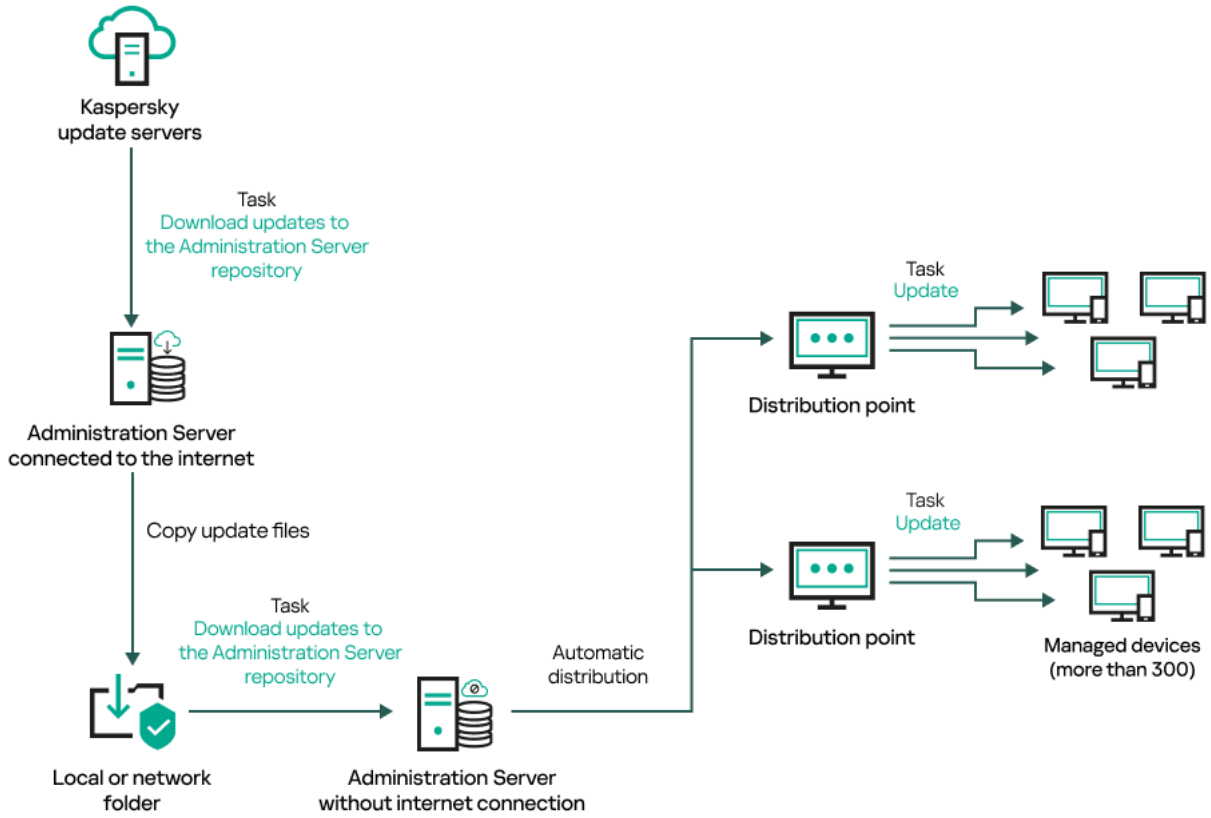
Through a local or network folder if Administration Server has no internet connection

If Administration Server has no internet connection, you can configure the *Download updates to the Administration Server repository* task to download updates from a local or network folder. In this case, you must copy the required update files to the specified folder from time to time. For example, you can copy the required update files from one of the following sources:

- Administration Server that has an internet connection (see the figure below)

  Because an Administration Server downloads only the updates that are requested by the security applications, the sets of security applications managed by the Administration Servers—the one that has an internet connection and the one that does not—must match.

  If the Administration Server that you use to download updates has version 13.2 or earlier, open properties of the *Download updates to the Administration Server repository* task, and then enable the **Download updates by using the old scheme** option.



Updating through a local or network folder if Administration Server has no internet connection

- Kaspersky Update Utility

  Because this utility uses the old scheme to download updates, open properties of the *Download updates to the Administration Server repository* task, and then enable the *Download updates by using the old scheme* option.

Creating the Download updates to the Administration Server repository task

The *Download updates to the Administration Server repository* task allows you to download updates of databases and software modules for Kaspersky security applications from Kaspersky update servers to the Administration Server repository.

The Kaspersky Security Center Quick Start Wizard automatically creates the *Download updates to the Administration Server repository* task of the Administration Server. In the list of tasks, there can only be one *Download updates to the Administration Server repository* task. You can create this task again if it is removed from the task list of the Administration Server.

After the *Download updates to the Administration Server repository* task is complete and the updates are downloaded, they can be propagated to the managed devices.

Before you distribute updates to the managed devices, you can run the *Update verification* task. This allows you to make sure that Administration Server installs the downloaded updates properly and a security level is not decreased because of the updates. To verify them before distributing, configure the **Run update verification** option in the *Download updates to the Administration Server repository* task settings.

To create a Download updates to the Administration Server repository task:

1. Go to **DEVICES** → **TASKS**.
2. Click **Add**.

   The New Task Wizard starts. Follow the steps of the Wizard.
3. For the Kaspersky Security Center application, select the **Download updates to the Administration Server repository** task type.
4. Specify the name for the task that you are creating. A task name cannot be more than 100 characters long and cannot include any special characters ("*<>?\:|).
5. On the **Finish task creation** page, you can enable the **Open task details when creation is complete** option to open the task properties window and modify the default task settings. Otherwise, you can configure task settings later, at any time.
6. Click the **Finish** button.

   The task is created and displayed in the list of tasks.
7. Click the created task name to open the task properties window.
8. In the task properties window, on the **Application settings** tab, specify the following settings:

   - Sources of updates

As a source of updates, you can use Kaspersky update servers, a local or network folder, or a primary Administration Server.

In the *Download updates to the Administration Server repository* task and the *Download updates to the repositories of distribution points* task, user authentication does not work if you select a password-protected local or network folder as an update source. To resolve this issue, first mount the password-protected folder, and then specify the required credentials, for example, by means of the operating system. After that, you can select this folder as an update source in an update download task. Kaspersky Security Center will not require that you enter the credentials.

- **Folder for storing updates**

  The path to the specified folder for storing saved updates. You can copy the specified folder path to a clipboard. You cannot change the path to a specified folder for a group task.

- **Copy downloaded updates to additional folders**

  After the Administration Server receives updates, it copies them to the specified folders. Use this option if you want to manually manage the distribution of updates on your network.

  For example, you may want to use this option in the following situation: the network of your organization consists of several independent subnets, and devices from each of the subnets do not have access to other subnets. However devices in all of the subnets have access to a common network share. In this case, you set Administration Server in one of the subnets to download updates from Kaspersky update servers, enable this option, and then specify this network share. In downloaded updates to the repository tasks for other Administration Servers, specify the same network share as the update source.

  By default, this option is disabled.

- **Download diff files**

  This option enables the downloading diff files feature.

  By default, this option is disabled.

- **Download updates by using the old scheme**

Starting from version 14, Kaspersky Security Center downloads updates of databases and software modules by using the new scheme. For the application to download updates by using the new scheme, the update source must contain the update files with the metadata compatible with the new scheme. If the update source contains the update files with the metadata compatible with the old scheme only, enable the **Download updates by using the old scheme** option. Otherwise, the update download task will fail.

For example, you must enable this option when a local or network folder is specified as an update source and the update files in this folder were downloaded by one of the following applications:

- Kaspersky Update Utility

  This utility downloads updates by using the old scheme.

- Kaspersky Security Center 13 Linux

  For example, your Administration Server 1 does not have an internet connection. In this case, you may download updates by using an Administration Server 2 that has an internet connection, and then place the updates to a local or network folder to use it as an update source for the Administration Server 1. If the Administration Server 2 has version 13, enable the **Download updates by using the old scheme** option in the task for the Administration Server 1.

By default, this option is disabled.

- **Run update verification**

  Administration Server downloads updates from the source, saves them to a temporary repository, and runs the task defined in the **Update verification task** field. If the task completes successfully, the updates are copied from the temporary repository to a shared folder on the Administration Server and then distributed to all devices for which the Administration Server acts as the source of updates (tasks with the **When new updates are downloaded to the repository** schedule type are started). The task of downloading updates to the repository is finished only after completion of the *Update verification* task.

  By default, this option is disabled.

9. In the task properties window, on the **Schedule** tab, create a schedule for task start. If necessary, specify the following settings:

   - **Scheduled start**

     Select the schedule according to which the task runs, and configure the selected schedule.

     - **Manually** (selected by default)

       The task does not run automatically. You can only start it manually.

       By default, this option is selected.

     - **Every N minutes**

       The task runs regularly, with the specified interval in minutes, starting from the specified time on the day that the task is created.

       By default, the task runs every 30 minutes, starting from the current system time.

     - **Every N hours**

The task runs regularly, with the specified interval in hours, starting from the specified date and time.

By default, the task runs every 6 hours, starting from the current system date and time.

- **Every N days**

  The task runs regularly, with the specified interval in days. Additionally, you can specify a date and time of the first task run. These additional options become available, if they are supported by the application for which you create the task.

  By default, the task runs every day, starting from the current system date and time.

- **Every N weeks**

  The task runs regularly, with the specified interval in weeks, on the specified day of week and at the specified time.

  By default, the task runs every Friday at the current system time.

- **Daily (daylight saving time is not supported)**

  The task runs regularly, with the specified interval in days. This schedule does not support observance of daylight saving time (DST). It means that when clocks jump one hour forward or backward at the beginning or ending of DST, the actual task start time does not change.

  We do not recommend that you use this schedule. It is needed for backward compatibility of Kaspersky Security Center Linux.

  By default, the task starts every day at the current system time.

- **Weekly**

  The task runs every week on the specified day and at the specified time.

- **By days of week**

  The task runs regularly, on the specified days of the week, at the specified time.

  By default, the task runs every Friday at 6:00:00 PM.

- **Monthly**

  The task runs regularly, on the specified day of the month, at the specified time.

  In months that lack the specified day, the task runs on the last day.

  By default, the task runs on the first day of each month, at the current system time.

- **Every month on specified days of selected weeks**

  The task runs regularly, on the specified days of each month, at the specified time.

  By default, no days of month are selected. The default start time is 18:00.

- On completing another task

  The current task starts after another task completes. You can select how the previous task must complete (successfully or with error) to trigger the start of the current task. This parameter only works if both tasks are assigned to the same devices.

- Additional task settings:

  - Run missed tasks

    This option determines the behavior of a task if a client device is not visible on the network when the task is about to start.

    If this option is enabled, the system attempts to start the task the next time the Kaspersky application is run on the client device. If the task schedule is **Manually**, **Once** or **Immediately**, the task is started immediately after the device becomes visible on the network or immediately after the device is included in the task scope.

    If this option is disabled, only scheduled tasks run on client devices. For **Manually**, **Once** and **Immediately** schedule, tasks run only on those client devices that are visible on the network. For example, you may want to disable this option for a resource-consuming task that you want to run only outside of business hours.

    By default, this option is disabled.

  - Use automatically randomized delay for task starts

    If this option is enabled, the task is started on client devices randomly within a specified time interval, that is, *distributed task start*. A distributed task start helps to avoid a large number of simultaneous requests by client devices to the Administration Server when a scheduled task is running.

    The distributed start time is calculated automatically when a task is created, depending on the number of client devices to which the task is assigned. Later, the task is always started on the calculated start time. However, when task settings are edited or the task is started manually, the calculated value of the task start time changes.

    If this option is disabled, the task starts on client devices according to the schedule.

  - Use randomized delay for task starts within an interval of (min)

    If this option is enabled, the task is started on client devices randomly within the specified time interval. A distributed task start helps to avoid a large number of simultaneous requests by client devices to the Administration Server when a scheduled task is running.

    If this option is disabled, the task starts on client devices according to the schedule.

    By default, this option is disabled. The default time interval is one minute.

  - Stop task if it has been running longer than (min)

    After the specified time period expires, the task is stopped automatically, whether it is completed or not.

    Enable this option if you want to interrupt (or stop) tasks that take too long to execute.

    By default, this option is disabled. The default task execution time is 120 minutes.

10. Click the **Save** button.

The task is created and configured.

When Administration Server performs the *Download updates to the Administration Server repository* task, updates to databases and software modules are downloaded from the updates source and stored in the shared folder of Administration Server. If you create this task for an administration group, it will only be applied to Network Agents included in the specified administration group.

Updates are distributed to client devices and secondary Administration Servers from the shared folder of Administration Server.

Viewing downloaded updates

When Administration Server performs the *Download updates to the Administration Server repository* task, updates to databases and software modules are downloaded from the updates source and stored in the shared folder of Administration Server. You can view the downloaded updates in the **UPDATES FOR KASPERSKY DATABASES AND SOFTWARE MODULES** section.

To view the list of downloaded updates,

In the main menu, go to **OPERATIONS → KASPERSKY APPLICATIONS → UPDATES FOR KASPERSKY DATABASES AND SOFTWARE MODULES**.

A list of available updates appears.

Verifying downloaded updates

Before installing updates to the managed devices, you can first check the updates for operability and errors through the *Update verification* task. The *Update verification* task is performed automatically as part of the *Download updates to the Administration Server repository* task. The Administration Server downloads updates from the source, saves them in the temporary repository, and runs the *Update verification* task. If the task completes successfully, the updates are copied from the temporary repository to the Administration Server shared folder. They are distributed to all client devices for which the Administration Server is the source of updates.

If, as a result of the *Update verification* task, updates located in the temporary repository are incorrect or if the *Update verification* task completes with an error, such updates are not copied to the shared folder. The Administration Server retains the previous set of updates. Also, the tasks that have the **When new updates are downloaded to the repository** schedule type are not started then. These operations are performed at the next start of the *Download updates to the Administration Server repository* task if scanning of the new updates completes successfully.

A set of updates is considered invalid if any of the following conditions is met on at least one test device:

- An update task error occurred.
- The real-time protection status of the security application changed after the updates were applied.
- An infected object was detected during running of the on-demand scan task.

- A runtime error of a Kaspersky application occurred.

If none of the listed conditions is true for any test device, the set of updates is considered valid, and the *Update verification* task is considered to have completed successfully.

Before you start to create the *Update verification* task, perform the prerequisites:

1. Create an administration group with several test devices. You will need this group to verify the updates.

   We recommend using devices with the most reliable protection and the most popular application configuration across the network. This approach increases the quality and probability of virus detection during scans, and minimizes the risk of false positives. If viruses are detected on test devices, the *Update verification* task is considered unsuccessful.

2. Create the update and virus scan tasks for an application supported by Kaspersky Security Center, for example, Kaspersky Endpoint Security for Linux. When creating the update and virus scan tasks, specify the administration group with the test devices.

   The *Update verification* task sequentially runs the update and virus scan tasks on test devices to check that all updates are valid. In addition, when creating the *Update verification* task, you need to specify the update and virus scan tasks.

3. Create the *Download updates to the Administration Server repository* task.

To make Kaspersky Security Center Linux verify downloaded updates before distributing them to client devices:

1. In the main menu, go to **DEVICES** → **TASKS**.
2. Click the **Download updates to the Administration Server repository** task.
3. In the task properties window that opens, go to the **Application settings** tab, and then enable the **Run update verification** option.
4. If the *Update verification* task exists, click the **Select task** button. In the window that opens, select the *Update verification* task in the administration group with test devices.
5. If you did not create the *Update verification* task earlier, do the following:

   a. Click the **New task** button.

   b. In the Add Task Wizard that opens, specify the task name if you want to change the preset name.

   c. Select the administration group with test devices, which you created earlier.

   d. First, select the update task of a required application supported by Kaspersky Security Center, and then select the virus scan task.

   After that, the following options appear. We recommend leaving them enabled:

   - **Restart the device after database update**

     After anti-virus databases are updated on a device, we recommend rebooting the device.

     By default, the option is enabled.

   - **Check real-time protection status after database update and device restart**

If this option is enabled, the *Update verification* task checks whether updates downloaded to the Administration Server repository are valid, and if the protection level decreased after the anti-virus database update and device restart.

By default, this option is enabled.

e. Specify an account from which the *Update verification* task will be run. You can use your account and leave the **Default account** option enabled. Alternatively, you can specify that the task should be run under another account that has the necessary access rights. To do this, select the **Specify account** option, and then enter the credentials of that account.

6. Click **Save** to close the properties window of the *Download updates to the Administration Server repository* task.

The automatic update verification is enabled. Now, you can run the *Download updates to the Administration Server repository* task, and it will start from update verification.

Adjustment of distribution points and connection gateways

A structure of administration groups in Kaspersky Security Center Linux performs the following functions:

- Sets the scope of policies

  There is an alternate way of applying relevant settings on devices, by using *policy profiles*.

- Sets the scope of group tasks

  There is an approach to defining the scope of group tasks that is not based on a hierarchy of administration groups: use of tasks for device selections and tasks for specific devices.

- Sets access rights to devices, virtual Administration Servers, and secondary Administration Servers

- Assigns distribution points

When building the structure of administration groups, you must take into account the topology of the organization's network for the optimum assignment of distribution points. The optimum distribution of distribution points allows you to save traffic on the organization's network.

Depending on the organizational schema and network topology, the following standard configurations can be applied to the structure of administration groups:

- Single office

- Multiple small remote offices

Devices functioning as distribution points must be protected, including physical protection, against any unauthorized access.

About distribution points

A device with Network Agent installed can be used as a distribution point. In this mode, Network Agent can distribute updates, which can be retrieved either from the Administration Server or from Kaspersky servers. In the latter case, configure update download for a distribution point.

Deployment of distribution points on an organization's network has the following objectives:

- Reducing the load on the Administration Server.
- Optimizing traffic.
- Providing the Administration Server with access to devices in hard-to-reach spots of the organization's network. The availability of a distribution point on the network behind a NAT (in relation to the Administration Server) allows the Administration Server to perform the following actions:
  - Send notifications to devices over UDP on the IPv4 or IPv6 network
  - Poll the IPv4 or IPv6 network
  - Perform initial deployment
  - Act as a push server

A distribution point is assigned for an administration group. In this case, the scope of the distribution point includes all devices within the administration group and all of its subgroups. However, the device that acts as the distribution point may not be included in the administration group to which it has been assigned.

You can make a distribution point function as a connection gateway. In this case, devices in the scope of the distribution point will be connected to the Administration Server through the gateway, not directly. This mode can be useful in scenarios that do not allow the establishment of a direct connection between the Administration Server and managed devices.

If you use a Linux-based device as a distribution point, we strongly recommend to increase the limit of file descriptors for the klnagent service, because if the scope of the distribution point includes many devices, the default maximum number of files that can be opened may not be enough.

Standard configuration of distribution points: Single office

In a standard "single-office" configuration, all devices are on the organization's network so they can "see" each other. The organization's network may consist of a few separate parts (networks or network segments) linked by narrow channels.

The following methods of building the structure of administration groups are possible:

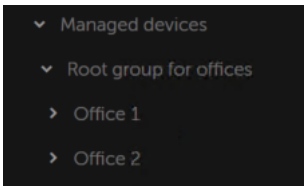
- Building the structure of administration groups taking into account the network topology. The structure of administration groups may not reflect the network topology with absolute precision. A match between the separate parts of the network and certain administration groups would be enough. You can use automatic assignment of distribution points or assign them manually.
- Building the structure of administration groups, without taking the network topology into account. In this case, you must disable automatic assignment of distribution points, and then assign one or several devices to act as distribution points for a root administration group in each of the separate parts of the network, for example, for the **Managed devices** group. All distribution points will be at the same level and will feature the same scope spanning all devices on the organization's network. In this case, each Network Agent will connect to the

distribution point that has the shortest route. The route to a distribution point can be traced with the tracert utility.

Standard configuration of distribution points: Multiple small remote offices

This standard configuration provides for a number of small remote offices, which may communicate with the head office over the internet. Each remote office is located behind the NAT, that is, connection from one remote office to another is not possible because offices are isolated from one another.

The configuration must be reflected in the structure of administration groups: a separate administration group must be created for each remote office (groups **Office 1** and **Office 2** in the figure below).



Remote offices are included in the administration group structure

One or multiple distribution points must be assigned to each administration group that correspond to an office. Distribution points must be devices at the remote office that have a sufficient amount of free disk space. Devices deployed in the **Office 1** group, for example, will access distribution points assigned to the **Office 1** administration group.

If some users move between offices physically, with their laptops, you must select two or more devices (in addition to the existing distribution points) in each remote office and assign them to act as distribution points for a top-level administration group (**Root group for offices** in the figure above).

Example: A laptop is deployed in the **Office 1** administration group and then is moved physically to the office that corresponds to the **Office 2** administration group. After the laptop is moved, Network Agent attempts to access the distribution points assigned to the **Office 1** group, but those distribution points are unavailable. Then, Network Agent starts attempting to access the distribution points that have been assigned to the **Root group for offices**. Because remote offices are isolated from one another, attempts to access distribution points assigned to the **Root group for offices** administration group will only be successful when Network Agent attempts to access distribution points in the **Office 2** group. That is, the laptop will remain in the administration group that corresponds to the initial office, but the laptop will use the distribution point of the office where it is physically located at the moment.

Calculating the number and configuration of distribution points

The more client devices a network contains, the more distribution points it requires. We recommend that you not disable automatic assignment of distribution points. When automatic assignment of distribution points is enabled, Administration Server assigns distribution points if the number of client devices is quite large and defines their configuration.

Using exclusively assigned distribution points

If you plan to use certain specific devices as distribution points (that is, exclusively assigned servers), you can opt out of using automatic assignment of distribution points. In this case, make sure that the devices that you intend to make distribution points have sufficient volume of free disk space, are not shut down regularly, and have Sleep mode disabled.

Number of exclusively assigned distribution points on a network that contains a single network segment, based on the number of networked devices

Number of client devices in the network segment	Number of distribution points
Less than 300	0 (Do not assign distribution points)
More than 300	Acceptable: (N/10,000 + 1), recommended: (N/5000 + 2), where N is the number of networked devices

Number of exclusively assigned distribution points on a network that contains multiple network segments, based on the number of networked devices

Number of client devices per network segment	Number of distribution points
Less than 10	0 (Do not assign distribution points)
10–100	1
More than 100	Acceptable: (N/10,000 + 1), recommended: (N/5000 + 2), where N is the number of networked devices

Using standard client devices (workstations) as distribution points

If you plan to use standard client devices (that is, workstations) as distribution points, we recommend that you assign distribution points as shown in the tables below in order to avoid excessive load on the communication channels and on Administration Server:

Number of workstations functioning as distribution points on a network that contains a single network segment, based on the number of networked devices

Number of client devices in the network segment	Number of distribution points
Less than 300	0 (Do not assign distribution points)
More than 300	(N/300 + 1), where N is the number of networked devices; there must be at least 3 distribution points

Number of workstations functioning as distribution points on a network that contains multiple network segments, based on the number of networked devices

Number of client devices per network segment	Number of distribution points
Less than 10	0 (Do not assign distribution points)
10–30	1
31–300	2
More than 300	(N/300 + 1), where N is the number of networked devices; there must be at least 3 distribution points

If a distribution point is shut down (or not available for some other reason), the managed devices in its scope can access the Administration Server for updates.

Assigning distribution points automatically

We recommend that you assign distribution points automatically. In this case, Kaspersky Security Center Linux will select on its own which devices must be assigned distribution points.

To assign distribution points automatically:

1. In the main menu, click the settings icon ( ) next to the name of the required Administration Server.

   The Administration Server properties window opens.

2. On the **General** tab, select the **Distribution points** section.

3. Select the **Automatically assign distribution points** option.

   If automatic assignment of devices as distribution points is enabled, you cannot configure distribution points manually or edit the list of distribution points.

4. Click the **Save** button.

Administration Server assigns and configures distribution points automatically.

Assigning distribution points manually

Kaspersky Security Center Linux allows you to manually assign devices to act as distribution points.

We recommend that you assign distribution points automatically. In this case, Kaspersky Security Center Linux will select on its own which devices must be assigned distribution points. However, if you have to opt out of assigning distribution points automatically for any reason (for example, if you want to use exclusively assigned servers), you can assign distribution points manually after you calculate their number and configuration.

Devices functioning as distribution points must be protected, including physical protection, against any unauthorized access.

To manually assign a device to act as distribution point:

1. In the main menu, click the settings icon ( ) next to the name of the required Administration Server.

   The Administration Server properties window opens.

2. On the **General** tab, select the **Distribution points** section.

3. Select the **Manually assign distribution points** option.

4. Click the **Assign** button.

5. Select the device that you want to make a distribution point.

   When selecting a device, keep in mind the operation features of distribution points and the requirements set for the device that acts as distribution point.

6. Select the administration group that you want to include in the scope of the selected distribution point.

7. Click the **OK** button.

   The distribution point that you have added will be displayed in the list of distribution points, in the **Distribution points** section.

8. Click the newly added distribution point in the list to open its properties window.

9. Configure the distribution point in the properties window:

- The **General** section contains the settings of interaction between the distribution point and client devices.

  - SSL port

    The number of the SSL port for encrypted connection between client devices and the distribution point using SSL.

    By default, port 13000 is used.

  - Use multicast

    If this option is enabled, IP multicasting will be used for automatic distribution of installation packages to client devices within the group.

    IP multicasting decreases the time required to install an application from an installation package to a group of client devices, but increases the installation time when you install an application to a single client device.

  - IP multicast address

    IP address that will be used for multicasting. You can define an IP address in the range of 224.0.0.0 – 239.255.255.255

    By default, Kaspersky Security Center Linux automatically assigns a unique IP multicast address within the given range.

  - IP multicast port number

    Number of the port for IP multicasting.

    By default, the port number is 15001. If the device with Administration Server installed is specified as the distribution point, port 13001 is used for SSL connection by default.

  - Gateway address for remote devices

    The IPv4 address through which remote devices connect to the distribution point.

  - Deploy updates

Updates are distributed to managed devices from the following sources:

- This distribution point, if this option is enabled.
- Other distribution points, Administration Server, or Kaspersky update servers, if this option is disabled.

If you use distribution points to deploy updates, you can save traffic because you reduce the number of downloads. Also, you can relieve the load on the Administration Server and relocate the load between the distribution points. You can calculate the number of distribution points for your network to optimize the traffic and load.

If you disable this option, the number of update downloads and load on the Administration Server may increase. By default, this option is enabled.

- **Deploy installation packages**

Installation packages are distributed to managed devices from the following sources:

- This distribution point, if this option is enabled.
- Other distribution points, Administration Server, or Kaspersky update servers, if this option is disabled.

If you use distribution points to deploy installation packages, you can save traffic because you reduce the number of downloads. Also, you can relieve the load on the Administration Server and relocate the load between the distribution points. You can calculate the number of distribution points for your network to optimize the traffic and load.

If you disable this option, the number of installation package downloads and load on the Administration Server may increase. By default, this option is enabled.

- **Run push server**

In Kaspersky Security Center, a distribution point can work as a push server for the devices managed through the mobile protocol and for the devices managed by Network Agent. For example, a push server must be enabled if you want to be able to force synchronization of KasperskyOS devices with Administration Server. A push server has the same scope of managed devices as the distribution point on which the push server is enabled. If you have several distribution points assigned for the same administration group, you can enable push server on each of the distribution points. In this case, Administration Server balances the load between the distribution points.

- **Push server port**

The port number for the push server. You can specify the number of any unoccupied port.

- In the **Scope** section, specify administration groups to which the distribution point will distribute updates.
- In the **Source of updates** section, you can select a source of updates for the distribution point:
  - **Source of updates**

Select a source of updates for the distribution point:

- To allow the distribution point to receive updates from the Administration Server, select **Retrieve from Administration Server**.
- To allow the distribution point to receive updates by using a task, select **Use update download task**, and then specify a *Download updates to the repositories of distribution points* task:
  - If such a task already exists on the device, select the task in the list.
  - If no such task yet exists on the device, click the **Create task** link to create a task. The Add Task Wizard starts. Follow the instructions of the Wizard.

- **Download diff files**

  This option enables the downloading diff files feature.

  By default, this option is enabled.

- In the **Internet connection settings** subsection, you can specify the internet access settings:

  - **Use proxy server**

    If this check box is selected, in the entry fields you can configure the proxy server connection.

    By default, this check box is cleared.

  - **Proxy server address**

    Address of the proxy server.

  - **Port number**

    Port number that is used for connection.

  - **Bypass proxy server for local addresses**

    If this option is enabled, no proxy server is used to connect to devices on the local network.

    By default, this option is disabled.

  - **Proxy server authentication**

    If this check box is selected, in the entry fields you can specify the credentials for proxy server authentication.

    By default, this check box is cleared.

  - **User name**

User account under which connection to the proxy server is established.

- **Password**

  Password of the account under which the task will be run.

- In the **Connection gateway** section, you can configure the distribution point to act as a gateway for connection between Network Agent instances and Administration Server:

  - **Connection gateway**

    If a direct connection between Administration Server and Network Agents cannot be established due to organization of your network, you can use the distribution point to act as the connection gateway between Administration Server and Network Agents.

    Enable this option if you need the distribution point to act as a connection gateway between Network Agents and Administration Server. By default, this option is disabled.

  - **Establish connection to gateway from Administration Server (if gateway is in DMZ)**

    If Administration Server is located outside the demilitarized zone (DMZ), on local area network, Network Agents installed on remote devices cannot connect to Administration Server. You can use a distribution point as the connection gateway with reverse connectivity (Administration Server establishes a connection to distribution point).

    Enable this option if you need to connect Administration Server to the connection gateway in DMZ.

  - **Open local port for Kaspersky Security Center 14 Web Console**

    Enable this option if you need the connection gateway in DMZ to open a port for Web Console that is in DMZ or on the internet. Specify the port number that will be used for the connection from Web Console to the distribution point. The default port number is 13299.

    This option is available if you enable the **Establish connection to gateway from Administration Server (if gateway is in DMZ)** option.

  When connecting mobile devices to Administration Server via the distribution point that acts as a connection gateway, you can enable the following options:

  - **Open port for mobile devices (SSL authentication of the Administration Server only)**

    Enable this option if you need the connection gateway to open a port for mobile devices and specify the port number that mobile devices will use for connection to distribution point. The default port number is 13292. The mobile device will check the Administration Server certificate. When establishing the connection, only Administration Server is authenticated.

  - **Open port for mobile devices (two-way SSL authentication)**

Enable this option if you need connection gateway to open a port that will be used for two-way authentication of Administration Server and mobile devices. Mobile device will check the Administration Server certificate, and Administration Server will check the mobile device certificate. Specify the following parameters:

- Port number that mobile devices will use for connection to the distribution point. The default port number is 13293.
- DNS domain names of the connection gateway that will be used by mobile devices. Separate domain names with commas. The specified domain names will be included in the distribution point certificate. If the domain names used by mobile devices do not match the common name in the distribution point certificate, mobile devices do not connect to the distribution point.

  The default DNS domain name is the FQDN name of the connection gateway.

In both cases, the certificates are checked during the TLS session establishment on distribution point only. The certificates are not forwarded to be checked by the Administration Server. After a TLS session with the mobile device is established, the distribution point uses the Administration Server certificate to create a tunnel for synchronization between the mobile device and Administration Server. If you open the port for two-way SSL authentication, the only way to distribute the mobile device certificate is via an installation package.

- Configure the polling of IP ranges by the distribution point.

  - **IP ranges**

    You can enable device discovery for IPv4 ranges and IPv6 networks.

    If you enable the **Enable range polling** option, you can add scanned ranges and set the schedule for them. You can add IP ranges to the list of scanned ranges.

    If you enable the **Use Zeroconf to poll IPv6 networks** option, the distribution point automatically polls the IPv6 network by using zero-configuration networking (also referred to as *Zeroconf*). In this case, the specified IP ranges are ignored because the distribution point polls the whole network. The **Use Zeroconf to poll IPv6 networks** option is available if the distribution point runs Linux. To use Zerocong IPv6 polling, you must install the avahi-browse utility on the distribution point.

- In the **Advanced** section, specify the folder that the distribution point must use to store distributed data.

  - **Use default folder**

    If you select this option, the application uses the Network Agent installation folder on the distribution point.

  - **Use specified folder**

    If you select this option, in the field below, you can specify the path to the folder. It can be a local folder on the distribution point, or it can be a folder on any device on the corporate network.

    The user account used on the distribution point to run Network Agent must have read/write access to the specified folder.

10. Click the **OK** button.

The selected devices act as distribution points.

Modifying the list of distribution points for an administration group

You can view the list of distribution points assigned to a specific administration group and modify the list by adding or removing distribution points.

To view and modify the list of distribution points assigned to an administration group:

1. In the main menu, go to **DEVICES** → **MANAGED DEVICES**.
2. In the **Current path** field above the list of managed devices, click the path link.
3. In the left-side pane that opens, select an administration group for which you want to view the assigned distribution points.

   This enables the **DISTRIBUTION POINTS** menu item.
4. In the main menu, go to **DEVICES** → **DISTRIBUTION POINTS**.
5. To add new distribution points for the administration group, click the **Assign** button.
6. To remove the assigned distribution points, select devices from the list and click the **Unassign** button.

Depending on your modifications, the new distribution points are added to the list or existing distribution points are removed from the list.

Enabling a push server

In Kaspersky Security Center, a distribution point can work as a push server for the devices managed through the mobile protocol and for the devices managed by Network Agent. For example, a push server must be enabled if you want to be able to force synchronization of KasperskyOS devices with Administration Server. A push server has the same scope of managed devices as the distribution point on which the push server is enabled. If you have several distribution points assigned for the same administration group, you can enable push server on each of the distribution points. In this case, Administration Server balances the load between the distribution points.

You might want to use distribution points as push servers to make sure that there is continuous connectivity between a managed device and the Administration Server. Continuous connectivity is needed for some operations, such as running and stopping local tasks, receiving statistics for a managed application, or creating a tunnel. If you use a distribution point as a push server, you do not have to use the **Do not disconnect from the Administration Server** option on managed devices or send packets to the UDP port of the Network Agent.

A push server supports the load of up to 50,000 simultaneous connections.

To enable push server on a distribution point:

1. Click the settings icon ( ) next to the name of the required Administration Server.

   The Administration Server properties window opens.
2. On the **General** tab, select the **Distribution points** section.
3. Click the name of the distribution point on which you want to enable the push server.

   The distribution point properties window opens.

4. On the **General** section, enable the **Run push server** option.

5. In the **Push server port** field, type the port number. You can specify number of any unoccupied port.

6. In the **Address for remote hosts** field, specify the IP address or the name of the distribution point device.

7. Click the **OK** button.

The push server is enabled on the selected distribution point.

Increasing the limit of file descriptors for the klnagent service

If the scope of a Linux-based distribution point includes many devices, the default limit of files that can be opened (file descriptors) may not be enough. To avoid this, you can increase the limit of file descriptors for the klnagent service.

To increase the limit of file descriptors for the klnagent service:

1. On the Linux-based device that acts as a distribution point, open the `/lib/systemd/system/klnagent64.service` file, and then specify the hard and soft limits of the file descriptors in the `LimitNOFILE` parameter of the `[Service]` section:

   `LimitNOFILE=<soft_resource_limit>:<hard_resource_limit>`

   For example, `LimitNOFILE=32768:131072`. Note that the soft limit of the file descriptors must be less or equal to the hard limit.

2. Run the following command to ensure that the parameters are specified correctly:

   `systemd-analyze verify klnagent64.service`

   If the parameters are specified incorrectly, this command can output one of the following errors:

   - `/lib/systemd/system/klnagent64.service:11: Failed to parse resource value, ignoring: 32768:13107`

     If this error occurs, the symbols in the `LimitNOFILE` line were specified incorrectly. You must check and correct the entered line.

   - `/lib/systemd/system/klnagent64.service:11: Soft resource limit chosen higher than hard limit, ignoring: 32768:13107`

     If this error occurs, the soft limit of the file descriptors you entered is more than the hard limit. You must check the entered line and ensure that the soft limit of the file descriptors is less or equal to the hard limit.

3. Run the following command to reload the systemd process:

   `systemctl daemon-reload`

4. Run the following command to restart the Network Agent service:

   `systemctl restart klnagent`

5. Run the following command to ensure that the specified parameters are applied correctly:

   `less /proc/<nagent_proc_id>/limits`

   where the `<nagent_proc_id>` parameter is the identifier of the Network Agent process. You can run the following command to obtain the identifier:

```
ps -ax | grep klnagent
```

For the Linux-based distribution point, the limit of files that can be opened is increased.

Creating the task for downloading updates to the repositories of distribution points

You can create the *Download updates to the repositories of distribution points* task for an administration group. This task will run for distribution points included in the specified administration group.

You can use this task, for example, if traffic between the Administration Server and the distribution point(s) is more expensive than traffic between the distribution point(s) and Kaspersky update servers, or if your Administration Server does not have internet access.

This task is required to download updates from Kaspersky update servers to the repositories of distribution points. The list of updates includes:

- Updates to databases and software modules for Kaspersky security applications
- Updates to Kaspersky Security Center components
- Updates to Kaspersky security applications

After the updates are downloaded, they can be propagated to the managed devices.

*To create the **Download updates to the repositories of distribution points** task, for a selected administration group:*

1. In the main menu, go to **DEVICES** → **TASKS**.
2. Click the **Add** button.

   The Add Task Wizard starts. Follow the steps of the Wizard.
3. For the Kaspersky Security Center application, in the **Task type** field select **Download updates to the repositories of distribution points**.
4. Specify the name for the task that you are creating. A task name cannot be more than 100 characters long and cannot include any special characters ("*<>?\:|).
5. Select an option button to specify the administration group, the device selection, or the devices to which the task applies.
6. At the **Finish task creation** step, if you want to modify the default task settings, enable the **Open task details when creation is complete** option. If you do not enable this option, the task is created with the default settings. You can modify the default settings later, at any time.
7. Click the **Create** button.

   The task is created and displayed in the list of tasks.
8. Click the name of the created task to open the task properties window.
9. On the **Application settings** tab of the task properties window, specify the following settings:

   - Sources of updates

The following resources can be used as a source of updates for the distribution point:

- Kaspersky update servers

  HTTP(S) servers at Kaspersky from which Kaspersky applications download database and application module updates.

  This option is selected by default.

- Primary Administration Server

  This resource applies to tasks created for a secondary or virtual Administration Server.

- Local or network folder

  A local or network folder that contains the latest updates. A network folder can be an FTP or HTTP server, or an SMB share. If a network folder requires authentication, only the SMB protocol is supported. When selecting a local folder, you must specify a folder on the device that has Administration Server installed.

  An FTP or HTTP server or a network folder used by an update source must contain a folders structure (with updates) that matches the structure created when using Kaspersky update servers.

  In the *Download updates to the Administration Server repository* task and the *Download updates to the repositories of distribution points* task, user authentication does not work if you select a password-protected local or network folder as an update source. To resolve this issue, first mount the password-protected folder, and then specify the required credentials, for example, by means of the operating system. After that, you can select this folder as an update source in an update download task. Kaspersky Security Center will not require that you enter the credentials.

- **Folder for storing updates**

  The path to the specified folder for storing saved updates. You can copy the specified folder path to a clipboard. You cannot change the path to a specified folder for a group task.

- **Download diff files**

  This option enables the downloading diff files feature.

  By default, this option is disabled.

- **Download updates by using the old scheme**

Starting from version 14, Kaspersky Security Center downloads updates of databases and software modules by using the new scheme. For the application to download updates by using the new scheme, the update source must contain the update files with the metadata compatible with the new scheme. If the update source contains the update files with the metadata compatible with the old scheme only, enable the **Download updates by using the old scheme** option. Otherwise, the update download task will fail.

For example, you must enable this option when a local or network folder is specified as an update source and the update files in this folder were downloaded by one of the following applications:

- Kaspersky Update Utility

  This utility downloads updates by using the old scheme.

- Kaspersky Security Center 13 Linux

  For example, a distribution point is configured to take the updates from a local or network folder. In this case, you may download updates by using an Administration Server that has an internet connection, and then place the updates to the local folder on the distribution point. If the Administration Server has version 13, enable the **Download updates by using the old scheme** option in the *Download updates to the repositories of distribution points* task.

By default, this option is disabled.

10. Create a schedule for task start. If necessary, specify the following settings:

- **Scheduled start**

  Select the schedule according to which the task runs, and configure the selected schedule.

  - **Manually** (selected by default)

    The task does not run automatically. You can only start it manually.

    By default, this option is selected.

  - **Every N minutes**

    The task runs regularly, with the specified interval in minutes, starting from the specified time on the day that the task is created.

    By default, the task runs every 30 minutes, starting from the current system time.

  - **Every N hours**

    The task runs regularly, with the specified interval in hours, starting from the specified date and time.

    By default, the task runs every 6 hours, starting from the current system date and time.

  - **Every N days**

    The task runs regularly, with the specified interval in days. Additionally, you can specify a date and time of the first task run. These additional options become available, if they are supported by the application for which you create the task.

    By default, the task runs every day, starting from the current system date and time.

- **Every N weeks**

  The task runs regularly, with the specified interval in weeks, on the specified day of week and at the specified time.

  By default, the task runs every Friday at the current system time.

- **Daily (daylight saving time is not supported)**

  The task runs regularly, with the specified interval in days. This schedule does not support observance of daylight saving time (DST). It means that when clocks jump one hour forward or backward at the beginning or ending of DST, the actual task start time does not change.

  We do not recommend that you use this schedule. It is needed for backward compatibility of Kaspersky Security Center Linux.

  By default, the task starts every day at the current system time.

- **Weekly**

  The task runs every week on the specified day and at the specified time.

- **By days of week**

  The task runs regularly, on the specified days of the week, at the specified time.

  By default, the task runs every Friday at 6:00:00 PM.

- **Monthly**

  The task runs regularly, on the specified day of the month, at the specified time.

  In months that lack the specified day, the task runs on the last day.

  By default, the task runs on the first day of each month, at the current system time.

- **Every month on specified days of selected weeks**

  The task runs regularly, on the specified days of each month, at the specified time.

  By default, no days of month are selected. The default start time is 18:00.

- **On virus outbreak**

The task runs after a *Virus outbreak* event occurs. Select application types that will monitor virus outbreaks. The following application types are available:

- Anti-virus for workstations and file servers
- Anti-virus for perimeter defense
- Anti-virus for mail systems

By default, all application types are selected.

You may want to run different tasks depending on the security application type that reports a virus outbreak. In this case, remove the selection of the application types that you do not need.

- **On completing another task**

  The current task starts after another task completes. You can select how the previous task must complete (successfully or with error) to trigger the start of the current task. This parameter only works if both tasks are assigned to the same devices.

- **Run missed tasks**

  This option determines the behavior of a task if a client device is not visible on the network when the task is about to start.

  If this option is enabled, the system attempts to start the task the next time the Kaspersky application is run on the client device. If the task schedule is **Manually**, **Once** or **Immediately**, the task is started immediately after the device becomes visible on the network or immediately after the device is included in the task scope.

  If this option is disabled, only scheduled tasks run on client devices. For **Manually**, **Once** and **Immediately** schedule, tasks run only on those client devices that are visible on the network. For example, you may want to disable this option for a resource-consuming task that you want to run only outside of business hours.

  By default, this option is disabled.

- **Use automatically randomized delay for task starts**

  If this option is enabled, the task is started on client devices randomly within a specified time interval, that is, *distributed task start*. A distributed task start helps to avoid a large number of simultaneous requests by client devices to the Administration Server when a scheduled task is running.

  The distributed start time is calculated automatically when a task is created, depending on the number of client devices to which the task is assigned. Later, the task is always started on the calculated start time. However, when task settings are edited or the task is started manually, the calculated value of the task start time changes.

  If this option is disabled, the task starts on client devices according to the schedule.

- **Use randomized delay for task starts within an interval of (min)**

If this option is enabled, the task is started on client devices randomly within the specified time interval. A distributed task start helps to avoid a large number of simultaneous requests by client devices to the Administration Server when a scheduled task is running.

If this option is disabled, the task starts on client devices according to the schedule.

By default, this option is disabled. The default time interval is one minute.

11. Click the **Save** button.

    The task is created and configured.

    In addition to the settings that you specify during task creation, you can change other properties of a created task.

When the *Download updates to the repositories of distribution points* task is performed, updates for databases and software modules are downloaded from the update source and stored in the shared folder. Downloaded updates will only be used by distribution points that are included in the specified administration group and that have no update download task explicitly set for them.

Downloading updates by distribution points

Kaspersky Security Center Linux allows distribution points to receive updates from the Administration Server, Kaspersky servers, or from a local or network folder.

To configure update download for a distribution point:

1. In the main application window, click the settings icon ( ) next to the name of the required Administration Server.

   The Administration Server properties window opens.

2. On the **General** tab, select the **Distribution points** section.

3. Click the name of the distribution point through which updates will be delivered to client devices in the group.

4. In the distribution point properties window, select the **Source of updates** section.

5. Select an update source for the distribution point:

   - Source of updates

Select a source of updates for the distribution point:

- To allow the distribution point to receive updates from the Administration Server, select **Retrieve from Administration Server**.
- To allow the distribution point to receive updates by using a task, select **Use update download task**, and then specify a *Download updates to the repositories of distribution points* task:
  - If such a task already exists on the device, select the task in the list.
  - If no such task yet exists on the device, click the **Create task** link to create a task. The Add Task Wizard starts. Follow the instructions of the Wizard.

- **Download diff files**

  This option enables the downloading diff files feature.

  By default, this option is enabled.

The distribution point will receive updates from the specified source.

Adding sources of updates for the Download updates to the Administration Server repository task

When you create or use the task for downloading updates to the Administration Server repository, you can choose the following sources of updates:

- Kaspersky update servers
- Primary Administration Server

  This resource applies to tasks created for a secondary or virtual Administration Server.
- Local or network folder

  In the *Download updates to the Administration Server repository* task and the *Download updates to the repositories of distribution points* task, user authentication does not work if you select a password-protected local or network folder as an update source. To resolve this issue, first mount the password-protected folder, and then specify the required credentials, for example, by means of the operating system. After that, you can select this folder as an update source in an update download task. Kaspersky Security Center will not require that you enter the credentials.

Kaspersky update servers are used by default, but you can also download updates from a local or network folder. You might want to use the folder if your network does not have access to the internet. In this case, you can manually download updates from Kaspersky update servers and put the downloaded files in the necessary folder.

You can specify only one path to a local or network folder. As a local folder, you must specify a folder on the device where Administration Server is installed. As a network folder, you can use an FTP or HTTP server or an SMB share. If an SMB share requires authentication, it must be mounted in the system with the required credentials in advance. We recommend not using the SMB1 protocol since it is insecure.

If you add both Kaspersky update servers and the local or network folder, updates will be downloaded first from the folder. In the case of an error when downloading, Kaspersky update servers will be used.

To add the sources of updates:

1. Go to **DEVICES** → **TASKS**.
2. Click **Download updates to the Administration Server repository**.
3. Go to the **Application settings** tab.
4. On the **Sources of updates** line, click the **Configure** button.
5. In the window that opens, click the **Add** button.
6. In the update source list, add the necessary sources. If you select the **Local or network folder** check box, specify a path to the folder.
7. Click **OK**, and then close the update source properties window.
8. In the update source window, click **OK**.
9. Click the **Save** button in the task window.

Now updates are downloaded to the Administration Server repository from the specified sources.

About using diff files for updating Kaspersky databases and software modules

When Kaspersky Security Center Linux downloads updates from Kaspersky update servers, it optimizes traffic by using diff files. You can also enable the usage of diff files by devices (Administration Servers, distribution points, and client devices) that take updates from other devices on your network.

About the Downloading diff files feature

A diff file describes the differences between two versions of a file of a database or software module. The usage of diff files saves traffic inside your company's network because diff files occupy less space than entire files of databases and software modules. If the *Downloading diff files* feature is enabled on Administration Server or a distribution point, the diff files are saved on this Administration Server or distribution point. As a result, devices that take updates from this Administration Server or distribution point can use the saved diff files to update their databases and software modules.

To optimize the usage of diff files, we recommend that you synchronize the update schedule of devices with the update schedule of the Administration Server or distribution point from which the devices take updates. However, the traffic can be saved even if devices are updated several times less often than are the Administration Server or distribution point from which the devices take updates.

Distribution points do not use IP multicasting for automatic distribution of diff files.

Enabling the Downloading diff files feature

Stages

1. **Enabling the feature on Administration Server**

   Enable the feature in the settings of a *Download updates to the repository of the Administration Server* task.

2. **Enabling the feature for a distribution point**

   Enable the feature for a distribution point that receives updates by means of a *Download updates to the repositories of distribution points* task.

   Then enable the feature in the Network Agent policy settings for a distribution point that receives updates from Administration Server.

   Then enable the feature for a distribution point that receives updates from Administration Server.

   The feature is enabled in the Network Agent policy settings and—if the distribution points are assigned manually and if you want to override policy settings—in the **Distribution points** section of the Administration Server properties.

To check that the Downloading diff files feature is successfully enabled, you can measure the internal traffic before and after you perform the scenario.

Updating Kaspersky databases and software modules on offline devices

Updating Kaspersky databases and software modules on managed devices is an important task for maintaining protection of the devices against viruses and other threats. Administrators usually configure regular updates through usage of the Administration Server repository.

When you need to update databases and software modules on a device (or a group of devices) that is not connected to the Administration Server (primary or secondary), a distribution point or the internet, you have to use alternative sources of updates, such as an FTP server or a local folder. In this case you have to deliver the files of the required updates by using a mass storage device, such as a flash drive or an external hard drive.

You can copy the required updates from:

- The Administration Server.

  To be sure the Administration Server repository contains the updates required for the security application installed on an offline device, at least one of the managed online devices must have the same security application installed. This application must be configured to receive the updates from the Administration Server repository through the *Download updates to the Administration Server repository* task.

- Any device that has the same security application installed and configured to receive the updates from the Administration Server repository, a distribution point repository, or directly from the Kaspersky update servers.

Below is an example of configuring updates of databases and software modules by copying them from the Administration Server repository.

To update Kaspersky databases and software modules on offline devices:

1. Connect the removable drive to the device where the Administration Server is installed.

2. Copy the updates files to the removable drive.

   By default, the updates are located at: \\<server name>\KLSHARE\Updates.

   Alternatively, you can configure Kaspersky Security Center to regularly copy the updates to the folder that you select. For this purpose, use the **Copy downloaded updates to additional folders** option in the properties of the *Download updates to the Administration Server repository* task. If you specify a folder located on a flash drive or an external hard drive as a destination folder for this option, this mass storage device will always contain the latest version of the updates.

3. On offline devices, configure Kaspersky Endpoint Security for Linux to receive updates from a local folder or a shared resource, such as an FTP server or a shared folder.

4. Copy the updates files from the removable drive to the local folder or the shared resource that you want to use as an update source.

5. On the offline device that requires update installation, start the update task of Kaspersky Endpoint Security for Linux.

After the update task is complete, the Kaspersky databases and software modules are up-to-date on the device.

Backing up and restoring web plug-ins

Kaspersky Security Center 14 Web Console allows you to back up the current state of a web plug-in to be able to restore the saved state later. For example, you can back up a web plug-in before updating it to a newer version. After the update, if the newer version does not meet your requirements or expectations, you can restore the previous version of the web plug-in from the backup.

To back up web plug-ins:

1. In the main menu, go to **Settings** → **Web plug-ins**.

2. In the **Web plug-ins** section, select the web plug-ins that you want to back up, and then click the **Create backup copy** button.

The selected web plug-ins are backed up. You can view the created backups in the **Backups** section.

To restore a web plug-in from a backup:

1. In the main menu, go to **Settings** → **Backups**.

2. In the **Backups** section, select the backup of the web plug-in that you want to restore, and then click the **Restore from backup** button.

The web plug-in is restored from the selected backup.

Managing third-party applications and executable files on client devices

This section describes the features of Kaspersky Security Center Linux related to the management of third-party applications and executable files run on client devices.

Scenario: Application Management

You can manage applications startup on user devices. You can allow or block applications to be run on managed devices. This functionality is realized by the Application Control component.

Application Control component is available for Kaspersky Endpoint Security 11.2 for Linux and later versions.

Prerequisites

- Kaspersky Security Center Linux is deployed in your organization.
- The Kaspersky Endpoint Security for Linux policy is created and is active.

Stages

The Application Control usage scenario proceeds in stages:

1. **Forming and viewing the list of executable files on client devices**

   This stage helps you find out what executable files are found on managed devices. View the list of executable files and compare it with the lists of allowed and prohibited executable files. The restrictions on executable files usage can be related to the information security polices in your organization. You can skip this stage if you know exactly what executable files are installed on managed devices.

   How-to instructions: Obtaining and viewing a list of executable files stored on client devices

2. **Creating application categories for the applications used in your organization**

   Analyze the lists of executable files stored on managed devices. Basing on the analysis, create application categories. It is recommended to create a "Work applications" category that covers the standard set of applications that are used at your organization. If different security groups use different sets of applications in their work, a separate application category can be created for each security group.

   How-to instructions: Creating application category with content added manually

3. **Configuring Application Control in the Kaspersky Endpoint Security for Linux policy**

   Configure the Application Control component in Kaspersky Endpoint Security for Linux policy using the application categories you have created on the previous stage.

4. **Verifying Application Control configuration**

   Be sure that you have done the following:

   - Created application categories.
   - Configured Application Control using the application categories.

Results

When the scenario is complete, applications startup on managed devices is controlled. The users can start only those applications that are allowed in your organization and cannot start applications that are prohibited in your organization.

For detailed information about Application Control, refer to the Kaspersky Endpoint Security for Linux Help.

About Application Control

The Application Control component monitors users' attempts to start applications and regulates the startup of applications by using Application Control rules.

Application Control component is available for Kaspersky Endpoint Security 11.2 for Linux and later versions.

Startup of applications whose settings do not match any of the Application Control rules is regulated by the selected operating mode of the component:

- *Denylist*. The mode is used if you want to allow the startup of all applications except the applications specified in block rules. This mode is selected by default.
- *Allowlist*. The mode is used if you want to block the startup of all applications except the applications specified in allow rules.

The Application Control rules are implemented through application categories. You create application categories defining specific criteria. In Kaspersky Security Center Linux, you can only create categories with content added manually. You define conditions, for example, file metadata, file hashcode, file certificate, KL category, file path, to include executable files in the category.

For detailed information about Application Control, refer to the Kaspersky Endpoint Security for Linux Help.

Obtaining and viewing a list of executable files stored on client devices

You can obtain a list of executable files stored on managed devices. To inventory executable files, you must create an inventory task.

The feature of inventorying executable files is available for Kaspersky Endpoint Security 11.2 for Linux and later versions.

To create an inventory task for executable files on client devices:

1. Go to **DEVICES** → **TASKS**.

   The list of tasks is displayed.

2. Click the **Add** button.

   The New Task Wizard starts. Follow the steps of the Wizard.

3. On the **New task** page, from the **Application** drop-down list, select Kaspersky Endpoint Security for Linux.

4. From the **Task type** drop-down list, select **Inventory**.

5. On the **Finish task creation** page, click the **Finish** button.

   After the New Task Wizard has finished, the **Inventory** task is created and configured. If you want, you can change the settings for the created task. The newly created task is displayed in the list of tasks.

For a detailed description of the inventory task, please refer to Kaspersky Endpoint Security for Linux Online Help.

After the **Inventory** task is performed, the list of executable files stored on managed devices is formed, and you can view the list.

> During inventory, executable files in the following formats are detected: MZ, COM, PE, NE, SYS, CMD, BAT, PS1, JS, VBS, REG, MSI, CPL, DLL, JAR, and HTML.

To view the list of executable files stored on client devices:

In the **OPERATIONS** → **THIRD-PARTY APPLICATIONS** drop-down list, select **EXECUTABLE FILES**.

The page displays the list of executable files stored on client devices.

Creating application category with content added manually

You can specify a set of criteria as a template of executable files for which you want to allow or block a start in your organization. On the basis of executable files corresponding to the criteria, you can create an application category and use it in the Application Control component configuration.

To create an application category with content added manually:

1. In the **OPERATIONS** → **THIRD-PARTY APPLICATIONS** drop-down list, select **APPLICATION CATEGORIES**.

   The page with a list of application categories is displayed.

2. Click the **Add** button.

   The New Category Wizard starts. Proceed through the wizard by using the **Next** button.

3. On the **Select category creation method** step, select the **Category with content added manually. Data of executable files is manually added to the category** option.

4. On the **Conditions** step, click the **Add** button to add a condition criterion to include files in the creating category.

5. On the **Condition criteria** step, select a rule type for the creation of category from the list:

   - Select certificate from repository

     > If this option is selected, you can specify certificates from the storage. Executable files that have been signed in accordance with the specified certificates will be added to the user category.

   - Specify path to application (masks supported)

If this option is selected, you can specify the path to the folder on the client device containing the executable files that are to be added to the user application category.

- Removable drive

  If this option is selected, you can specify the type of the medium (any drive or removable drive) on which the application is run. Applications that have been run on the selected drive type are added to the user application category.

- **Hash, metadata, or certificate**:

  - Select from list of executable files

    If this option is selected, you can use the list of executable files on the client device to select and add applications to the category.

  - Select from applications registry

    If this option is selected, application registry is displayed. You can select an application from the registry and specify the following file metadata:

    - File name.
    - File version. You can specify precise value of the version or describe a condition, for example "greater than 5.0".
    - Application name.
    - Application version. You can specify precise value of the version or describe a condition, for example "greater than 5.0".
    - Vendor.

  - Specify manually

If this option is selected, you must specify file hash, or metadata, or certificate as the condition of adding applications to the user category.

File Hash

Depending on the version of the security application installed on devices on your network, you should select an algorithm for hash value computing by Kaspersky Security Center Linux for files in this category. Information about computed hash values is stored in the Administration Server database. Storage of hash values does not increase the database size significantly.

SHA256 is a cryptographic hash function: no vulnerabilities have been found in its algorithm, and so it is considered the most reliable cryptographic function nowadays. Kaspersky Endpoint Security for Linux supports SHA256 computing.

Select either of the options of hash value computing by Kaspersky Security Center Linux for files in the category:

- If all instances of security applications installed on your network are Kaspersky Endpoint Security for Linux, select the **SHA-256** check box.
- Select the **MD5 hash** check box only if you use Kaspersky Endpoint Security for Windows. Kaspersky Endpoint Security for Linux does not support the MD5 hash function.

Metadata

If this option is selected, you can specify file metadata as file name, file version, vendor. The metadata will be sent to Administration Server. Executable files that contain the same metadata will be added to the application category.

Certificate

If this option is selected, you can specify certificates from the storage. Executable files that have been signed in accordance with the specified certificates will be added to the user category.

- From archived folder

If this option is selected, you can specify a file of an archived folder, and then select which condition you want to use to add applications to the user category. The archived folder is unpacked and the conditions that you select are applied to the files in the folder. As a condition, you can select one of the following criteria:

- **File Hash**

  You select which hash function (MD5 or SHA256) you want to use to calculate hash values. The applications that have the same hash value as the files in the archived folder are added to the user application category.

  Select an MD5 hash function only if you use Kaspersky Endpoint Security for Windows. Kaspersky Endpoint Security for Linux does not support the MD5 hash function.

- **Metadata**

  You select which metadata you want to use as criteria. Executable files that contain the same metadata will be added to the user application category.

- **Certificate**

  You select which certificate properties (certificate subject, fingerprint, or issuer) you want to use as criteria. Executable files that have been signed with the certificates that have the same properties will be added to the user category.

The selected criterion is added to the list of conditions.

You can add as many criteria for the creating application category as you need.

6. On the **Exclusions** step, click the **Add** button to add an exclusive condition criterion to exclude files from the category that is being created.

7. On the **Condition criteria** step, select a rule type from the list, in the same way that you selected a rule type for category creation.

When the Wizard finishes, the application category is created. It is displayed in the list of application categories. You can use the created application category when you configure Application Control.

For detailed information about Application Control, refer to the Kaspersky Endpoint Security for Linux Help.

Viewing the list of application categories

You can view the list of configured application categories and the settings of each application category.

To view the list of application categories,

On the **OPERATIONS** tab, in the **THIRD-PARTY APPLICATIONS** drop-down list, select **APPLICATION CATEGORIES**.

The page with a list of application categories is displayed.

To view properties of an application category,

Click the name of the application category.

The properties window of the application category is displayed. The properties are grouped on several tabs.

Adding event-related executable files to the application category

After you configure Application Control in the Kaspersky Endpoint Security for Linux policies, the following events will be displayed in the list of events:

- **Application startup prohibited** (*Critical* event). This event is displayed if you have configured Application Control to apply rules.
- **Application startup prohibited in test mode** (*Info* event). This event is displayed if you have configured Application Control to test rules.
- **Message to administrator about application startup prohibition** (*Warning* event). This event is displayed if you have configured Application Control to apply rules and a user has requested access to the application that is blocked at startup.

It is recommended to create event selections to view events related to Application Control operation.

You can add executable files related to Application Control events to an existing application category or to a new application category. You can add executable files only to an application category with content added manually.

To add executable files related to Application Control events to an application category:

1. Go to **MONITORING & REPORTING → EVENT SELECTIONS**.

   The list of event selections is displayed.

2. Select the event selection to view events related to Application Control and start this event selection.

   If you have not created event selection related to Application Control, you can select and start a predefined selection, for example, **Recent events**.

   The list of events is displayed.

3. Select the events whose associated executable files you want to add to the application category, and then click the **Assign to category** button.

   The New Category Wizard starts. Proceed through the Wizard by using the **Next** button.

4. On the Wizard page, specify the relevant settings:

   - In the **Action on executable file related to the event** section, select one of the following options:

     - Add to a new application category

       Select this option if you want to create a new application category based on event-related executable files.

       By default, this option is selected.

       If you have selected this option, specify a new category name.

     - Add to an existing application category

       Select this option if you want to add event-related executable files to an existing application category.

       By default, this option is not selected.

       If you have selected this option, select the application category with content added manually to which you want to add executable files.

   - In the **Rule type** section, select one of the following options:

     - **Rules for adding to inclusions**
     - **Rules for adding to exclusions**

   - In the **Parameter used as a condition** section, select one of the following options:

     - Certificate details (or SHA-256 hashes for files without a certificate)

Files may be signed with a certificate. Multiple files may be signed with the same certificate. For example, different versions of the same application may be signed with the same certificate, or several different applications from the same vendor may be signed with the same certificate. When you select a certificate, several versions of an application or several applications from the same vendor may end up in the category.

Each file has its own unique SHA256 hash function. When you select an SHA256 hash function, only one corresponding file, for example, the defined application version, ends up in the category.

Select this option if you want to add to the category rules the certificate details of an executable file (or the SHA256 hash function for files without a certificate).

By default, this option is selected.

- **Certificate details (files without a certificate will be skipped)**

  Files may be signed with a certificate. Multiple files may be signed with the same certificate. For example, different versions of the same application may be signed with the same certificate, or several different applications from the same vendor may be signed with the same certificate. When you select a certificate, several versions of an application or several applications from the same vendor may end up in the category.

  Select this option if you want to add the certificate details of an executable file to the category rules. If the executable file has no certificate, this file will be skipped. No information about this file will be added to the category.

- **Only SHA-256 (files without a hash will be skipped)**

  Each file has its own unique SHA256 hash function. When you select an SHA256 hash function, only one corresponding file, for example, the defined application version, ends up in the category.

  Select this option if you want to add only the details of the SHA256 hash function of the executable file.

- **Only MD5 (discontinued mode, only for Kaspersky Endpoint Security 10 Service Pack 1 version)**

  Select this option only if you use Kaspersky Endpoint Security for Windows. Kaspersky Endpoint Security for Linux does not support an MD5 hash function.

  Each file has its own unique MD5 hash function. When you select an MD5 hash function, only one corresponding file, for example, the defined application version, ends up in the category.

5. Click **OK**.

When the Wizard finishes, executable files related to the Application Control events are added to the existing application category or to a new application category. You can view settings of the application category that you have modified or created.

For detailed information about Application Control, refer to the Kaspersky Endpoint Security for Linux Help.

Monitoring and reporting

This section describes the monitoring and reporting capabilities of Kaspersky Security Center Linux. These capabilities give you an overview of your infrastructure, protection statuses, and statistics.

After Kaspersky Security Center Linux deployment or during the operation, you can configure the monitoring and reporting features to best suit your needs.

Scenario: Monitoring and reporting

This section provides a scenario for configuring the monitoring and reporting feature in Kaspersky Security Center Linux.

Prerequisites

After you deploy Kaspersky Security Center Linux in an organization's network, you can start to monitor it and generate reports on its functioning.

Monitoring and reporting in an organization's network proceeds in stages:

1. **Configuring the switching of device statuses**

   Get acquainted with the settings for device statuses depending on specific conditions. By changing these settings, you can change the number of events with *Critical* or *Warning* importance levels. When configuring the switching of device statuses, be sure of the following:

   - New settings do not conflict with the information security policies of your organization.
   - You are able to react to important security events in your organization's network in a timely manner.

2. **Configuring notifications about events on client devices**

   How-to instructions:

   Configure notification (by email, by SMS, or by running an executable file) of events on client devices

3. **Performing recommended actions for Critical and Warning notifications**

   How-to instructions:

   Perform recommended actions for your organization's network

4. **Reviewing the security status of your organization's network**

   How-to instructions:

   - Review the Protection status widget
   - Generate and review the Report on protection status
   - Generate and review the Report on errors

5. **Locating client devices that are not protected**

   How-to instructions:

   - Review the New devices widget

- Generate and review the Report on protection deployment

6. **Checking protection of client devices**

   How-to instructions:

   - Generate and review reports from the Protection status and Threat statistics categories
   - Start and review the Critical event selection

7. **Evaluating and limiting the event load on the database**

   Information about events that occur during operation of managed applications is transferred from a client device and registered in the Administration Server database. To reduce the load on the Administration Server, evaluate and limit the maximum number of events that can be stored in the database.

   How-to instructions:

   - Limiting the maximum number of events

8. **Reviewing license information**

   How-to instructions:

   - Add the License key usage widget to the dashboard and review it
   - Generate and review the Report on usage of license keys

Results

Upon completion of the scenario, you are informed about protection of your organization's network and, thus, can plan actions for further protection.

About types of monitoring and reporting

Information on security events in an organization's network is stored in the Administration Server database. Based on the events, Kaspersky Security Center 14 Web Console provides the following types of monitoring and reporting in your organization's network:

- Dashboard
- Reports
- Event selections
- Notifications

Dashboard

The dashboard allows you to monitor security trends on your organization's network by providing you with a graphical display of information.

Reports

The Reports feature allows you to get detailed numerical information about the security of your organization's network, save this information to a file, send it by email, and print it.

Event selections

Event selections provide an onscreen view of named sets of events that are selected from the Administration Server database. These sets of events are grouped according to the following categories:

- By importance level—**Critical events**, **Functional failures**, **Warnings**, and **Info events**
- By time—**Recent events**
- By type—**User requests** and **Audit events**

You can create and view user-defined event selections based on the settings available, in the Kaspersky Security Center 14 Web Console interface, for configuration.

Notifications

Notifications alert you about events and help you to speed up your responses to these events by performing recommended actions or actions you consider as appropriate.

Dashboard and widgets

This section contains information about the dashboard and the widgets that the dashboard provides. The section includes instructions on how to manage widgets and configure widget settings.

Using the dashboard

The dashboard allows you to monitor security trends on your organization's network by providing you with a graphical display of information.

The dashboard is available in the Kaspersky Security Center 14 Web Console, in the **MONITORING & REPORTING** section, by clicking **DASHBOARD**.

The dashboard provides widgets that can be customized. You can choose a large number of different widgets, presented as pie charts or donut charts, tables, graphs, bar charts, and lists. The information displayed in widgets is automatically updated, the update period is one to two minutes. The interval between updates varies for different widgets. You can refresh data on a widget manually at any time by means of the settings menu.

By default, widgets include information about all events stored in the database of Administration Server.

Kaspersky Security Center 14 Web Console has a default set of widgets for the following categories:

- **Protection status**
- **Deployment**
- **Updating**

- **Threat statistics**
- **Other**

Some widgets have text information with links. You can view detailed information by clicking a link.

When configuring the dashboard, you can add widgets that you need, hide widgets that you do not need, change the size or appearance of widgets, move widgets, and change their settings.

Adding widgets to the dashboard

To add widgets to the dashboard:

1. In the main menu, go to **MONITORING & REPORTING** → **DASHBOARD**.
2. Click the **Add or restore web widget** button.
3. In the list of available widgets, select the widgets that you want to add to the dashboard.

   Widgets are grouped by category. To view the list of widgets included in a category, click the chevron icon (>) next to the category name.
4. Click the **Add** button.

The selected widgets are added at the end of the dashboard.

You can now edit the representation and parameters of the added widgets.

Hiding a widget from the dashboard

To hide a displayed widget from the dashboard:

1. In the main menu, go to **MONITORING & REPORTING** → **DASHBOARD**.
2. Click the settings icon (⚙) next to the widget that you want to hide.
3. Select **Hide web widget**.
4. In the **Warning** window that opens, click **OK**.

The selected widget is hidden. Later, you can add this widget to the dashboard again.

Moving a widget on the dashboard

To move a widget on the dashboard:

1. In the main menu, go to **MONITORING & REPORTING** → **DASHBOARD**.

2. Click the settings icon (⚙) next to the widget that you want to move.

3. Select **Move**.

4. Click the place to which you want to move the widget. You can select only another widget.

The places of the selected widgets are swapped.

Changing the widget size or appearance

For widgets that display a graph, you can change its representation—a bar chart or a line chart. For some widgets, you can change their size: compact, medium, or maximum.

To change the widget representation:

1. In the main menu, go to **MONITORING & REPORTING** → **DASHBOARD**.

2. Click the settings icon (⚙) next to the widget that you want to edit.

3. Do one of the following:

   - To display the widget as a bar chart, select **Chart type: Bars**.
   - To display the widget as a line chart, select **Chart type: Lines**.
   - To change the area occupied by the widget, select one of the values:
     - **Compact**
     - **Compact (bar only)**
     - **Medium (donut chart)**
     - **Medium (bar chart)**
     - **Maximum**

The representation of the selected widget is changed.

Changing widget settings

To change settings of a widget:

1. In the main menu, go to **MONITORING & REPORTING** → **DASHBOARD**.

2. Click the settings icon (⚙) next to the widget that you want to change.

3. Select **Show settings**.

4. In the widget settings window that opens, change the widget settings as required.

5. Click **Save** to save the changes.

   The settings of the selected widget are changed.

The set of settings depends on the specific widget. Below are some of the common settings:

- **Web widget scope** (the set of objects for which the widget displays information)—for example, an administration group or device selection.
- **Select task** (the task for which the widget displays information).
- **Time interval** (the time interval during which the information is displayed in the widget)—between the two specified dates; from the specified date to the current day; or from the current day minus the specified number of days to the current day.
- **Set to Critical if these are specified** and **Set to Warning if these are specified** (the rules that determine the color of a traffic light).

After you change the widget settings, you can refresh data on the widget manually.

To refresh data on a widget:

1. In the main menu, go to **MONITORING & REPORTING** → **DASHBOARD**.
2. Click the settings icon (⚙) next to the widget that you want to move.
3. Select **Refresh**.

   The data on the widget is refreshed.

About the Dashboard-only mode

You can configure the Dashboard-only mode for employees who do not manage the network but who want to view the network protection statistics in Kaspersky Security Center (for example, a top manager). When a user has this mode enabled, only a dashboard with a predefined set of widgets is displayed to the user. Thus, he or she can monitor the statistics specified in the widgets, for example, the protection status of all managed devices, the number of recently detected threats, or the list of the most frequent threats in the network.

When a user works in the Dashboard-only mode, the following restrictions are applied:

- The main menu is not displayed to the user, so he or she cannot change the network protection settings.
- The user cannot perform any actions with widgets, for example, add or hide them. Therefore, you need to put all widgets required for the user on the dashboard and configure them, for instance, set the rule of counting objects or specify the time interval.

You cannot assign the Dashboard-only mode to yourself. If you want to work in this mode, contact a system administrator, Managed Service Provider (MSP), or a user with the **Modify object ACLs** right in the **General features: User permissions** functional area.

Configuring the Dashboard-only mode

Before you begin to configure the Dashboard-only mode, make sure that the following prerequisites are met:

- You have the **Modify object ACLs** right in the **General features: User permissions** functional area. If you do not have this right, the tab for configuring the mode will be missing.
- The user has the **Read** right in the **General features: Basic functionality** functional area.

If a hierarchy of Administration Servers is arranged in your network, for configuring the Dashboard-only mode go to the Server where the user account is available in the **USERS & ROLES** → **USERS** section. It can be a primary server or physical secondary server. It is not possible to adjust the mode on a virtual server.

To configure the Dashboard-only mode:

1. In the main menu, go to **USERS & ROLES** → **USERS**.
2. Click the user account name for which you want to adjust the dashboard with widgets.
3. In the account settings window that opens, select the **Dashboard** tab.

   On the tab that opens, the same dashboard is displayed for you as for the user.
4. If the **Display the console in Dashboard-only mode** option is enabled, switch the toggle button to disable it.

   When this option is enabled, you are also unable to change the dashboard. After you disable the option, you can manage widgets.
5. Configure the dashboard appearance. The set of widgets prepared on the **Dashboard** tab is available for the user with the customizable account. He or she cannot change any settings or size of the widgets, add, or remove any widgets from the dashboard. Therefore, adjust them for the user, so he or she can view the network protection statistics. For this purpose, on the **Dashboard** tab you can perform the same actions with widgets as in the **MONITORING & REPORTING** → **DASHBOARD** section:
   - Add new widgets to the dashboard.
   - Hide widgets that the user doesn't need.
   - Move widgets into a specific order.
   - Change the size or appearance of widgets.
   - Change the widget settings.
6. Switch the toggle button to enable the **Display the console in Dashboard-only mode** option.

   After that, only the dashboard is available for the user. He or she can monitor statistics but cannot change the network protection settings and dashboard appearance. As the same dashboard is displayed for you as for the user, you are also unable to change the dashboard.

   If you keep the option disabled, the main menu is displayed for the user, so he or she can perform various actions in Kaspersky Security Center, including changing security settings and widgets.
7. Click the **Save** button when you finish configuring the Dashboard-only mode. Only after that will the prepared dashboard be displayed to the user.

8. If the user wants to view statistics of supported Kaspersky applications and needs access rights to do so, configure the rights for the user. After that, Kaspersky applications data is displayed for the user in the widgets of these applications.

Now the user can log in to Kaspersky Security Center under the customized account and monitor the network protection statistics in the Dashboard-only mode.

Reports

This section describes how to use reports, manage custom report templates, use report templates to generate new reports, and create report delivery tasks.

Using reports

The Reports feature allows you to get detailed numerical information about the security of your organization's network, save this information to a file, send it by email, and print it.

Reports are available in the Kaspersky Security Center 14 Web Console, in the **MONITORING & REPORTING** section, by clicking **REPORTS**.

By default, reports include information for the last 30 days.

Kaspersky Security Center Linux has a default set of reports for the following categories:

- **Protection status**
- **Deployment**
- **Updating**
- **Threat statistics**
- **Other**

You can create custom report templates, edit report templates, and delete them.

You can create reports that are based on existing templates, export reports to files, and create tasks for report delivery.

Creating a report template

To create a report template:

1. In the main menu, go to **MONITORING & REPORTING** → **REPORTS**.
2. Click **Add**.

   The New report template wizard starts. Proceed through the Wizard by using the **Next** button.
3. Enter the report name and select the report type.

4. On the **Scope** step of the wizard, select the set of client devices (administration group, device selection, selected devices, or all networked devices) whose data will be displayed in reports that are based on this report template.

5. On the **Reporting period** step of the wizard, specify the report period. Available values are as follows:

   - Between the two specified dates
   - From the specified date to the report creation date
   - From the report creation date, minus the specified number of days, to the report creation date

   This page may not appear for some reports.

6. Click **OK** to close the wizard.

7. Do one of the following:

   - Click the **Save and run** button to save the new report template and to run a report based on it.

     The report template is saved. The report is generated.

   - Click the **Save** button to save the new report template.

     The report template is saved.

You can use the new template for generating and viewing reports.

Viewing and editing report template properties

You can view and edit basic properties of a report template, for example, the report template name or the fields displayed in the report.

To view and edit properties of a report template:

1. In the main menu, go to **MONITORING & REPORTING** → **REPORTS**.

2. Select the check box next to the report template whose properties you want to view and edit.

   As an alternative, you can first generate the report, and then click the **Edit** button.

3. Click the **Open report template properties** button.

   The **Editing report <Report name>** window opens with the **General** tab selected.

4. Edit the report template properties:

   - **General** tab:

     - Report template name
     - Maximum number of entries to display

If this option is enabled, the number of entries displayed in the table with detailed report data does not exceed the specified value.

Report entries are first sorted according to the rules specified in the **Fields** → **Details fields** section of the report template properties, and then only the first of the resulting entries are kept. The heading of the table with detailed report data shows the displayed number of entries and the total available number of entries that match other report template settings.

If this option is disabled, the table with detailed report data displays all available entries. We do not recommend that you disable this option. Limiting the number of displayed report entries reduces the load on the database management system (DBMS) and reduces the time required for generating and exporting the report. Some of the reports contain too many entries. If this is the case, you may find it difficult to read and analyze them all. Also, your device may run out of memory while generating such a report and, consequently, you will not be able to view the report.

By default, this option is enabled. The default value is 1000.

- **Group**

  Click the **Settings** button to change the set of client devices for which the report is created. For some types of the reports, the button may be unavailable. The actual settings depend on the settings specified during creation of the report template.

- **Time interval**

  Click the **Settings** button to modify the report period. For some types of the reports, the button may be unavailable. Available values are as follows:

  - Between the two specified dates
  - From the specified date to the report creation date
  - From the report creation date, minus the specified number of days, to the report creation date

- Include data from secondary and virtual Administration Servers

  If this option is enabled, the report includes the information from the secondary and virtual Administration Servers that are subordinate to the Administration Server for which the report template is created.

  Disable this option if you want to view data only from the current Administration Server.

  By default, this option is enabled.

- Up to nesting level

  The report includes data from secondary and virtual Administration Servers that are located under the current Administration Server on a nesting level that is less than or equal to the specified value.

  The default value is 1. You may want to change this value if you have to retrieve information from secondary Administration Servers located at lower levels in the tree.

- Data wait interval (min)

Before generating the report, the Administration Server for which the report template is created waits for data from secondary Administration Servers during the specified number of minutes. If no data is received from a secondary Administration Server at the end of this period, the report runs anyway. Instead of the actual data, the report shows data taken from the cache (if the **Cache data from secondary Administration Servers** option is enabled), or **N/A** (not available) otherwise.

The default value is 5 (minutes).

- Cache data from secondary Administration Servers

  Secondary Administration Servers regularly transfer data to the Administration Server for which the report template is created. There, the transferred data is stored in the cache.

  If the current Administration Server cannot receive data from a secondary Administration Server while generating the report, the report shows data taken from the cache. The date when the data was transferred to the cache is also displayed.

  Enabling this option allows you to view the information from secondary Administration Servers even if the up-to-date data cannot be retrieved. However, the displayed data can be obsolete.

  By default, this option is disabled.

- Cache update frequency (h)

  Secondary Administration Servers at regular intervals transfer data to the Administration Server for which the report template is created. You can specify this period in hours. If you specify 0 hours, data is transferred only when the report is generated.

  The default value is 0.

- Transfer detailed information from secondary Administration Servers

  In the generated report, the table with detailed report data includes data from secondary Administration Servers of the Administration Server for which the report template is created.

  Enabling this option slows the report generation and increases traffic between Administration Servers. However, you can view all data in one report.

  Instead of enabling this option, you may want to analyze detailed report data to detect a faulty secondary Administration Server, and then generate the same report only for that faulty Administration Server.

  By default, this option is disabled.

- **Fields** tab

  Select the fields that will be displayed in the report, and use the **Move up** button and **Move down** button to change the order of these fields. Use the **Add** button or **Edit** button to specify whether the information in the report must be sorted and filtered by each of the fields.

  In the **Filters of Details fields** section, you can also click the **Convert filters** button to start using the extended filtering format. This format enables you to combine filtering conditions specified in various fields by using the logical OR operation. After you click the button, the **Convert filters** panel opens on the right. Click the **Convert filters** button to confirm conversion. You can now define a converted filter with conditions from the **Details fields** section that are applied by using the logical OR operation.

Conversion of a report to the format supporting complex filtering conditions will make the report incompatible with the previous versions of Kaspersky Security Center (11 and earlier). Also, the converted report will not contain any data from secondary Administration Servers running such incompatible versions.

5. Click **Save** to save the changes.
6. Close the **Editing report <Report name>** window.

The updated report template appears in the list of report templates.

Exporting a report to a file

You can export a report to an XML, HTML, or PDF file.

To export a report to a file:

1. In the main menu, go to **MONITORING & REPORTING → REPORTS**.
2. Select the check box next to the report that you want to export to a file.
3. Click the **Export report** button.
4. In the window that opens, change the report file name in the **Name** field. By default, the file name coincides with the name of the selected report template.
5. Select the report file type: XML, HTML, or PDF.

   The wkhtmltopdf tool is required to convert a report to PDF. When you select the PDF option, Administration Server checks whether the wkhtmltopdf tool is installed on the device. If the tool is not installed, the application displays a message about the necessity to install the tool on the Administration Server device. Install the tool manually, and then proceed to the next step.
6. Click the **Export report** button.

   The report in selected format will be downloaded to your device—to the default folder of your device—or a standard **Save as** window in your browser will open to let you save the file where you want.

The report is saved to the file.

Generating and viewing a report

To create and view a report:

1. In the main menu, go to **MONITORING & REPORTING → REPORTS**.
2. Click the name of the report template that you want to use to create a report.

A report using the selected template is generated and displayed.

Report data is displayed according to the localization set for the Administration Server.

In the generated reports, some fonts may be displayed incorrectly on the diagrams. To resolve this issue, install the fontconfig library. Also, please check that the fonts corresponding to your operating system locale are installed in the operating system.

The report displays the following data:

- On the **Summary** tab:
  - The name and type of report, a brief description and the reporting period, as well as information about the group of devices for which the report is generated.
  - Graph chart showing the most representative report data.
  - Consolidated table with calculated report indicators.
- On the **Details** tab, a table with detailed report data is displayed.

Creating a report delivery task

You can create a task that will deliver selected reports.

To create a report delivery task:

1. Go to **MONITORING & REPORTING** → **REPORTS**.
2. [Optional] Select the check boxes next to the report templates for which you want to create a report delivery task.
3. Click the **New report delivery task** button.
4. The New Task Wizard starts. Proceed through the Wizard by using the **Next** button.
5. On the first page of the Wizard, enter the task name. The default name is **Deliver reports (<N>)**, where <N> is the sequence number of the task.
6. On the task settings page of the Wizard, specify the following settings:
   a. Report templates to be delivered by the task. If you selected them at step 2, skip this step.
   b. The report format: HTML, XLS, or PDF.

      The wkhtmltopdf tool is required to convert a report to PDF. When you select the PDF option, Administration Server checks whether the wkhtmltopdf tool is installed on the device. If the tool is not installed, the application displays a message about the necessity to install the tool on the Administration Server device. Install the tool manually, and then proceed to the next step.

   c. Whether the reports are to be sent by email, together with email notification settings.
   d. Whether the reports are to be saved to a folder, together with the corresponding settings.

After you enable the **Save reports to folder** option, you must specify a POSIX path to the folder. If you want to save the reports to a shared folder, you also have to select the **Specify account for access to shared folder** check box, and then specify the user account and password for accessing this folder.

If you select to save the reports to a shared folder, you have to ensure the access to this folder from the device with Administration Server installed. The ways to ensure the access and the tools used depend on your infrastructure.

When saving the reports to a local folder, credentials are usually not needed since the account under which the Administration Server is running has the access to this folder. If necessary, you can specify the user credentials at the **Selecting an account to run the task** step of the wizard.

Regardless of the folder choice, you can also select the **Overwrite older reports of the same type** check box if you want the new report file to overwrite the file that was saved in the reports folder at the previous task startup.

7. If you want to modify other task settings after the task is created, on the **Finish task creation** page of the Wizard enable the **Open task details when creation is complete** option.

8. Click the **Create** button to create the task and close the Wizard.

   The report delivery task is created. If you enabled the **Open task details when creation is complete** option, the task settings window opens.

Deleting report templates

To delete one or several report templates:

1. In the main menu, go to **MONITORING & REPORTING** → **REPORTS**.

2. Select check boxes next to the report templates that you want to delete.

3. Click the **Delete** button.

4. In the window that opens, click **OK** to confirm your selection.

The selected report templates are deleted. If these report templates were included in the report delivery tasks, they are also removed from the tasks.

Events and event selections

This section provides information about events and event selections, about the types of events that occur in Kaspersky Security Center Linux components, and about managing frequent events blocking.

About events in Kaspersky Security Center Linux

Kaspersky Security Center Linux allows you to receive information about events that occur during the operation of Administration Server and Kaspersky applications installed on managed devices. Information about events is saved in the Administration Server database.

Events by type

In Kaspersky Security Center Linux, there are the following types of events:

- General events. These events occur in all managed Kaspersky applications. An example of a general event is Virus outbreak. General events have strictly defined syntax and semantics. General events are used, for instance, in reports and dashboards.
- Managed Kaspersky applications-specific events. Each managed Kaspersky application has its own set of events.

Events by source

You can view the full list of the events that can be generated by an application on the **Event configuration** tab in the application policy. For Administration Server, you can additionally view the event list in the Administration Server properties.

Events can be generated by the following applications:

- Kaspersky Security Center Linux components:
  - Administration Server
  - Network Agent
- Managed Kaspersky applications

  For details about the events generated by Kaspersky managed applications, please refer to the documentation of the corresponding application.

Events by importance level

Each event has its own importance level. Depending on the conditions of its occurrence, an event can be assigned various importance levels. There are four importance levels of events:

- A *critical event* is an event that indicates the occurrence of a critical problem that may lead to data loss, an operational malfunction, or a critical error.
- A *functional failure* is an event that indicates the occurrence of a serious problem, error, or malfunction that occurred during operation of the application or while performing a procedure.
- A *warning* is an event that is not necessarily serious, but nevertheless indicates a potential problem in the future. Most events are designated as warnings if the application can be restored without loss of data or functional capabilities after such events occur.
- An *info* event is an event that occurs for the purpose of informing about successful completion of an operation, proper functioning of the application, or completion of a procedure.

Each event has a defined storage term, during which you can view or modify it in Kaspersky Security Center Linux. Some events are not saved in the Administration Server database by default because their defined storage term is zero. Only events that will be stored in the Administration Server database for at least one day can be exported to external systems.

Events of Kaspersky Security Center Linux components

Each Kaspersky Security Center Linux component has its own set of event types. This section lists types of events that occur in Kaspersky Security Center Administration Server and Network Agent. Types of events that occur in Kaspersky applications are not listed in this section.

For each event that can be generated by an application, you can specify notification settings and storage settings on the **Event configuration** tab in the application policy. For Administration Server, you can additionally view and configure the event list in the Administration Server properties. If you want to configure notification settings for all the events at once, configure general notification settings in the Administration Server properties.

Data structure of event type description

For each event type, its display name, identifier (ID), alphabetic code, description, and the default storage term are provided.

- **Event type display name**. This text is displayed in Kaspersky Security Center Linux when you configure events and when they occur.
- **Event type ID**. This numerical code is used when you process events by using third-party tools for event analysis.
- **Event type** (alphabetic code). This code is used when you browse and process events by using public views that are provided in the Kaspersky Security Center Linux database and when events are exported to a SIEM system.
- **Description**. This text contains the situations when an event occurs and what you can do in such a case.
- **Default storage term**. This is the number of days during which the event is stored in the Administration Server database and is displayed in the list of events on Administration Server. After this period elapses, the event is deleted. If the event storage term value is 0, such events are detected but are not displayed in the list of events on Administration Server. If you configured to save such events to the operating system event log, you can find them there.

  You can change the storage term for events: Setting the storage term for an event

Administration Server events

This section contains information about the events related to the Administration Server.

Administration Server critical events

The table below shows the events of Kaspersky Security Center Administration Server that have the **Critical** importance level.

For each event that can be generated by an application, you can specify notification settings and storage settings on the **Event configuration** tab in the application policy. For Administration Server, you can additionally view and configure the event list in the Administration Server properties. If you want to configure notification settings for all the events at once, configure general notification settings in the Administration Server properties.

Administration Server critical events

Event type display name	Event type ID	Event type	Description	Default storage term
License limit has been exceeded	4099	KLSRV_EV_LICENSE_CHECK_MORE_110	Once a day Kaspersky Security Center Linux checks whether a license limit is exceeded. Events of this type occur when Administration Server detects that some licensing limits are exceeded by Kaspersky applications installed on client devices and if the number of currently used licensing units covered by a single license exceeds 110% of the total number of units covered by the license. Even when this event occurs, client devices are protected. You can respond to the event in the following ways: • Look through the managed devices list. Delete devices that are not in use. • Provide a license for more devices (add a valid activation code or a key file to Administration Server). Kaspersky Security Center Linux determines the rules to generate events when a licensing limit is exceeded.	180 days
Device has become unmanaged	4111	KLSRV_HOST_OUT_CONTROL	Events of this type occur if a managed device is visible on the network but has not connected to Administration Server for a specific period. Find out what prevents the proper functioning of Network Agent on the device. Possible causes include network issues and removal of Network Agent from the device.	180 days
Device status is Critical	4113	KLSRV_HOST_STATUS_CRITICAL	Events of this type occur when a managed device is assigned the *Critical* status. You can configure the conditions under which the device status is changed to *Critical*.	180 days
The key file has been added to the denylist	4124	KLSRV_LICENSE_BLACKLISTED	Events of this type occur when Kaspersky has added the activation code or key file that you use to the denylist. Contact Technical Support for more details.	180 days
License expires soon	4129	KLSRV_EV_LICENSE_SRV_EXPIRE_SOON	Events of this type occur when the commercial license expiration date is approaching. Once a day Kaspersky Security Center checks whether a license expiration date is approaching. Events of this type are published 30 days, 15 days, 5 days, and 1 day before the license expiration date. This number of days cannot be changed. If the Administration Server is turned off on the specified day before the license expiration date, the event will not be published until the next day. When the commercial license expires, Kaspersky Security Center Linux provides only basic functionality. You can respond to the event in the following ways: • Make sure that a reserve license key is added to Administration Server. • If you use a subscription, make sure to renew it. An unlimited subscription is renewed automatically if it has been prepaid to the service provider by the due date.	180 days
Certificate has expired	4132	KLSRV_CERTIFICATE_EXPIRED	Events of this type occur when the Administration Server certificate for Mobile Device Management expires. You need to update the expired certificate.	180 days

Administration Server functional failure events

The table below shows the events of Kaspersky Security Center Linux Administration Server that have the **Functional failure** importance level.

Administration Server functional failure events

Event type display name	Event type ID	Event type	Description	Default storage term
Runtime error	4125	KLSRV_RUNTIME_ERROR	Events of this type occur because of unknown issues. Most often these are DBMS issues, network issues, and other software and hardware issues. Details of the event can be found in the event description.	180 days
Failed to copy the updates to the specified folder	4123	KLSRV_UPD_REPL_FAIL	Events of this type occur when software updates are copied to an additional shared folder(s). You can respond to the event in the following ways: • Check whether the user account that is employed to gain access to the folder(s) has write permission. • Check whether a user name and/or a password to the folder(s) is/are changed. • Check the internet connection, as it might be the cause of the event. Follow the instructions to update databases and software modules.	180 days
No free disk space	4107	KLSRV_DISK_FULL	Events of this type occur when the hard drive of the device on which Administration Server is installed runs out of free space. Free up disk space on the device.	180 days
Shared folder is not available	4108	KLSRV_SHARED_FOLDER_UNAVAILABLE	Events of this type occur if the shared folder of Administration Server is not available. You can respond to the event in the following ways: • Check whether the Administration Server (where the shared folder is located) is turned on and available. • Check whether a user name and/or a password to the folder is/are changed. • Check the network connection.	180 days
The Administration Server database is unavailable	4109	KLSRV_DATABASE_UNAVAILABLE	Events of this type occur if the Administration Server database becomes unavailable. You can respond to the event in the following ways: • Check whether the remote server that has SQL Server installed is available. • View the DBMS logs to discover the reason for Administration Server database unavailability. For example, because of preventive maintenance a remote server with SQL Server installed might be unavailable.	180 days

No free space in the Administration Server database	4110	KLSRV_DATABASE_FULL	Events of this type occur when there is no free space in the Administration Server database.
			Administration Server does not function when its database has reached its capacity and when further recording to the database is not possible.
			Following are the causes of this event, depending on the DBMS that you use, and appropriate responses to the event:
			• You use the SQL Server Express Edition DBMS:
			  • In the SQL Server Express documentation, review the database size limit for the version you use. Probably your Administration Server database has exceeded the database size limit.
			  • Limit the number of events to store in the Administration Server database.
			  • In the Administration Server database there are too many events sent by the Application Control component. You can change the settings of the Kaspersky Endpoint Security for Linux policy relating to Application Control event storage in the Administration Server database.
			• You use a DBMS other than SQL Server Express Edition:
			  • Do not limit the number of events to store in the Administration Server database.
			  • Reduce the list of events to store in the Administration Server database.
			Review the information on DBMS selection.
				180 days

Administration Server warning events

The table below shows the events of Kaspersky Security Center Linux Administration Server that have the **Warning** importance level.

Administration Server warning events

Event type display name	Event type ID	Event type	Description	Default storage term
A frequent event has been detected		KLSRV_EVENT_SPAM_EVENTS_DETECTED	Events of this type occur when Administration Server detects a frequent event on a managed device. Refer to the following section for details: Blocking frequent events.	90 days
License limit has been exceeded	4098	KLSRV_EV_LICENSE_CHECK_100_110	Once a day Kaspersky Security Center Linux checks whether a license limit is exceeded. Events of this type occur when Administration Server detects that some licensing limits are exceeded by Kaspersky applications installed on client devices and if the number of currently used licensing units covered by a single license constitute 100% to 110% of the total number of units covered by the license. Even when this event occurs, client devices are protected. You can respond to the event in the following ways: • Look through the managed devices list. Delete devices that are not in use. • Provide a license for more devices (add a valid activation code or a key file to Administration	90 days

			Server). Kaspersky Security Center Linux determines the rules to generate events when a license limit is exceeded.	
Device has remained inactive on the network for a long time	4103	KLSRV_EVENT_HOSTS_NOT_VISIBLE	Events of this type occur when a managed device shows inactivity for some time. Most often, this happens when a managed device is decommissioned. You can respond to the event in the following ways: • Manually remove the device from the list of managed devices. Specify the time interval after which the **Device has remained inactive on the network for a long time** event is created by using Kaspersky Security Center 14 Web Console. • Specify the time interval after which the device is automatically removed from the group by using Kaspersky Security Center 14 Web Console.	90 days
Conflict of device names	4102	KLSRV_EVENT_HOSTS_CONFLICT	Events of this type occur when Administration Server considers two or more managed devices as a single device. Most often this happens when a cloned hard drive was used for software deployment on managed devices and without switching the Network Agent to the dedicated disk cloning mode on a reference device. To avoid this issue, switch Network Agent to the disk cloning mode on a reference device before cloning the hard drive of this device.	90 days
Device status is Warning	4114	KLSRV_HOST_STATUS_WARNING	Events of this type occur when a managed device is assigned the *Warning* status. You can configure the conditions under which the device status is changed to *Warning*.	90 days
Certificate has been requested	4133	KLSRV_CERTIFICATE_REQUESTED	Events of this type occur when a certificate for Mobile Device Management fails to be automatically reissued. Following might be the causes and appropriate responses to the event: • Automatic reissue was initiated for a certificate for which the **Reissue certificate automatically if possible** option is disabled. This might be due to an error that occurred during creation of the certificate. Manual reissue of the certificate might be required. • If you use an integration with a public key infrastructure, the cause might be a missing SAM-Account-Name attribute of the account used for integration with PKI and for issuance of the certificate. Review the account properties.	90 days
Certificate has	4134	KLSRV_CERTIFICATE_REMOVED	Events of this type occur when an administrator	90

been removed			removes any type of certificate (General, Mail, VPN) for Mobile Device Management. After removing a certificate, mobile devices connected via this certificate will fail to connect to Administration Server. This event might be helpful when investigating malfunctions associated with the management of mobile devices.	days
APNs certificate has expired	4135	KLSRV_APN_CERTIFICATE_EXPIRED	Events of this type occur when an APNs certificate expires. You need to manually renew the APNs certificate and install it on an iOS MDM Server.	Not stored
APNs certificate expires soon	4136	KLSRV_APN_CERTIFICATE_EXPIRES_SOON	Events of this type occur when there are fewer than 14 days left before the APNs certificate expires. When the APNs certificate expires, you need to manually renew the APNs certificate and install it on an iOS MDM Server. We recommend that you schedule the APNs certificate renewal in advance of the expiration date.	Not stored
Failed to send the FCM message to the mobile device	4138	KLSRV_GCM_DEVICE_ERROR	Events of this type occur when Mobile Device Management is configured to use Google Firebase Cloud Messaging (FCM) for connecting to managed mobile devices with an Android operating system and FCM Server fails to handle some of the requests received from Administration Server. It means that some of the managed mobile devices will not receive a push notification. Read the HTTP code in the details of the event description and respond accordingly. For more information on the HTTP codes received from FCM Server and related errors, please refer to the Google Firebase service documentation (see chapter "Downstream message error response codes").	90 days
HTTP error sending the FCM message to the FCM server	4139	KLSRV_GCM_HTTP_ERROR	Events of this type occur when Mobile Device Management is configured to use Google Firebase Cloud Messaging (FCM) for connecting managed mobile devices with the Android operating system and FCM Server reverts to the Administration Server a request with a HTTP code other than 200 (OK). Following might be the causes and appropriate responses to the event: • Problems on the FCM server side. Read the HTTP code in the details of the event description and respond accordingly. For more information on the HTTP codes received from FCM Server and related errors, please refer to the Google Firebase service documentation (see chapter "Downstream message error response codes"). • Problems on the proxy server side (if you use proxy server). Read the HTTP code in the details of the event and respond accordingly.	90 days
Failed to send the FCM message to the FCM server	4140	KLSRV_GCM_GENERAL_ERROR	Events of this type occur due to unexpected errors on the Administration Server side when working with the Google Firebase Cloud Messaging HTTP protocol. Read the details in the event description and respond accordingly. If you cannot find the solution to an issue on your own, we recommend that you contact Kaspersky Technical Support.	90 days
Little free space	4105	KLSRV_NO_SPACE_ON_VOLUMES	Events of this type occur when the hard drive of	90

on the hard drive			the device on which Administration Server is installed almost runs out of free space. Free up disk space on the device.	days
Little free space in the Administration Server database	4106	KLSRV_NO_SPACE_IN_DATABASE	Events of this type occur if space in the Administration Server database is too limited. If you do not remedy the situation, soon the Administration Server database will reach its capacity and Administration Server will not function. Following are the causes of this event, depending on the DBMS that you use, and the appropriate responses to the event. You use the SQL Server Express Edition DBMS: • In SQL Server Express documentation, review the database size limit for the version you use. Probably your Administration Server database is about to reach the database size limit. • Limit the number of events to store in the Administration Server database. • In the Administration Server database there are too many events sent by the Application Control component. You can change the settings of the Kaspersky Endpoint Security for Linux policy relating to Application Control event storage in the Administration Server database. You use a DBMS other than SQL Server Express Edition: • Do not limit the number of events to store in the Administration Server database • Reduce the list of events to store in the Administration Server database Review the information on DBMS selection.	90 days
Connection to the secondary Administration Server has been interrupted	4116	KLSRV_EV_SLAVE_SRV_DISCONNECTED	Events of this type occur when a connection to the secondary Administration Server is interrupted. Read the operating system log on the device where the secondary Administration Server is installed and respond accordingly.	90 days
Connection to the primary Administration Server has been interrupted	4118	KLSRV_EV_MASTER_SRV_DISCONNECTED	Events of this type occur when a connection to the primary Administration Server is interrupted. Read the operating system log on the device where the primary Administration Server is installed and respond accordingly.	90 days
New updates for Kaspersky software modules have been registered	4141	KLSRV_SEAMLESS_UPDATE_REGISTERED	Events of this type occur when Administration Server registers new updates for the Kaspersky software installed on managed devices that require approval to be installed. Approve or decline the updates by using Kaspersky Security Center Web Console.	90 days
The limit on the number of events in the database is exceeded, deletion of events has started	4145	KLSRV_EVP_DB_TRUNCATING	Events of this type occur when deletion of old events from the Administration Server database has started after the Administration Server database capacity is reached. You can respond to the event in the following ways: • Change the maximum number of events stored in the Administration Server database • Reduce the list of events to store in the Administration Server database	Not stored
The limit on the	4146	KLSRV_EVP_DB_TRUNCATED	Events of this type occur when old events have	Not

number of events in the database is exceeded, the events have been deleted			been deleted from the Administration Server database after the Administration Server database capacity is reached. You can respond to the event in the following ways: • Change the allowed maximum number of events to be stored in the Administration Server database • Reduce the list of events to store in the Administration Server database	stored

Administration Server informational events

The table below shows the events of Kaspersky Security Center Linux Administration Server that have the **Info** importance level.

Administration Server informational events

Event type display name	Event type ID	Event type	Default storage term	Remarks
Over 90% of the license key is used up	4097	KLSRV_EV_LICENSE_CHECK_90	30 days	
New device has been detected	4100	KLSRV_EVENT_HOSTS_NEW_DETECTED	30 days	
Device has been automatically added to the group	4101	KLSRV_EVENT_HOSTS_NEW_REDIRECTED	30 days	
Device has been removed from the group: inactive on the network for a long time	4104	KLSRV_INVISIBLE_HOSTS_REMOVED	30 days	
Files have been found to send to Kaspersky for analysis	4131	KLSRV_APS_FILE_APPEARED	30 days	
FCM Instance ID has changed on this mobile device	4137	KLSRV_GCM_DEVICE_REGID_CHANGED	30 days	
Updates have been successfully copied to the specified folder	4122	KLSRV_UPD_REPL_OK	30 days	
Connection to the secondary Administration Server has been established	4115	KLSRV_EV_SLAVE_SRV_CONNECTED	30 days	
Connection to the primary Administration Server has been established	4117	KLSRV_EV_MASTER_SRV_CONNECTED	30 days	
Databases have been updated	4144	KLSRV_UPD_BASES_UPDATED	30 days	
Audit: Connection to the Administration Server has been established	4147	KLAUD_EV_SERVERCONNECT	30 days	Events of this type occur when a user connects to Administration Server using Administration Console or Web Console. These events include the IP address of the device where the MMC-based Administration Console or Web Console Server is installed.

Audit: Object has been modified	4148	KLAUD_EV_OBJECTMODIFY	30 days	This event tracks changes in the following objects: • Administration group • Security group • User • Package • Task • Policy • Server • Virtual Server
Audit: Object status has changed	4150	KLAUD_EV_TASK_STATE_CHANGED	30 days	For example, this event occurs when a task has failed with an error.
Audit: Group settings have been modified	4149	KLAUD_EV_ADMGROUP_CHANGED	30 days	
Audit: Connection to Administration Server has been terminated	4151	KLAUD_EV_SERVERDISCONNECT	30 days	
Audit: Object properties have been modified	4152	KLAUD_EV_OBJECTPROPMODIFIED	30 days	This event tracks changes in the following properties: • User • License • Server • Virtual server
Audit: User permissions have been modified	4153	KLAUD_EV_OBJECTACLMODIFIED	30 days	

Network Agent events

This section contains information about the events related to Network Agent.

Network Agent warning events

The table below shows the events of Kaspersky Security Center Linux Network Agent that have the **Warning** severity level.

Network Agent warning events

Event type display name	Event type ID	Event type	Default storage term
Incident has occurred	549	GNRL_EV_APP_INCIDENT_OCCURED	30 days

Network Agent informational events

The table below shows the events of Kaspersky Security Center Linux Network Agent that have the **Info** severity level.

Network Agent informational events

Event type display name	Event type ID	Event type	Default storage term
Application has been installed	7703	KLNAG_EV_INV_APP_INSTALLED	30 days
Application has been uninstalled	7704	KLNAG_EV_INV_APP_UNINSTALLED	30 days
Monitored application has been installed	7705	KLNAG_EV_INV_OBS_APP_INSTALLED	30 days
Monitored application has been uninstalled	7706	KLNAG_EV_INV_OBS_APP_UNINSTALLED	30 days
New device has been added	7708	KLNAG_EV_DEVICE_ARRIVAL	30 days
Device has been removed	7709	KLNAG_EV_DEVICE_REMOVE	30 days
New device has been detected	7710	KLNAG_EV_NAC_DEVICE_DISCOVERED	30 days
Device has been authorized	7711	KLNAG_EV_NAC_HOST_AUTHORIZED	30 days

Using event selections

Event selections provide an onscreen view of named sets of events that are selected from the Administration Server database. These sets of events are grouped according to the following categories:

- By importance level—**Critical events**, **Functional failures**, **Warnings**, and **Info events**
- By time—**Recent events**
- By type—**User requests** and **Audit events**

You can create and view user-defined event selections based on the settings available, in the Kaspersky Security Center 14 Web Console interface, for configuration.

Event selections are available in the Kaspersky Security Center 14 Web Console, in the **MONITORING & REPORTING** section, by clicking **EVENT SELECTIONS**.

By default, event selections include information for the last seven days.

Kaspersky Security Center Linux has a default set of event (predefined) selections:

- Events with different importance levels:
  - **Critical events**
  - **Functional failures**
  - **Warnings**
  - **Informational messages**
- **User requests** (events of managed applications)
- **Recent events** (over the last week)
- Audit events.

You can also create and configure additional user-defined selections. In user-defined selections, you can filter events by the properties of the devices they originated from (device names, IP ranges, and administration groups), by event types and severity levels, by application and component name, and by time interval. It is also possible to include task results in the search scope. You can also use a simple search field where a word or several words can be typed. All events that contain any of the typed words anywhere in their attributes (such as event name, description, component name) are displayed.

Both for predefined and user-defined selections, you can limit the number of displayed events or the number of records to search. Both options affect the time it takes Kaspersky Security Center Linux to display the events. The larger the database is, the more time-consuming the process can be.

You can do the following:

- Edit properties of event selections
- Generate event selections
- View details of event selections
- Delete event selections
- Delete events from the Administration Server database

Creating an event selection

To create an event selection:

1. In the main menu, go to **MONITORING & REPORTING → EVENT SELECTIONS**.
2. Click **Add**.
3. In the **New event selection** window that opens, specify the settings of the new event selection. Do this in one or more of the sections in the window.
4. Click **Save** to save the changes.

   The confirmation window opens.
5. To view the event selection result, keep the **Go to selection result** check box selected.
6. Click **Save** to confirm the event selection creation.

If you kept the **Go to selection result** check box selected, the event selection result is displayed. Otherwise, the new event selection appears in the list of event selections.

Editing an event selection

To edit an event selection:

1. In the main menu, go to **MONITORING & REPORTING → EVENT SELECTIONS**.

2. Select the check box next to the event selection that you want to edit.
3. Click the **Properties** button.

   An event selection settings window opens.
4. Edit the properties of the event selection.

   > For predefined event selections, you can edit only the properties on the following tabs: **General** (except for the selection name), **Time**, and **Access rights**.

   For user-defined selections, you can edit all properties.
5. Click **Save** to save the changes.

The edited event selection is shown in the list.

Viewing a list of an event selection

To view an event selection:

1. In the main menu, go to **MONITORING & REPORTING → EVENT SELECTIONS**.
2. Select the check box next to the event selection that you want to start.
3. Do one of the following:
   - If you want to configure sorting in the event selection result, do the following:
     a. Click the **Reconfigure sorting and start** button.
     b. In the displayed **Reconfigure sorting for event selection** window, specify the sorting settings.
     c. Click the name of the selection.
   - Otherwise, if you want to view the list of events as they are sorted on the Administration Server, click the name of the selection.

The event selection result is displayed.

Viewing details of an event

To view details of an event:

1. Start an event selection.
2. Click the time of the required event.

   The **Event properties** window opens.

3. In the displayed window, you can do the following:

   - View the information about the selected event
   - Go to the next event and the previous event in the event selection result
   - Go to the device on which the event occurred
   - Go to the administration group that includes the device on which the event occurred
   - For an event related to a task, go to the task properties

Exporting events to a file

To export events to a file:

1. Start an event selection.
2. Select the check box next to the required event.
3. Click the **Export to file** button.

   The selected event is exported to a file.

Viewing an object history from an event

From an event of creation or modification of an object that supports revision management, you can switch to the revision history of the object.

To view an object history from an event:

1. Start an event selection.
2. Select the check box next to the required event.
3. Click the **Revision history** button.

   The revision history of the object is opened.

Deleting events

To delete one or several events:

1. Start an event selection.
2. Select the check boxes next to the required events.

3. Click the **Delete** button.

The selected events are deleted and cannot be restored.

Deleting event selections

You can delete only user-defined event selections. Predefined event selections cannot be deleted.

To delete one or several event selections:

1. In the main menu, go to **MONITORING & REPORTING** → **EVENT SELECTIONS**.
2. Select the check boxes next to the event selections that you want to delete.
3. Click **Delete**.
4. In the window that opens, click **OK**.

The event selection is deleted.

Setting the storage term for an event

Kaspersky Security Center Linux allows you to receive information about events that occur during the operation of Administration Server and Kaspersky applications installed on managed devices. Information about events is saved in the Administration Server database. You might need to store some events for a longer or shorter period than specified by default values. You can change the default settings of the storage term for an event.

If you are not interested in storing some events in the database of Administration Server, you can disable the appropriate setting in the Administration Server policy and Kaspersky application policy, or in the Administration Server properties (only for Administration Server events). This will reduce the number of event types in the database.

The longer the storage term for an event, the faster the database reaches its maximum capacity. However, a longer storage term for an event lets you perform monitoring and reporting tasks for a longer period.

To set the storage term for an event in the database of Administration Server:

1. Select **DEVICES** → **POLICIES & PROFILES**.
2. Do one of the following:

   - To configure the storage term of the events of Network Agent or of a managed Kaspersky application, click the name of the corresponding policy.

     The policy properties page opens.

   - To configure Administration Server events, at the top of the screen, click the settings icon ( ) next to the name of the required Administration Server.

     If you have a policy for the Administration Server, you can click the name of this policy instead.

The Administration Server properties page (or the Administration Server policy properties page) opens.

3. Select the **Event configuration** tab.

   A list of event types related to the **Critical** section is displayed.

4. Select the **Functional failure**, **Warning**, or **Info** section.

5. In the list of event types in the right pane, click the link for the event whose storage term you want to change.

   In the **Event registration** section of the window that opens, the **Store in the Administration Server database for (days)** option is enabled.

6. In the edit box below this toggle button, enter the number of days to store the event.

7. If you do not want to store an event in the Administration Server database, disable the **Store in the Administration Server database for (days)** option.

   If you configure Administration Server events in Administration Server properties window and if event settings are locked in the Kaspersky Security Center Linux Administration Server policy, you cannot redefine the storage term value for an event.

8. Click **OK**.

   The properties window of the policy is closed.

From now on, when Administration Server receives and stores the events of the selected type, they will have the changed storage term. Administration Server does not change the storage term of previously received events.

Blocking frequent events

This section provides information about managing frequent events blocking and about removing blocking of frequent events.

About blocking frequent events

A managed application, for example, Kaspersky Endpoint Security for Linux, installed on a single or several managed devices can send a lot of events of the same type to the Administration Server. Receiving frequent events may overload the Administration Server database and overwrite other events. Administration Server starts blocking the most frequent events when the number of all the received events exceeds the specified limit for the database.

Administration Server blocks the frequent events from receiving automatically. You cannot block the frequent events yourself, or choose which events to block.

If you want to find out if an event is blocked, you can view the notification list or you can check if this event is present in the **Blocking frequent events** section of the Administration Server properties. If the event is blocked, you can do the following:

- If you want to prevent overwriting the database, you can continue blocking such type of events from receiving.

- If you want, for example, to find the reason of sending the frequent events to the Administration Server, you can unblock frequent events and continue receiving the events of this type anyway.
- If you want to continue receiving the frequent events until they become blocked again, you can remove from blocking the frequent events.

Managing frequent events blocking

Administration Server blocks the automatic receiving of frequent events, but you can unblock and continue to receive frequent events. You can also block receiving frequent events that you unblocked before.

To manage frequent events blocking:

1. In the main menu, click the settings icon ( ) next to the name of the required Administration Server.

   The Administration Server properties window opens.

2. On the **General** tab, select the **Blocking frequent events** section.
3. In the **Blocking frequent events** section:
   - If you want to unblock the receiving of frequent events:
     a. Select the frequent events you want to unblock, and then click the **Exclude** button.
     b. Click the **Save** button.
   - If you want to block receiving frequent events:
     a. Select the frequent events you want to block, and then click the **Block** button.
     b. Click the **Save** button.

Administration Server receives the unblocked frequent events and does not receive the blocked frequent events.

Removing blocking of frequent events

You can remove blocking for frequent events and start receiving them until Administration Server blocks these frequent events again.

To remove blocking for frequent events:

1. In the main menu, click the settings icon ( ) next to the name of the required Administration Server.

   The Administration Server properties window opens.

2. On the **General** tab, select the **Blocking frequent events** section.
3. In the **Blocking frequent events** section, select the frequent event types for which you want to remove blocking.
4. Click the **Remove from blocking** button.

The frequent event is removed from the list of frequent events. Administration Server will receive events of this type.

Event processing and storage on the Administration Server

Information about events that occur during the operation of the application and managed devices is saved in the Administration Server database. Each event is attributed to a certain type and level of severity (*Critical event*, *Functional failure*, *Warning*, or *Info*). Depending on the conditions under which an event occurred, the application can assign different levels of severity to events of the same type.

You can view types and levels of severity assigned to events in the **Event configuration** section of the Administration Server properties window. In the **Event configuration** section, you can also configure processing of every event by the Administration Server:

- Registration of events on the Administration Server and in event logs of the operating system on a device and on the Administration Server.
- Method used for notifying the administrator of an event (for example, an SMS or email message).

In the **Events repository** section of the Administration Server properties window, you can edit the settings of events storage in the Administration Server database by limiting the number of event records and record storage term. When you specify the maximum number of events, the application calculates an approximate amount of storage space required for the specified number. You can use this approximate calculation to evaluate whether you have enough free space on the disk to avoid database overflow. The default capacity of the Administration Server database is 400,000 events. The maximum recommended capacity of the database is 45 million events.

The application checks the database every 10 minutes. If the number of events reaches the specified maximum value plus 10,000, the application deletes the oldest events so that only the specified maximum number of events remains.

When the Administration Server deletes old events, it cannot save new events to the database. During this period, information about events that were rejected is written to the operating system log. The new events are queued and then saved to the database after the deletion operation is complete. By default, the event queue is limited to 20,000 events. You can customize the queue limit by editing the KLEVP_MAX_POSTPONED_CNT flag value.

Notifications and device statuses

This section contains information on how to view notifications, configure notification delivery, use device statuses, and enable changing device statuses.

Using notifications

Notifications alert you about events and help you to speed up your responses to these events by performing recommended actions or actions you consider as appropriate.

Depending on the notification method chosen, the following types of notifications are available:

- Onscreen notifications
- Notifications by SMS

- Notifications by email
- Notifications by executable file or script

Onscreen notifications

Onscreen notifications alert you to events grouped by importance levels (*Critical*, *Warning*, and *Informational*).

Onscreen notification can have one of two statuses:

- *Reviewed*. It means you have performed recommended action for the notification, or you have assigned this status for the notification manually.
- *Not Reviewed*. It means you have not performed recommended action for the notification, or you have not assigned this status for the notification manually.

By default, the list of notifications include notifications in the *Not Reviewed* status.

You can monitor your organization's network viewing onscreen notifications and responding to them in a real time.

Notifications by email, by SMS, and by executable file or a script

Kaspersky Security Center Linux provides the capability to monitor your organization's network by sending notifications about any event that you consider important. For any event, you can configure notifications by email, by SMS, or by running an executable file or a script.

Upon receiving notifications by email or by SMS, you can decide on your response to an event. This response should be the most appropriate for your organization's network. By running an executable file or a script, you predefine a response to an event. You can also consider running an executable file or a script as a primary response to an event. After the executable file runs, you can take other steps to respond to the event.

Viewing onscreen notifications

You can view notifications onscreen in three ways:

- In the **MONITORING & REPORTING** → **NOTIFICATIONS** section. Here you can view notifications relating to predefined categories.
- In a separate window that can be opened no matter which section you are using at the moment. In this case, you can mark notifications as reviewed.
- In the **Notifications by selected severity level** widget on the **MONITORING & REPORTING** → **DASHBOARD** section. In the widget, you can view only notifications of events that are at the *Critical* and *Warning* importance levels.

You can perform actions, for example, you can response to an event.

To view notifications from predefined categories:

1. In the main menu, go to **MONITORING & REPORTING** → **NOTIFICATIONS**.

   The **All notifications** category is selected in the left pane, and in the right pane, all the notifications are displayed.

2. In the left pane, select one of the categories:

   - **Deployment**
   - **Devices**
   - **Protection**
   - **Updates** (this includes notifications about Kaspersky applications available for download and notifications about anti-virus database updates that have been downloaded)
   - **Exploit Prevention**
   - **Administration Server** (this includes events concerning only Administration Server)
   - **Useful links** (this includes links to Kaspersky resources, for example, Kaspersky Technical Support, Kaspersky forum, license renewal page, or the Kaspersky IT Encyclopedia)
   - **Kaspersky news** (this includes information about releases of Kaspersky applications)

   A list of notifications of the selected category is displayed. The list contains the following:

- Icon related to the topic of the notification: deployment (), protection (), updates (), device management (), Exploit Prevention (), Administration Server ().
- Notification importance level. Notifications of the following importance levels are displayed: **Critical notifications** (), **Warning notifications** (), **Info notifications**. Notifications in the list are grouped by importance levels.
- **Notification**. This contains a description of the notification.
- **Action**. This contains a link to a quick action that we recommend you perform. For example, by clicking this link, you can proceed to the repository and install security applications on devices, or view a list of devices or a list of events. After you perform the recommended action for the notification, this notification is assigned the *Reviewed* status.
- **Status registered**. This contains the number of days or hours that have passed from the moment when the notification was registered on the Administration Server.

To view onscreen notifications in a separate window by importance level:

1. In the upper-right corner of Kaspersky Security Center 14 Web Console, click the flag icon ().

   If the flag icon has a red dot, there are notifications that have not been reviewed.

   A window opens listing the notifications. By default, the **All notifications** tab is selected and the notifications are grouped by importance level: *Critical*, *Warning*, and *Info*.

2. Select the **System** tab.

   The list of *Critical* () and *Warning* () importance levels notifications is displayed. The notification list includes the following:

   - Color marker. Critical notifications are marked in red. Warning notifications are marked in yellow.

- Icon indicating the topic of the notification: deployment (), protection (), updates (), device management (), Exploit Prevention (), Administration Server ().
- Description of the notification.
- Flag icon. The flag icon is gray if notifications have been assigned the *Not Reviewed* status. When you select the gray flag icon and assign the *Reviewed* status to a notification, the icon changes color to white.
- Link to the recommended action. When you perform the recommended action after clicking the link, the notification gets the *Reviewed* status.
- Number of days that have passed since the date when the notification was registered on the Administration Server.

3. Select the **More** tab.

   The list of *Info* importance level notifications is displayed.

   The organization of the list is the same as for the list on the **System** tab (see the description above). The only difference is the absence of a color marker.

You can filter notifications by the date interval when they were registered on Administration Server. Use the **Show filter** check box to manage the filter.

To view onscreen notifications in the widget:

1. In the **DASHBOARD** section, select **Add or restore web widget**.
2. In the window that opens, click the **Other** category, select the **Notifications by selected severity level** widget, and click Add.

   The widget now appears on the **DASHBOARD** tab. By default, the notifications of *Critical* importance level are displayed on the widget.

   You can click the **Settings** button on the widget and change the widget settings to view notifications of the *Warning* importance level. Or, you can add another widget: **Notifications by selected severity level**, with a *Warning* importance level.

   The list of notifications on the widget is limited by its size and includes two notifications. These two notifications relate to the latest events.

The notification list in the widget includes the following:

- Icon related to the topic of the notification: deployment (), protection (), updates (), device management (), Exploit Prevention (), Administration Server ().
- Description of the notification with a link to the recommended action. When you perform a recommended action after clicking the link, the notification gets the *Reviewed* status.
- Number of days or number of hours that have passed since the date when the notification was registered on the Administration Server.
- Link to other notifications. Upon clicking this link, you are transferred to the view of notifications in the **NOTIFICATIONS** section of the **MONITORING & REPORTING** section.

About device statuses

Kaspersky Security Center Linux assigns a status to each managed device. The particular status depends on whether the conditions defined by the user are met. In some cases, when assigning a status to a device, Kaspersky Security Center Linux takes into consideration the device's visibility flag on the network (see the table below). If Kaspersky Security Center Linux does not find a device on the network within two hours, the visibility flag of the device is set to *Not Visible*.

The statuses are the following:

- *Critical* or *Critical/Visible*
- *Warning* or *Warning/Visible*
- *OK* or *OK/Visible*

The table below lists the default conditions that must be met to assign the *Critical* or *Warning* status to a device, with all possible values.

Conditions for assigning a status to a device

Condition	Condition description	Available values
Security application is not installed	Network Agent is installed on the device, but a security application is not installed.	• Toggle button is on. • Toggle button is off.
Too many viruses detected	Some viruses have been found on the device by a task for virus detection, for example, the Virus scan task, and the number of viruses found exceeds the specified value.	More than 0.
Real-time protection level differs from the level set by the Administrator	The device is visible on the network, but the real-time protection level differs from the level set (in the condition) by the administrator for the device status.	• Stopped. • Paused. • Running.
Virus scan has not been performed in a long time	The device is visible on the network and a security application is installed on the device, but neither the *Malware scan* task nor a local scan task has been run within the specified time interval. The condition is applicable only to devices that were added to the Administration Server database 7 days ago or earlier.	More than 1 day.
Databases are outdated	The device is visible on the network and a security application is installed on the device, but the anti-virus databases have not been updated on this device within the specified time interval. The condition is applicable only to devices that were added to the Administration Server database 1 day ago or earlier.	More than 1 day.
Not connected in a long time	Network Agent is installed on the device, but the device has not connected to an Administration Server within the specified time interval, because the device was turned off.	More than 1 day.
Active threats are detected	The number of unprocessed objects in the **ACTIVE THREATS** folder exceeds the specified value.	More than 0 items.
Restart is required	The device is visible on the network, but an application requires the device restart longer than the specified time interval and for one of the selected reasons.	More than 0 minutes.
Incompatible applications are installed	The device is visible on the network, but software inventory performed through Network Agent has detected incompatible applications installed on the device.	• Toggle button is off. • Toggle button is on.
License expired	The device is visible on the network, but the license has expired.	• Toggle button is off.

		• Toggle button is on.
License expires soon	The device is visible on the network, but the license will expire on the device in less than the specified number of days.	More than 0 days.
Unprocessed incidents detected	Some unprocessed incidents have been found on the device. Incidents can be created either automatically, through managed Kaspersky applications installed on the client device, or manually by the administrator.	• Toggle button is off. • Toggle button is on.
Device status defined by application	The status of the device is defined by the managed application.	• Toggle button is off. • Toggle button is on.
Device is out of disk space	Free disk space on the device is less than the specified value or the device could not be synchronized with the Administration Server. The *Critical* or *Warning* status is changed to the *OK* status when the device is successfully synchronized with the Administration Server and free space on the device is greater than or equal to the specified value.	More than 0 MB
Device has become unmanaged	During device discovery, the device was recognized as visible on the network, but more than three attempts to synchronize with the Administration Server failed.	• Toggle button is off. • Toggle button is on.
Protection is disabled	The device is visible on the network, but the security application on the device has been disabled for longer than the specified time interval. In this case, the state of the security application is *stopped* or *failure*, and differs from the following: *starting*, *running*, or *suspended*.	More than 0 minutes.
Security application is not running	The device is visible on the network and a security application is installed on the device but is not running.	• Toggle button is off. • Toggle button is on.

Kaspersky Security Center Linux allows you to set up automatic switching of the status of a device in an administration group when specified conditions are met. When specified conditions are met, the client device is assigned one of the following statuses: *Critical* or *Warning*. When specified conditions are not met, the client device is assigned the *OK* status.

Different statuses may correspond to different values of one condition. For example, by default, if the **Databases are outdated** condition has the **More than 3 days** value, the client device is assigned the *Warning* status; if the value is **More than 7 days**, the *Critical* status is assigned.

If you upgrade Kaspersky Security Center Linux from the previous version, the values of the **Databases are outdated** condition for assigning the status to *Critical* or *Warning* do not change.

When Kaspersky Security Center Linux assigns a status to a device, for some conditions (see the Condition description column) the visibility flag is taken into consideration. For example, if a managed device was assigned the *Critical* status because the Databases are outdated condition was met, and later the visibility flag was set for the device, then the device is assigned the *OK* status.

Configuring the switching of device statuses

You can change conditions to assign the *Critical* or *Warning* status to a device.

To enable changing the device status to Critical:

1. In the main menu, go to **DEVICES** → **HIERARCHY OF GROUPS**.
2. In the list of groups that opens, click the link with the name of a group for which you want to change switching the device statuses.
3. In the properties window that opens, select the **Device status** tab.
4. In the left pane, select **Critical**.
5. In the right pane, in the **Set to Critical if these are specified** section, enable the condition to switch a device to the *Critical* status.

   You can change only settings that are not locked in the parent policy.

6. Select the radio button next to the condition in the list.
7. In the upper-left corner of the list, click the **Edit** button.
8. Set the required value for the selected condition.

   Values cannot be set for every condition.

9. Click **OK**.

When specified conditions are met, the managed device is assigned the *Critical* status.

To enable changing the device status to Warning:

1. In the main menu, go to **DEVICES** → **HIERARCHY OF GROUPS**.
2. In the list of groups that opens, click the link with the name of a group for which you want to change switching the device statuses.
3. In the properties window that opens, select the **Device status** tab.
4. In the left pane, select **Warning**.
5. In the right pane, in the **Set to Warning if these are specified** section, enable the condition to switch a device to the *Warning* status.

You can change only settings that are not locked in the parent policy.

6. Select the radio button next to the condition in the list.
7. In the upper-left corner of the list, click the **Edit** button.
8. Set the required value for the selected condition.

   Values cannot be set for every condition.
9. Click **OK**.

When specified conditions are met, the managed device is assigned the *Warning* status.

Configuring notification delivery

You can configure notification about events occurring in Kaspersky Security Center Linux. Depending on the notification method chosen, the following types of notifications are available:

- Email—When an event occurs, Kaspersky Security Center Linux sends a notification to the email addresses specified.
- SMS—When an event occurs, Kaspersky Security Center Linux sends a notification to the phone numbers specified.
- Executable file—When an event occurs, the executable file is run on the Administration Server.

To configure notification delivery of events occurring in Kaspersky Security Center Linux:

1. In the main menu, click the settings icon () next to the name of the required Administration Server.

   The Administration Server properties window opens with the **General** tab selected.
2. Click the **Notification** section, and in the right pane select the tab for the notification method you want:
   - Email

The **Email** tab allows you to configure event notification by email.

In the **SMTP servers** field, specify mail server addresses, separating them with semicolons. You can use the following values:

- IPv4 or IPv6 address
- DNS name of the SMTP server

In the **SMTP server port** field, specify the number of an SMTP server communication port. The default port number is 25.

If you enable the **Use DNS MX lookup** option, you can use several MX records of the IP addresses for the same DNS name of the SMTP server. The same DNS name may have several MX records with different values of priority of receiving email messages. Administration Server attempts to send email notifications to the SMTP server in ascending order of MX records priority.

If you enable the **Use DNS MX lookup** option and do not enable usage of TLS settings, we recommend that you use the DNSSEC settings on your server device as an additional measure of protection for sending email notifications.

If you enable the **Use ESMTP authentication** option, you can specify the ESMTP authentication settings in the **User name** and **Password** fields. By default, the option is disabled, and the ESMTP authentication settings are not available.

You can specify TLS settings of connection with an SMTP server:

- **Do not use TLS**

You can select this option if you want to disable encryption of email messages.

- **Use TLS if supported by the SMTP server**

You can select this option if you want to use a TLS connection to an SMTP server. If the SMTP server does not support TLS, Administration Server connects the SMTP server without using TLS.

- **Always use TLS, check server certificate validity**

You can select this option if you want to use TLS authentication settings. If the SMTP server does not support TLS, Administration Server cannot connect the SMTP server.

We recommend that you use this option for better protection of the connection with an SMTP server. If you select this option, you can set authentication settings for a TLS connection.

If you select **Always use TLS, check server certificate validity** value, you can specify a certificate for authentication of the SMTP server and choose whether you want to enable communication through any version of TLS or only through TLS 1.2 or later versions. Also, you can specify a certificate for client authentication on the SMTP server.

You can specify certificates for a TLS connection by clicking the **Specify certificates** link:

- Browse for an SMTP server certificate file:

You can receive a file with the list of certificates from a trusted certification authority and upload the file to Administration Server. Kaspersky Security Center Linux checks whether the certificate of an SMTP server is also signed by a trusted certification authority. Kaspersky Security Center Linux cannot connect to an SMTP server if the certificate of the SMTP server is not received from a trusted certification authority.

- Browse for a client certificate file:

You can use a certificate that you received from any source, for example, from any trusted certification authority. You must specify the certificate and its private key by using one of the following certificate types:

- X-509 certificate:

You must specify a file with the certificate and a file with the private key. Both files do not depend on each other and the order of loading of the files is not significant. When both files are loaded, you must specify the password for decoding the private key. The password can have an empty value if the private key is not encoded.

- pkcs12 container:

You must upload a single file that contains the certificate and its private key. When the file is loaded, you must then specify the password for decoding the private key. The password can have an empty value if the private key is not encoded.

Clicking the **Send test message** button allows you to check whether you configured notifications properly: the application sends a test notification to the email addresses that you specified.

In the **Recipients (email addresses)** field, specify the email addresses to which the application will send notifications. You can specify multiple addresses in this field, by separating them with semicolons.

In the **Subject** field, specify the email subject. You can leave this field empty.

In the **Subject template** drop-down list, select the template for your subject. A variable determined by the selected template is placed automatically in the **Subject** field. You can construct an email subject selecting several subject templates.

In the **Sender email address: If this setting is not specified, the recipient address will be used instead. Warning: We do not recommend using a fictitious email address** field, specify the sender email address. If you leave this field empty, by default, the recipient address is used. It is not recommended to use fictitious email addresses.

The **Notification message** field contains standard text with information about the event that the application sends when an event occurs. This text includes substitute parameters, such as event name, device name, and domain name. You can edit the message text by adding other substitute parameters with more relevant details about the event.

> If the notification text contains a percent sign (%), you have to type it twice in a row to allow message sending. For example, "CPU load is 100%%".

Clicking the **Configure numeric limit of notifications** link allows you to specify the maximum number of notifications that the application can send during the specified time interval.

- SMS

The **SMS** tab allows you to configure the transmission of SMS notifications about various events to a cell phone. SMS messages are sent through a mail gateway.

In the **SMTP servers** field, specify mail server addresses, separating them with semicolons. You can use the following values:

- IPv4 or IPv6 address
- DNS name of the SMTP server

In the **SMTP server port** field, specify the number of an SMTP server communication port. The default port number is 25.

If the **Use ESMTP authentication** option is enabled, you can specify the ESMTP authentication settings in the **User name** and **Password** fields. By default, the option is disabled, and the ESMTP authentication settings are not available.

You can specify TLS settings of connection with an SMTP server:

- **Do not use TLS**

You can select this option if you want to disable encryption of email messages.

- **Use TLS if supported by the SMTP server**

You can select this option if you want to use a TLS connection to an SMTP server. If the SMTP server does not support TLS, Administration Server connects the SMTP server without using TLS.

- **Always use TLS, check server certificate validity**

You can select this option if you want to use TLS authentication settings. If the SMTP server does not support TLS, Administration Server cannot connect the SMTP server.

We recommend that you use this option for better protection of the connection with an SMTP server. If you select this option, you can set authentication settings for a TLS connection.

If you select **Always use TLS, check server certificate validity** value, you can specify a certificate for authentication of the SMTP server and choose whether you want to enable communication through any version of TLS or only through TLS 1.2 or later versions. Also, you can specify a certificate for client authentication on the SMTP server.

You can specify SMTP server certificate file by clicking the **Specify certificates** link. You can receive a file with the list of certificates from a trusted certification authority and upload the file to Administration Server. Kaspersky Security Center Linux checks whether the certificate of an SMTP server is also signed by a trusted certification authority. Kaspersky Security Center Linux cannot connect to an SMTP server if the certificate of the SMTP server is not received from a trusted certification authority.

In the **Recipients (email addresses)** field, specify the email addresses to which the application will send notifications. You can specify multiple addresses in this field, by separating them with semicolons. The notifications will be delivered to the phone numbers associated with the specified email addresses.

In the **Subject** field, specify the email subject.

In the **Subject template** drop-down list, select the template for your subject. A variable according to the selected template is put in the **Subject** field. You can construct an email subject selecting several subject templates.

In the **Sender email address: If this setting is not specified, the recipient address will be used instead. Warning: We do not recommend using a fictitious email address** field, specify the sender email address. If you leave this field empty, by default, the recipient address is used. It is not recommended to use fictitious email addresses.

In the **Phone numbers of SMS message recipients** field, specify the cell phone numbers of the SMS notification recipients.

In the **Notification message** field, specify a text with information about the event that the application sends when an event occurs. This text can include substitute parameters, such as event name, device name, and domain name.

If the notification text contains a percent sign (%), you have to type it twice in a row to allow message sending. For example, "CPU load is 100%%".

Click the **Send test message** to check whether you configured notifications properly: the application sends a test notification to the recipient that you specified.

Click the **Configure numeric limit of notifications** link to specify the maximum number of notifications that the application can send during the specified time interval.

- **Executable file to be run**

  If this notification method is selected, in the entry field you can specify the application that will start when an event occurs.

  In the **Executable file to be run on the Administration Server when an event occurs** field, specify the folder and the name of the file to be run. Before specifying the file, prepare the file and specify the placeholders that define the event details to be sent in the notification message. The folder and the file that you specify must be located on the Administration Server.

  Clicking the **Configure numeric limit of notifications** link allows you to specify the maximum number of notifications that the application can send during the specified time interval.

3. On the tab, define the notification settings.
4. Click the **OK** button to close the Administration Server properties window.

The saved notification delivery settings are applied to all events that occur in Kaspersky Security Center Linux.

You can override notification delivery settings for certain events in the **Event configuration** section of the Administration Server settings, of a policy's settings, or of an application's settings.

Testing notifications

To check whether event notifications are sent, the application uses the notification of the EICAR test virus detection on client devices.

To verify sending of event notifications:

1. Stop the real-time file system protection task on a client device and copy the EICAR test virus to that client device. Then, re-enable real-time protection of the file system.
2. Run a scan task for client devices in an administration group or for specific devices, including one with the EICAR test virus.

   If the scan task is configured correctly, the test virus will be detected. If notifications are configured correctly, you are notified that a virus has been detected.

To open a record of the test virus detection:

1. In the main menu, go to **MONITORING & REPORTING → EVENT SELECTIONS**.
2. Click the **Recent events** selection name.

   In the window that opens, the notification about the test virus is displayed.

The EICAR test virus contains no code that can do harm to your device. However, most manufacturers' security applications identify this file as a virus. You can download the test virus from the official EICAR website.

Event notifications displayed by running an executable file

Kaspersky Security Center Linux can notify the administrator about events on client devices by running an executable file. The executable file must contain another executable file with placeholders of the event to be relayed to the administrator (see the table below).

Placeholders for describing an event

Placeholder	Placeholder description
%SEVERITY%	Event severity. Possible values: • **Info** • **Warning** • **Error** • **Critical**
%COMPUTER%	Name of the device where the event occurred. Maximum length of the device name is 256 characters.
%DOMAIN%	Domain name of the device where the event occurred.
%EVENT%	Name of the event type. Maximum length of the event type name is 50 characters.
%DESCR%	Event description. Maximum length of the description is 1000 characters.
%RISE_TIME%	Event creation time.
%KLCSAK_EVENT_TASK_DISPLAY_NAME%	Task name. Maximum length of the task name is 100 characters.
%KL_PRODUCT%	Product name.
%KL_VERSION%	Product version number.
%KLCSAK_EVENT_SEVERITY_NUM%	Event severity number. Possible values: • 1—**Info** • 2—**Warning** • 3—**Error** • 4—**Critical**
%HOST_IP%	IP address of the device where the event occurred.
%HOST_CONN_IP%	Connection IP address of the device where the event occurred.

Example:
Event notifications are sent by an executable file (such as script1.bat) inside which another executable file (such as script2.bat) with the %COMPUTER% placeholder is launched. When an event occurs, the script1.bat file is run on the administrator's device, which, in turn, runs the script2.bat file with the %COMPUTER% placeholder. The administrator then receives the name of the device where the event occurred.

Kaspersky announcements

This section describes how to use, configure, and disable Kaspersky announcements.

About Kaspersky announcements

The Kaspersky announcements section (**MONITORING & REPORTING → Kaspersky announcements**) keeps you informed by providing information related to your version of Kaspersky Security Center and the managed applications installed on the managed devices. Kaspersky Security Center periodically updates the information in the section by removing outdated announcements and adding new information.

Kaspersky Security Center shows only those Kaspersky announcements that relate to the currently connected Administration Server and the Kaspersky applications installed on the managed devices of this Administration Server. The announcements are shown individually for any type of Administration Server—primary, secondary, or virtual.

Administration Server must have an internet connection to receive Kaspersky announcements.

The announcements include information of the following types:

- Security-related announcements

  Security-related announcements are intended to keep the Kaspersky applications installed in your network up-to-date and fully functional. The announcements may include information about critical updates for Kaspersky applications, fixes for found vulnerabilities, and ways to fix other issues in Kaspersky applications. By default, security-related announcements are enabled. If you do not want to receive the announcements, you can disable this feature.

  To show you the information that corresponds to your network protection configuration, Kaspersky Security Center sends data to Kaspersky cloud servers and receives only those announcements that relate to the Kaspersky applications installed in your network. The data set that can be sent to the servers is described in the End User License Agreement that you accept when you install Kaspersky Security Center Administration Server.

- Marketing announcements

  Marketing announcements include information about special offers for your Kaspersky applications, advertisements, and news from Kaspersky. Marketing announcements are disabled by default. You receive this type of announcements only if you enabled Kaspersky Security Network (KSN). You can disable marketing announcements by disabling KSN.

  To show you only relevant information that might be helpful in protecting your network devices and in your everyday tasks, Kaspersky Security Center sends data to Kaspersky cloud servers and receives the appropriate announcements. The data set that can be sent to the servers is described in the Processed Data section of the KSN Statement.

New information is divided into the following categories, according to importance:

1. Critical info

2. Important news
3. Warning
4. Info

When new information appears in the Kaspersky announcements section, Kaspersky Security Center 14 Web Console displays a notification label that corresponds to the importance level of the announcements. You can click the label to view this announcement in the Kaspersky announcements section.

You can specify the Kaspersky announcements settings, including the announcement categories that you want to view and where to display the notification label. If you do not want to receive announcements, you can disable this feature.

Specifying Kaspersky announcements settings

In the Kaspersky announcements section, you can specify the Kaspersky announcements settings, including the categories of the announcements that you want to view and where to display the notification label.

To configure Kaspersky announcements:

1. In the main menu, go to **MONITORING & REPORTING** → **KASPERSKY ANNOUNCEMENTS**.
2. Click the **Settings** link.

   The Kaspersky announcement settings window opens.
3. Specify the following settings:

   - Select the importance level of the announcements that you want to view. The announcements of other categories will not be displayed.
   - Select where you want to see the notification label. The label can be displayed in all console sections, or in the **MONITORING & REPORTING** section and its subsections.
4. Click the **OK** button.

   The Kaspersky announcement settings are specified.

Disabling Kaspersky announcements

The Kaspersky announcements section (**MONITORING & REPORTING** → **Kaspersky announcements**) keeps you informed by providing information related to your version of Kaspersky Security Center and managed applications installed on the managed devices. If you do not want to receive Kaspersky announcements, you can disable this feature.

To disable Kaspersky announcements:

1. In the main menu, click the settings icon ( ) next to the name of the required Administration Server.

   The Administration Server properties window opens.
2. On the **General** tab, select the **Kaspersky announcements** section.

3. Switch the toggle button to the **Security-related announcements are disabled** position.
4. Click the **Save** button.

   Kaspersky announcements are disabled.

Exporting events to SIEM systems

This section describes how to configure export of events to the SIEM systems.

Configuring event export to SIEM systems

Kaspersky Security Center Linux allows configuring event export to SIEM systems by one of the following methods: export to any SIEM system that uses Syslog format or export of events to SIEM systems directly from the Kaspersky Security Center database. When you complete this scenario, Administration Server sends events to a SIEM system automatically.

Prerequisites

Before you start configuration export of events in the Kaspersky Security Center Linux:

- Learn more about the methods of event export.
- Make sure that you have the values of system settings.

> You can perform the steps of this scenario in any order.

The process of export of events to a SIEM system consists of the following steps:

- **Configuring the SIEM system to receive events from Kaspersky Security Center Linux**

  How-to instructions: Configuring event export in a SIEM system

- **Selecting the events that you want to export to the SIEM system**

  Mark which events you want to export to the SIEM system. First, mark the general events that occur in all managed Kaspersky applications. Then, you can mark the events for specific managed Kaspersky applications.

- **Configuring export of events to the SIEM system**

  You can export events by using one of the following methods:

  - Using TCP/IP, UDP or TLS over TCP protocols
  - Using export of events directly from the Kaspersky Security Center database (a set of public views is provided in the Kaspersky Security Center database; you can find the description of these public views in the klakdb.chm document)

Results

After configuring export of events to a SIEM system you can view export results if you selected events which you want to export.

Before you begin

When setting up automatic export of events in the Kaspersky Security Center Linux, you must specify some of the SIEM system settings. It is recommended that you check these settings in advance in order to prepare for setting up Kaspersky Security Center Linux.

To successfully configure automatic sending of events to a SIEM system, you must know the following settings:

- **SIEM system server address**

  The IP address of the server on which the currently used SIEM system is installed. Check this value in your SIEM system settings.

- **SIEM system server port**

  Port number used to establish a connection between Kaspersky Security Center Linux and your SIEM system server. You specify this value in the Kaspersky Security Center Linux settings and in the receiver settings of your SIEM system.

- **Protocol**

  Protocol used for transferring messages from Kaspersky Security Center Linux to your SIEM system. You specify this value in the Kaspersky Security Center Linux settings and in the receiver settings of your SIEM system.

About event export

Kaspersky Security Center Linux allows you to receive information about events that occur during the operation of Administration Server and Kaspersky applications installed on managed devices. Information about events is saved in the Administration Server database.

You can use event export within centralized systems that deal with security issues on an organizational and technical level, provide security monitoring services, and consolidate information from different solutions. These are SIEM systems, which provide real-time analysis of security alerts and events generated by network hardware and applications, or Security Operation Centers (SOCs).

These systems receive data from many sources, including networks, security, servers, databases, and applications. SIEM systems also provide functionality to consolidate monitored data in order to help you avoid missing critical events. In addition, the systems perform automated analysis of correlated events and alerts in order to notify the administrators of immediate security issues. Alerting can be implemented through a dashboard or can be sent through third-party channels such as email.

The process of exporting events from Kaspersky Security Center Linux to external SIEM systems involves two parties: an event sender, Kaspersky Security Center Linux, and an event receiver, a SIEM system. To successfully export events, you must configure this in your SIEM system and in the Kaspersky Security Center Linux. It does not matter which side you configure first. You can either configure the transmission of events in the Kaspersky Security Center Linux, and then configure the receipt of events by the SIEM system, or vice versa.

Syslog format of event export

You can send events in the Syslog format to any SIEM system. Using the Syslog format, you can relay any events that occur on the Administration Server and in Kaspersky applications that are installed on managed devices. When exporting events in the Syslog format, you can select exactly which types of events will be relayed to the SIEM system.

Receipt of events by the SIEM system

The SIEM system must receive and correctly parse the events received from Kaspersky Security Center Linux. For these purposes, you must properly configure the SIEM system. The configuration depends on the specific SIEM system utilized. However, there are a number of general steps in the configuration of all SIEM systems, such as configuring the receiver and the parser.

About configuring event export in a SIEM system

The process of exporting events from Kaspersky Security Center Linux to external SIEM systems involves two parties: an event sender—Kaspersky Security Center Linux and an event receiver—SIEM system. You must configure the export of events in your SIEM system and in the Kaspersky Security Center Linux.

The settings that you specify in the SIEM system depend on the particular system that you are using. Generally, for all SIEM systems you must set up a receiver and, optionally, a message parser to parse received events.

Setting up the receiver

To receive events sent by Kaspersky Security Center Linux, you must set up the receiver in your SIEM system. In general, the following settings must be specified in the SIEM system:

- **Export protocol**

  A message transfer protocol, either UDP, TCP, or TLS, over TCP. This protocol must be the same as the protocol you specified in Kaspersky Security Center Linux.

- **Port**

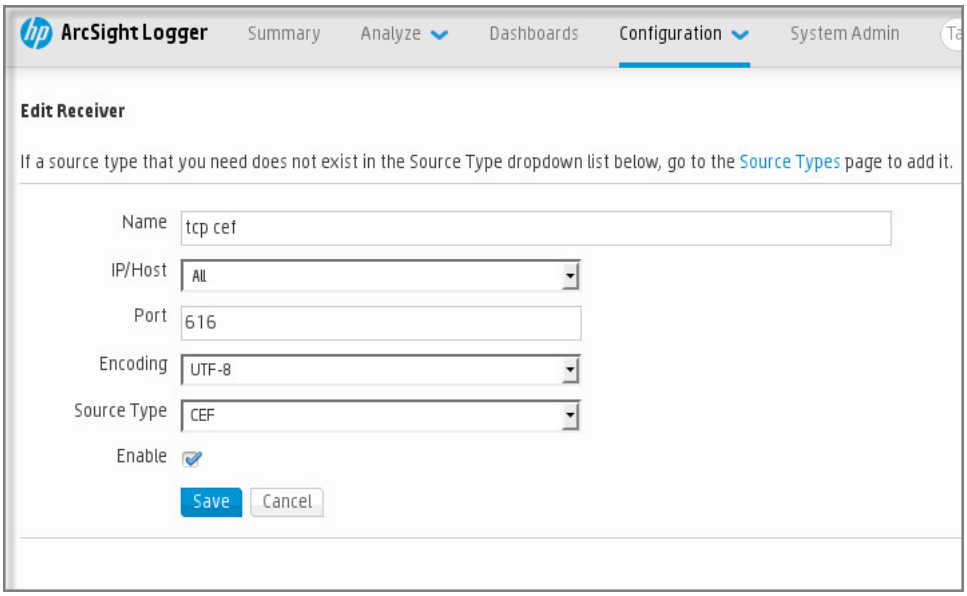
  Specify the port number to connect to Kaspersky Security Center Linux. This port must be the same as the port you specify in Kaspersky Security Center Linux during configuration with a SIEM system.

- **Data format**

  Specify the Syslog format.

Depending on the SIEM system that you use, you may have to specify some additional receiver settings.

The figure below shows the receiver setup screen in ArcSight.



Receiver setup in ArcSight

Message parser

Exported events are passed to SIEM systems as messages. These messages must be properly parsed so that information on the events can be used by the SIEM system. Message parsers are part of the SIEM system; they are used to split the contents of the message into the relevant fields, such as event ID, severity, description, parameters. This enables the SIEM system to process events received from Kaspersky Security Center Linux so that they can be stored in the SIEM system database.

Marking of events for export to SIEM systems in Syslog format

After enabling automatic export of events, you must select which events will be exported to the external SIEM system.

You can configure export of events in the Syslog format to an external system based on one of the following conditions:

- Marking general events. If you mark events to export in a policy, in the settings of an event, or in the Administration Server settings, the SIEM system will receive the marked events that occurred in all applications managed by the specific policy. If exported events were selected in the policy, you will not be able to redefine them for an individual application managed by this policy.

- Marking events for a managed application. If you mark events to export for a managed application installed on a managed device, the SIEM system will receive only the events that occurred in this application.

About marking events for export to SIEM system in the Syslog format

After enabling automatic export of events, you must select which events will be exported to the external SIEM system.

You can configure export of events in the Syslog format to an external system based on one of the following conditions:

- Marking general events. If you mark events to export in a policy, in the settings of an event, or in the Administration Server settings, the SIEM system will receive the marked events that occurred in all applications managed by the specific policy. If exported events were selected in the policy, you will not be able to redefine them for an individual application managed by this policy.

- Marking events for a managed application. If you mark events to export for a managed application installed on a managed device, the SIEM system will receive only the events that occurred in this application.

Marking events of a Kaspersky application for export in the Syslog format

If you want to export events that occurred in a specific managed application installed on the managed devices, mark the events for export in the application policy. In this case, the marked events are exported from all of the devices included in the policy scope.

To mark events for export for a specific managed application:

1. In the main menu, go to **DEVICES** → **POLICIES & PROFILES**.
2. Click the policy of the application for which you want to mark events.

   The policy settings window opens.
3. Go to the **Event configuration** section.
4. Select the check boxes next to the events that you want to export to a SIEM system.
5. Click the **Mark for export to SIEM system by using Syslog** button.

   > You can also mark an event for export to a SIEM system in the **Event registration** section, which opens by clicking the link of the event.
6. A check mark (✓) appears in the **Syslog** column of the event or events that you marked for export to the SIEM system.
7. Click the **Save** button.

The marked events from the managed application are ready to be exported to a SIEM system.

You can mark which events to export to a SIEM system for a specific managed device. If previously exported events were marked in an application policy, you will not be able to redefine the marked events for a managed device.

To mark events for export for a managed device:

1. In the main menu, go to **DEVICES** → **MANAGED DEVICES**.

   The list of managed devices is displayed.
2. Click the link with the name of the required device in the list of managed devices.

   The properties window of the selected device is displayed.
3. Go to the **Applications** section.

4. Click the link with the name of the required application in the list of applications.
5. Go to the **Event configuration** section.
6. Select the check boxes next to the events that you want to export to SIEM.
7. Click the **Mark for export to SIEM system by using Syslog** button.

   Also, you can mark an event for export to a SIEM system in the **Event registration** section, that opens by clicking the link of the event.

8. A check mark (✓) appears in the **Syslog** column of the event or events that you marked for export to the SIEM system.

From now on, Administration Server sends the marked events to the SIEM system if export to the SIEM system is configured.

Marking general events for export in Syslog format

You can mark general events that Administration Server will export to SIEM systems by using the Syslog format.

To mark general events for export to a SIEM system:

1. Do one of the following:
   - Click the settings icon (⚙) next to the name of the required Administration Server.
   - In the main menu, go to **DEVICES** → **POLICIES & PROFILES**, and then click a link of a policy.
2. In the window that opens, go to the **Event configuration** tab.
3. Click **Mark for export to SIEM system by using Syslog**.

   Also, you can mark an event for export to SIEM system in the **Event registration** section, that opens by clicking the link of the event.

4. A check mark (✓) appears in the **Syslog** column of the event or events that you marked for export to the SIEM system.

From now on, Administration Server sends the marked events to the SIEM system if export to the SIEM system is configured.

About exporting events using Syslog format

You can use the Syslog format to export to SIEM systems the events that occur in Administration Server and other Kaspersky applications installed on managed devices.

Syslog is a standard for message logging protocol. It permits separation of the software that generates messages, the system that stores them, and the software that reports and analyzes them. Each message is labeled with a facility code, indicating the software type that generates the message, and is assigned a severity level.

The Syslog format is defined by Request for Comments (RFC) documents published by the Internet Engineering Task Force (internet standards). The RFC 5424 standard is used to export the events from Kaspersky Security Center Linux to external systems.

In Kaspersky Security Center Linux, you can configure export of the events to the external systems using the Syslog format.

The export process consists of two steps:

1. Enabling automatic event export. At this step, Kaspersky Security Center Linux is configured so that it sends events to the SIEM system. Kaspersky Security Center Linux starts sending events immediately after you enable automatic export.

2. Selecting the events to be exported to the external system. At this step, you select which event to export to the SIEM system.

Configuring Kaspersky Security Center Linux for export of events to a SIEM system

To export events to a SIEM system, you have to configure the process of export in Kaspersky Security Center Linux.

To configure export to SIEM systems in the Kaspersky Security Center 14 Web Console:

1. In the **Console settings** drop-down list, select **Integration**.

   The **Console settings** window opens.

2. Select the **Integration** tab.

3. On the **Integration** tab, select the **SIEM** section.

4. Click the **Settings** link.

   The **Export settings** section opens.

5. Specify the settings in the **Export settings** section:

   - SIEM system server address

     The IP address of the server on which the currently used SIEM system is installed. Check this value in your SIEM system settings.

   - SIEM system port

     Port number used to establish a connection between Kaspersky Security Center Linux and your SIEM system server. You specify this value in the Kaspersky Security Center Linux settings and in the receiver settings of your SIEM system.

- Protocol

Select the protocol to be used for transferring messages to the SIEM system. You can select either the TCP, UDP, or TLS over TCP protocol.

Specify the following TLS settings if you select the TLS over TCP protocol:

- **Server authentication**

  In the **Server authentication** field, you can select the **Trusted certificates** or **SHA fingerprints** values:

  - **Trusted certificates**. You can receive a complete certificate chain (including the root certificate) from a trusted certification authority (CA) and upload the file to Kaspersky Security Center Linux. Kaspersky Security Center Linux checks whether the certificate chain of the SIEM system server is also signed by a trusted CA or not.

    To add a trusted certificate, click the **Browse for CA certificates file** button, and then upload the certificate.

  - **SHA fingerprints**. You can specify SHA1 thumbprints of the complete certificate chain of the SIEM system (including the root certificate) in Kaspersky Security Center. To add a SHA1 thumbprint, enter it in the **Thumbprints** field, and then click the **Add** button.

  By using the **Add client authentication** setting, you can generate a certificate to authenticate Kaspersky Security Center. Thus, you will use a self-signed certificate issued by Kaspersky Security Center. In this case, you can use both a trusted certificate and a SHA fingerprint to authenticate the SIEM system server.

- **Add Subject Name/Subject Alternative Name**

  Subject name is a domain name for which the certificate is received. Kaspersky Security Center Linux cannot connect to the SIEM system server if the domain name of the SIEM system server does not match the subject name of the SIEM system server certificate. However, the SIEM system server can change its domain name if the name has changed in the certificate. In this case, you can specify subject names in the **Add Subject Name/Subject Alternative Name** field. If any of the specified subject names matches the subject name of the SIEM system certificate, Kaspersky Security Center Linux validates the SIEM system server certificate.

- **Add client authentication**

  For client authentication, you can insert your certificate or generate it in Kaspersky Security Center.

  - **Insert certificate**. You can use a certificate that you received from any source, for example, from any trusted CA. You must specify the certificate and its private key by using one of the following certificate types:

    - **X.509 certificate PEM**. Upload a file with a certificate in the **File with certificate** field, and a file with a private key in the **File with key** field. Both files do not depend on each other and the order of loading the files is not significant. When both files are uploaded, specify the password for decoding the private key in the **Password or certificate verification** field. The password can have an empty value if the private key is not encoded.

    - **X.509 certificate PKCS12**. Upload a single file that contains a certificate and its private key in the **File with certificate** field. When the file is uploaded, specify the password for decoding the private key in the **Password or certificate verification** field. The password can have an empty value if the private key is not encoded.

  - **Generate key**. You can generate a self-signed certificate in Kaspersky Security Center. As a result, Kaspersky Security Center Linux stores the generated self-signed certificate, and you can

pass the public part of the certificate or SHA1-fingerprint to the SIEM system.

6. If you want, you can export archived events from the Administration Server database and set the start date from which you want to start the export of archived events:

   a. Click the **Set the export start date** link.

   b. In the section that opens, specify the start date in the **Date to start export from** field.

   c. Click the **OK** button.

7. Switch the option to the **Automatically export events to SIEM system database ENABLED** position.

8. Click the **Save** button.

Export to a SIEM system is configured. From now on, if you configured the receiving of events in a SIEM system, Administration Server exports the marked events to a SIEM system. If you set the start date of export, Administration Server also exports the marked events stored in the Administration Server database from the specified date.

Exporting events directly from the database

You can retrieve events directly from the Kaspersky Security Center Linux database without having to use the Kaspersky Security Center Linux interface. You can either query the public views directly and retrieve the event data, or create your own views on the basis of existing public views and address them to get the data you need.

Public views

For your convenience, a set of public views is provided in the Kaspersky Security Center Linux database. You can find the description of these public views in the klakdb.chm document.

The v_akpub_ev_event public view contains a set of fields that represent the event parameters in the database. In the klakdb.chm document you can also find information on public views corresponding to other Kaspersky Security Center Linux entities, for example, devices, applications, or users. You can use this information in your queries.

This section contains instructions for executing an SQL query by means of the klsql2 utility and a query example.

To create SQL queries or database views, you can also use any other program for working with databases. Information on how to view the parameters for connecting to the Kaspersky Security Center Linux database, such as instance name and database name, is given in the corresponding section.

Executing an SQL query by using the klsql2 utility

This article describes how to use the klsql2 utility, and how to execute an SQL query by using this utility. When you execute an SQL query by means of the klsql2 utility, you do not have to provide database name and access parameters, because the query addresses Kaspersky Security Center Linux public views directly.

To use the klsql2 utility:

1. Go to the directory where Kaspersky Security Center Linux Administration Server is installed. The default installation path is /opt/kaspersky/ksc64/sbin.

2. In this directory, create src.sql blank file.

3. Open the src.sql file in any text editor.

4. In the src.sql file, type the SQL query that you want, and then save the file.

5. On the device with Kaspersky Security Center Linux Administration Server installed, in the command line, type the following command to execute the SQL query from the src.sql file and save the results to the result.xml file:
   ```
   sudo ./klsql2 -i src.sql -o result.xml
   ```

6. Open the newly created result.xml file to view the SQL query results.

You can edit the src.sql file and create any query to the public views. Then, from the command line, execute your SQL query and save the results to a file.

Example of an SQL query in the klsql2 utility

This section shows an example of an SQL query, executed by means of the klsql2 utility.

The following example illustrates retrieval of the events that occurred on devices during the last seven days, and display of the events ordered by the time they occur, the most recent events are displayed first.

Example:

```
SELECT
e.nId, /* event identifier */
e.tmRiseTime, /* time, when the event occurred */
e.strEventType, /* internal name of the event type */
e.wstrEventTypeDisplayName, /* displayed name of the event */
e.wstrDescription, /* displayed description of the event */
e.wstrGroupName, /* name of the group, where the device is located */
h.wstrDisplayName, /* displayed name of the device, on which the event occurred */
CAST(((h.nIp / 16777216) & 255) AS varchar(4)) + '.' +
CAST(((h.nIp / 65536) & 255) AS varchar(4)) + '.' +
CAST(((h.nIp / 256) & 255) AS varchar(4)) + '.' +
CAST(((h.nIp) & 255) AS varchar(4)) as strIp /* IP-address of the device, on which the event occurred */
FROM v_akpub_ev_event e
INNER JOIN v_akpub_host h ON h.nId=e.nHostId
WHERE e.tmRiseTime>=DATEADD(Day, -7, GETUTCDATE())
ORDER BY e.tmRiseTime DESC
```

Viewing the Kaspersky Security Center Linux database name

If you want to access Kaspersky Security Center Linux database by means of the MySQL, or MariaDB database management tools, you must know the name of the database in order to connect to it from your SQL script editor.

To view the name of the Kaspersky Security Center Linux database:

1. In the main menu, click the settings icon ( ) next to the name of the required Administration Server.

   The Administration Server properties window opens.

2. On the **General** tab, select the **Details of current database** section.

The database name is specified in the **Database name** field. Use the database name to address the database in your SQL queries.

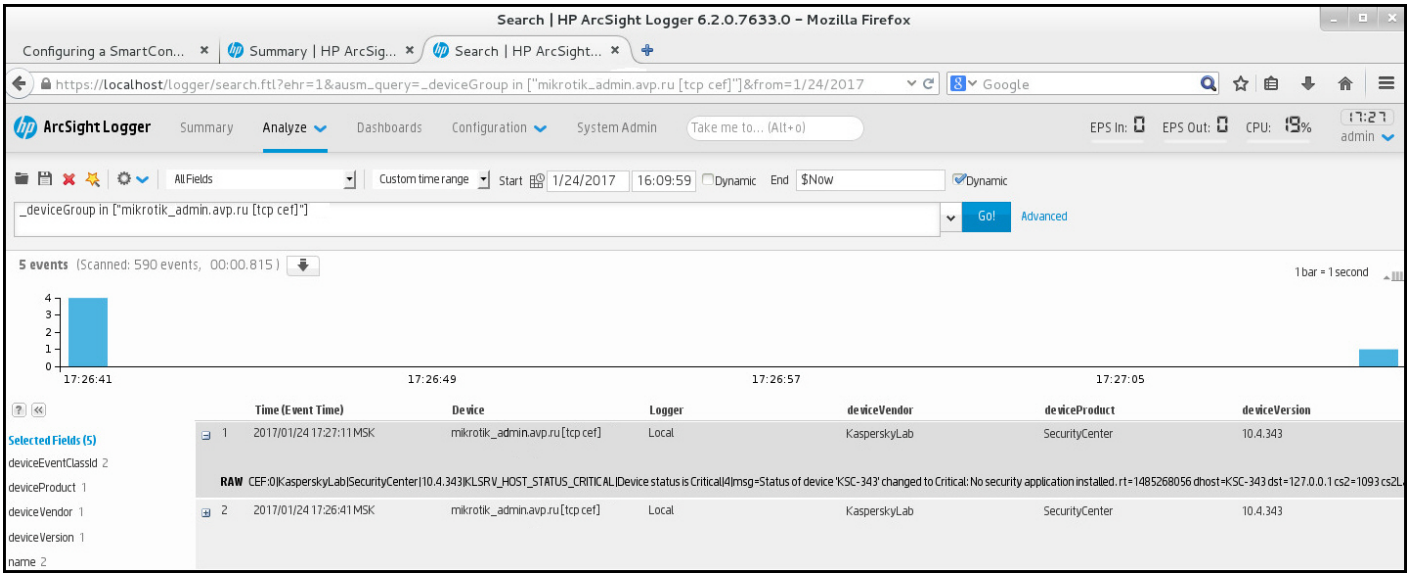
Viewing export results

You can control for successful completion of the event export procedure. To do this, check whether messages with export events are received by your SIEM system.

If the events sent from Kaspersky Security Center Linux are received and properly parsed by your SIEM system, configuration on both sides is done properly. Otherwise, check the settings you specified in Kaspersky Security Center Linux against the configuration in your SIEM system.

The figure below shows the events exported to ArcSight. For example, the first event is a critical Administration Server event: "*Device status is Critical*".

The representation of export events in the SIEM system varies according to the SIEM system you use.



Example of events

Device selections

Device selections are a tool for filtering devices according to specific conditions. You can use device selections to manage several devices: for example, to view a report about only these devices or to move all of these devices to another group.

Kaspersky Security Center provides a broad range of *predefined selections* (for example, **Devices with Critical status**, **Protection is disabled**, **Active threats are detected**). Predefined selections cannot be deleted. You can also create and configure additional *user-defined selections*.

In user-defined selections, you can set the search scope and select all devices, managed devices, or unassigned devices. Search parameters are specified in the conditions. In the device selection you can create several conditions with different search parameters. For example, you can create two conditions and specify different IP ranges in each of them. If several conditions are specified, a selection displays the devices that meet any of the conditions. By contrast, search parameters within a condition are superimposed. If both an IP range and the name of an installed application are specified in a condition, only those devices will be displayed where both the application is installed and the IP address belongs to the specified range.

Viewing the device list from a device selection

Kaspersky Security Center allows you to view the list of devices from a device selection.

To view the device list from the device selection:

1. In the main menu, go to the **DEVICES** → **DEVICE SELECTIONS** or **DISCOVERY & DEPLOYMENT** → **DEVICE SELECTIONS** section.
2. In the selection list, click the name of the device selection.

   The page displays a table with information about the devices included in the device selection.
3. You can group and filter the data of the device table as follows:

   - Click the settings icon ( ), and then select the columns to be displayed in the table.
   - Click the filter icon ( ), and then specify and apply the filter criterion in the invoked menu.

     The filtered table of devices is displayed.

You can select one or several devices in the device selection and click the **New task** button to create a task that will be applied to these devices.

To move the selected devices of the device selection to another administration group, click the **Move to group** button, and then select the target administration group.

Creating a device selection

To create a device selection:

1. In the main menu, go to **DEVICES** → **DEVICE SELECTIONS**.

   A page with a list of device selections is displayed.
2. Click the **Add** button.

   The **Device selection settings** window opens.
3. Enter the name of the new selection.
4. Specify the group that contains the devices to be included in the device selection:

   - **Find any devices**—Searching for devices that meet the selection criteria and included in the **Managed Devices** or **UNASSIGNED DEVICES** group.

- **Find managed devices**—Searching for devices that meet the selection criteria and included in the **Managed Devices** group.
- **Find unassigned devices**—Searching for devices that meet the selection criteria and included in the **UNASSIGNED DEVICES** group.

You can enable the **Include data from secondary Administration Servers** check box to enable searching for devices that meet the selection criteria and managed by secondary Administration Servers.

5. Click the **Add** button.
6. In the window that opens, specify conditions that must be met for including devices in this selection, and then click the **OK** button.
7. Click the **Save** button.

The device selection is created and added to the list of device selections.

Configuring a device selection

To configure a device selection:

1. In the main menu, go to **DEVICES** → **DEVICE SELECTIONS**.

   A page with a list of device selections is displayed.
2. Select the relevant user-defined device selection, and click the **Properties** button.

   The **Device selection settings** window opens.
3. On the **General** tab, click the **New condition** link.
4. Specify conditions that must be met for including devices in this selection.
5. Click the **Save** button.

The settings are applied and saved.

Below are descriptions of the conditions for assigning devices to a selection. Conditions are combined by using the OR logical operator: the selection will contain devices that comply with at least one of the listed conditions.

General

In the **General** section, you can change the name of the selection condition and specify whether that condition must be inverted:

Invert selection condition

If this option is enabled, the specified selection condition will be inverted. The selection will include all devices that do not meet the condition.

By default, this option is disabled.

Network infrastructure

In the **Network** subsection, you can specify the criteria that will be used to include devices in the selection according to their network data:

- **Device name**

  Windows network name (NetBIOS name) of the device, or the IPv4 or IPv6 address.

- **Windows domain**

  Displays all devices included in the specified workgroup.

- **Administration group**

  Displays devices included in the specified administration group.

- **Description**

Text in the device properties window: in the **Description** field of the **General** section.

To describe text in the **Description** field, you can use the following characters:

- Within a word:
  - *****. Replaces any string with any number of characters.

    Example:

    To describe words such as **Server** or **Server's**, you can enter **Server***.
  - **?.** Replaces any single character.

    Example:

    To describe phrases such as **SUSE Linux Enterprise Server 12** or **SUSE Linux Enterprise Server 15**, you can enter **SUSE Linux Enterprise Server 1?**.

    Asterisk (*****) or question mark (**?**) cannot be used as the first character in the query.
- To find several words:
  - Space. Displays all the devices whose descriptions contain any of the listed words.

    Example:

    To find a phrase that contains **Secondary** or **Virtual** words, you can include **Secondary Virtual** line in your query.
  - **+**. When a plus sign precedes a word, all search results will contain this word.

    Example:

    To find a phrase that contains both **Secondary** and **Virtual**, enter the **+Secondary+Virtual** query.
  - **-**. When a minus sign precedes a word, no search results will contain this word.

    Example:

    To find a phrase that contains **Secondary** and does not contain **Virtual**, enter the **+Secondary-Virtual** query.
  - **"<some text>"**. Text enclosed in quotation marks must be present in the text.

    Example:

    To find a phrase that contains **Secondary Server** word combination, you can enter **"Secondary Server"** in the query.

- IP range

  If this option is enabled, you can enter the initial and final IP addresses of the IP range in which the relevant devices must be included.

  By default, this option is disabled.

- Managed by a different Administration Server

Select one of the following values:

- **Yes**. A device moving rule only applies to client devices managed by other Administration Servers. These Servers are different from the Server on which you configure the device moving rule.
- **No**. The device moving rule only applies to client devices managed by the current Administration Server.
- **No value is selected**. The condition does not apply.

In the **Active Directory** subsection, you can configure criteria for including devices into a selection based on their Active Directory data:

- Device is in an Active Directory organizational unit

  If this option is enabled, the selection includes devices from the Active Directory unit specified in the entry field.

  By default, this option is disabled.

- Include child organizational units

  If this option is enabled, the selection includes devices from all child organizational units of the specified domain controller organizational unit.

  By default, this option is disabled.

- This device is a member of an Active Directory group

  If this option is enabled, the selection includes devices from the Active Directory group specified in the entry field.

  By default, this option is disabled.

In the **Network activity** subsection, you can specify the criteria that will be used to include devices in the selection according to their network activity:

- Acts as a distribution point

  In the drop-down list, you can set up the criterion for including devices in the selection when performing search:

  - **Yes**. The selection includes devices that act as distribution points.
  - **No**. Devices that act as distribution points are not included in the selection.
  - **No value is selected**. The criterion will not be applied.

- Do not disconnect from the Administration Server

In the drop-down list, you can set up the criterion for including devices in the selection when performing search:

- **Enabled**. The selection will include devices on which the **Do not disconnect from the Administration Server** check box is selected.
- **Disabled**. The selection will include devices on which the **Do not disconnect from the Administration Server** check box is cleared.
- **No value is selected**. The criterion will not be applied.

- Connection profile switched

In the drop-down list, you can set up the criterion for including devices in the selection when performing search:

- **Yes**. The selection will include devices that connected to the Administration Server after the connection profile was switched.
- **No**. The selection will not include devices that connected to the Administration Server after the connection profile was switched.
- **No value is selected**. The criterion will not be applied.

- Last connected to Administration Server

You can use this check box to set a search criterion for devices according to the time they last connected to the Administration Server.

If this check box is selected, in the entry fields you can specify the time interval (date and time) during which the last connection was established between Network Agent installed on the client device and the Administration Server. The selection will include devices that fall within the specified interval.

If this check box is cleared, the criterion will not be applied.

By default, this check box is cleared.

- New devices detected by network poll

Searches for new devices that have been detected by network polling over the last few days.

If this option is enabled, the selection only includes new devices that have been detected by device discovery over the number of days specified in the **Detection period (days)** field.

If this option is disabled, the selection includes all devices that have been detected by device discovery.

By default, this option is disabled.

- Device is visible

In the drop-down list, you can set up the criterion for including devices in the selection when performing search:

- **Yes**. The application includes in the selection devices that are currently visible in the network.
- **No**. The application includes in the selection devices that are currently invisible in the network.
- **No value is selected**. The criterion will not be applied.

Device statuses

In the **Managed device status** subsection, you can configure criteria for including devices into a selection based on the description of the devices status from a managed application:

- Device status

  Drop-down list in which you can select one of the device statuses: *OK*, *Critical*, or *Warning*.

- Real-time protection status

  Drop-down list, in which you can select the real-time protection status. Devices with the specified real-time protection status are included in the selection.

- Device status description

  In this field, you can select the check boxes next to conditions that, if met, assign one of the following statuses to the device: *OK, Critical*, or *Warning*.

In the **Status of components in managed applications** subsection, you can configure criteria for including devices in a selection according to the statuses of components in managed applications:

- Data Leakage Prevention status

  Search for devices by the status of Data Leakage Prevention (*No data from device, Stopped, Starting, Paused, Running, Failed*).

- Collaboration servers protection status

  Search for devices by the status of server collaboration protection (*No data from device*, *Stopped*, *Starting*, *Paused*, *Running*, *Failed*).

- Anti-virus protection status of mail servers

  Search for devices by the status of Mail Server protection (*No data from device, Stopped, Starting, Paused, Running, Failed*).

- Endpoint Sensor status

Search for devices by the status of the Endpoint Sensor component (*No data from device, Stopped, Starting, Paused, Running, Failed*).

In the **Status-affecting problems in managed applications** subsection, you can specify the criteria that will be used to include devices in the selection according to the list of possible problems detected by a managed application. If at least one problem that you select exists on a device, the device will be included in the selection. When you select a problem listed for several applications, you have the option to select this problem in all of the lists automatically.

You can select check boxes for descriptions of statuses from the managed application; upon receipt of these statuses, the devices will be included in the selection. When you select a status listed for several applications, you have the option to select this status in all of the lists automatically.

System details

In the **Operating system** section, you can specify the criteria that will be used to include devices in the selection according to their operating system type.

- Platform type

  If the check box is selected, you can select an operating system from the list. Devices with the specified operating systems installed are included in the search results.

- Operating system service pack version

  In this field, you can specify the package version of the operating system (in the *X.Y* format), which will determine how the moving rule is applied to the device. By default, no version value is specified.

- Operating system bit size

  In the drop-down list, you can select the architecture for the operating system, which will determine how the moving rule is applied to the device (**Unknown**, **x86**, **AMD64**, or **IA64**). By default, no option is selected in the list so that the operating system's architecture is not defined.

- Operating system build

  This setting is applicable to Windows operating systems only.

  The build number of the operating system. You can specify whether the selected operating system must have an equal, earlier, or later build number. You can also configure searching for all build numbers except the specified one.

- Operating system release number

This setting is applicable to Windows operating systems only.

The release identifier (ID) of the operating system. You can specify whether the selected operating system must have an equal, earlier, or later release ID. You can also configure searching for all release ID numbers except the specified one.

In the **Virtual machines** section, you can set up the criteria to include devices in the selection according to whether these are virtual machines or part of virtual desktop infrastructure (VDI):

- This is a virtual machine

  In the drop-down list, you can select the following options:
  - **Undefined**.
  - **No**. Find devices that are not virtual machines.
  - **Yes**. Find devices that are virtual machines.

- Virtual machine type

  In the drop-down list, you can select the virtual machine manufacturer.

  This drop-down list is available if the **Yes** or **Not important** value is selected in the **This is a virtual machine** drop-down list.

- Part of Virtual Desktop Infrastructure

  In the drop-down list, you can select the following options:
  - **Undefined**.
  - **No**. Find devices that are not part of Virtual Desktop Infrastructure.
  - **Yes**. Find devices that are part of the Virtual Desktop Infrastructure (VDI).

In the **Hardware registry** subsection, you can configure criteria for including devices into a selection based on their installed hardware:

Ensure that the lshw utility is installed on Linux devices from which you want to fetch hardware details. Hardware details fetched from virtual machines may be incomplete depending on the hypervisor used.

- Device

  In the drop-down list, you can select a unit type. All devices with this unit are included in the search results.

  The field supports the full-text search.

- Vendor

In the drop-down list, you can select the name of a unit manufacturer. All devices with this unit are included in the search results.

The field supports the full-text search.

- **Device name**

  The device with the specified name is included in the selection.

- **Description**

  Description of the device or hardware unit. Devices with the description specified in this field are included in the selection.

  A device's description in any format can be entered in the properties window of that device. The field supports the full-text search.

- **Device vendor**

  Name of the device manufacturer. Devices produced by the manufacturer specified in this field are included in the selection.

  You can enter the manufacturer's name in the properties window of a device.

- **Serial number**

  All hardware units with the serial number specified in this field will be included in the selection.

- **Inventory number**

  Equipment with the inventory number specified in this field will be included in the selection.

- **User**

  All hardware units of the user specified in this field will be included in the selection.

- **Location**

  Location of the device or hardware unit (for example, at the HQ or a branch office). Computers or other devices that are deployed at the location specified in this field will be included in the selection.

  You can describe the location of a device in any format in the properties window of that device.

- **CPU clock rate, in MHz, from**

  The minimum clock rate of a CPU. Devices with a CPU that matches the clock rate range specified in the entry fields (inclusive) will be included in the selection.

- **CPU clock rate, in MHz, to**

The maximum clock rate of a CPU. Devices with a CPU that matches the clock rate range specified in the entry fields (inclusive) will be included in the selection.

- Number of virtual CPU cores, from

  The minimum number of virtual CPU cores. Devices with a CPU that matches the range of the virtual cores number specified in the entry fields (inclusive) will be included in the selection.

- Number of virtual CPU cores, to

  The maximum number of virtual CPU cores. Devices with a CPU that matches the range of the virtual cores number specified in the entry fields (inclusive) will be included in the selection.

- Hard drive volume, in GB, from

  The minimum volume of the hard drive on the device. Devices with a hard drive that matches the volume range specified in the entry fields (inclusive) will be included in the selection.

- Hard drive volume, in GB, to

  The maximum volume of the hard drive on the device. Devices with a hard drive that matches the volume range specified in the entry fields (inclusive) will be included in the selection.

- RAM size, in MB, from

  The minimum size of the device RAM. Devices with RAM that matches the size range specified in the entry fields (inclusive) will be included in the selection.

- RAM size, in MB, to

  The maximum size of the device RAM. Devices with RAM that matches the size range specified in the entry fields (inclusive) will be included in the selection.

Third-party software details

In the **Applications registry** subsection, you can set up the criteria to search for devices according to applications installed on them:

- Application name

  Drop-down list in which you can select an application. Devices on which the specified application is installed, are included in the selection.

- Application version

  Entry field in which you can specify the version of selected application.

- Vendor

Drop-down list in which you can select the manufacturer of an application installed on the device.

- Application status

  A drop-down list in which you can select the status of an application (*Installed*, *Not installed*). Devices on which the specified application is installed or not installed, depending on the selected status, will be included in the selection.

- Find by update

  If this option is enabled, search will be performed using the details of updates for applications installed on the relevant devices. After you select the check box, the **Application name**, **Application version**, and **Application status** fields change to **Update name**, **Update version**, and **Status** respectively.

  By default, this option is disabled.

- Name of incompatible security application

  Drop-down list in which you can select third-party security applications. During the search, devices on which the specified application is installed, are included in the selection.

- Application tag

  In the drop-down list, you can select the application tag. All devices that have installed applications with the selected tag in the description are included in the device selection.

- Apply to devices without the specified tags

  If this option is enabled, the selection includes devices with descriptions that contain none of the selected tags.

  If this option is disabled, the criterion is not applied.

  By default, this option is disabled.

Details of Kaspersky applications

In the **Kaspersky applications** subsection, you can configure criteria for including devices in a selection based on the selected managed application:

- Application name

  In the drop-down list, you can set a criterion for including devices in a selection when search is performed by the name of a Kaspersky application.

  The list provides only the names of applications with management plug-ins installed on the administrator's workstation.

  If no application is selected, the criterion will not be applied.

- Application version

In the entry field, you can set a criterion for including devices in a selection when search is performed by the version number of a Kaspersky application.

If no version number is specified, the criterion will not be applied.

- **Critical update name**

  In the entry field, you can set a criterion for including devices in a selection when search is performed by application name or by update package number.

  If the field is left blank, the criterion will not be applied.

- **Application status**

  A drop-down list in which you can select the status of an application (*Installed*, *Not installed*). Devices on which the specified application is installed or not installed, depending on the selected status, will be included in the selection.

- **Modules last updated**

  You can use this option to set a criterion for searching devices by time of the last update of modules of applications installed on those devices.

  If this check box is selected, in the entry fields you can specify the time interval (date and time) during which the last update of modules of applications installed on those devices was performed.

  If this check box is cleared, the criterion will not be applied.

  By default, this check box is cleared.

- **Device is managed through Kaspersky Security Center 14**

  In the drop-down list, you can include in the selection the devices managed through Kaspersky Security Center Linux:

  - **Yes**. The application includes in the selection devices managed through Kaspersky Security Center Linux.
  - **No**. The application includes devices in the selection if they are not managed through Kaspersky Security Center Linux.
  - **No value is selected**. The criterion will not be applied.

- **Security application is installed**

  In the drop-down list, you can include in the selection all devices with the security application installed:

  - **Yes**. The application includes in the selection all devices with the security application installed.
  - **No**. The application includes in the selection all devices with no security application installed.
  - **No value is selected**. The criterion will not be applied.

In the **Anti-virus protection** subsection, you can set up the criteria for including devices in a selection based on their protection status:

- **Databases released**

  If this option is selected, you can search for client devices by anti-virus database release date. In the entry fields you can set the time interval, on the basis of which the search is performed.

  By default, this option is disabled.

- **Database records count**

  If this option is enabled, you can search for client devices by number of database records. In the entry fields you can set the lower and upper threshold values for anti-virus database records.

  By default, this option is disabled.

- **Last scanned**

  If this check option is enabled, you can search for client devices by time of the last virus scan. In the entry fields you can specify the time period within which the last virus scan was performed.

  By default, this option is disabled.

- **Threats detected**

  If this option is enabled, you can search for client devices by number of viruses detected. In the entry fields you can set the lower and upper threshold values for the number of viruses found.

  By default, this option is disabled.

The **Application components** subsection contains the list of components of those applications that have corresponding management plug-ins installed in Kaspersky Security Center 14 Web Console.

In the **Application components** subsection, you can specify criteria for including devices in a selection according to the statuses and version numbers of the components that refer to the application that you select:

- **Status**

Search for devices according to the component status sent by an application to the Administration Server. You can select one of the following statuses: *N/A*, *Stopped*, *Paused*, *Starting*, *Running*, *Failed*, *Not installed*, *Not supported by license*. If the selected component of the application installed on a managed device has the specified status, the device is included in the device selection.

Statuses sent by applications:

- *Stopped*—The component is disabled and not working at the moment.
- *Paused*—The component is suspended, for example, after the user has paused protection in the managed application.
- *Starting*—The component is currently in the process of initialization.
- *Running*—The component is enabled and working properly.
- *Failed*—An error has occurred during the component operation.
- *Not installed*—The user did not select the component for installation when configuring custom installation of the application.
- *Not supported by license*—The license does not cover the selected component.

Unlike other statuses, the *N/A* status is not sent by applications. This option shows that the applications have no information about the selected component status. For example, this can happen when the selected component does not belong to any of the applications installed on the device, or when the device is turned off.

- Version

  Search for devices according to the version number of the component that you select in the list. You can type a version number, for example `3.4.1.0`, and then specify whether the selected component must have an equal, earlier, or later version. You can also configure searching for all versions except the specified one.

Tags

In the **Tags** section, you can configure criteria for including devices into a selection based on key words (tags) that were previously added to the descriptions of managed devices:

Apply if at least one specified tag matches

If this option is enabled, the search results will show devices with descriptions that contain at least one of the selected tags.

If this option is disabled, the search results will only show devices with descriptions that contain all the selected tags.

By default, this option is disabled.

To add tags to the criterion, click the **Add** button, and select tags by clicking the **Tag** entry field. Specify whether to include or exclude the devices with the selected tags in the device selection.

- **Must be included**

  If this option is selected, the search results will display the devices whose descriptions contain the selected tag. To find devices, you can use the asterisk, which stands for any string with any number of characters.

  By default, this option is selected.

- **Must be excluded**

  If this option is selected, the search results will display the devices whose descriptions do not contain the selected tag. To find devices, you can use the asterisk, which stands for any string with any number of characters.

Users

In the **Users** section, you can set up the criteria to include devices in the selection according to the accounts of users who have logged in to the operating system.

- **Last user who logged in to the system**

  If this option is enabled, you can select the user account for configuring the criterion. The search results include devices on which the selected user performed the last login to the system.

- **User who logged in to the system at least once**

  If this option is enabled, click the **Browse** button to specify a user account. The search results include devices on which the specified user logged in to the system at least once.

Exporting the device list from a device selection

Kaspersky Security Center allows you to save information about devices from a device selection in a CSV or a TXT file.

To export the device list from the device selection to a file:

1. Open the table with the devices from the device selection.
2. You can export the information about devices from the table in one of the following ways:

   - Export the selected devices.

     Select the check boxes next to the required devices, and then click the **Export rows to CSV file** or **Export rows to TXT file** button, depending on the format you prefer for export. All information about the selected devices included in the table will be exported to a TXT or CSV file.

   - Export all devices displayed on the current page.

     Click the **Export rows to CSV file** or **Export rows to TXT file** button, depending on the format you prefer for export. You do not need to select devices from the table. All information about devices displayed on the current page will be exported to a TXT file.

Note that if you applied a filter criterion to the device table, only the filtered data from the displayed columns will be exported to a CSV or TXT file.

Removing devices from administration groups in a selection

When working with a device selection, you can remove devices from administration groups right in this selection, without switching to the administration groups from which these devices must be removed.

To remove devices from administration groups:

1. In the main menu, go to **DEVICES** → **DEVICE SELECTIONS** or **DISCOVERY & DEPLOYMENT** → **DEVICE SELECTIONS**.

2. In the selection list, click the name of the device selection.

   The page displays a table with information about the devices included in the device selection.

3. Select the devices that you want to remove, and then click **Delete**.

   The selected devices are removed from their respective administration groups.

Changing the language of the Kaspersky Security Center 14 Web Console interface

You can select the language of the Kaspersky Security Center 14 Web Console interface.

To change the interface language:

1. In the main menu, go to your account settings, and then select **Language**.
2. Select one of the supported localization languages.

API Reference Guide

This Kaspersky Security Center OpenAPI reference guide is designed to assist in the following tasks:

- Automation and customization. You can automate tasks that you might not want to handle manually. For example, as an administrator, you can use Kaspersky Security Center OpenAPI to create and run scripts that will facilitate developing the structure of administration groups and keep that structure up-to-date.
- Custom development. Using OpenAPI, you can develop a client application.

You can use the search field in the right part of the screen to locate the information you need in the OpenAPI reference guide.

OPENAPI REFERENCE GUIDE

Samples of scripts

The OpenAPI reference guide contains samples of the Python scripts listed in the table below. The samples show how you can call OpenAPI methods and automatically accomplish various tasks for protecting your network, for instance, create a "primary/secondary" hierarchy, run tasks in Kaspersky Security Center, or assign distribution points. You can run the samples as is or create your own scripts based on the samples.

To call the OpenAPI methods and run scripts:

1. Download the KlAkOAPI.tar.gz archive. This archive includes the KlAkOAPI package and samples (you can copy them from the archive or the OpenAPI reference guide). The KlAkOAPI.tar.gz archive is also located in the Kaspersky Security Center installation folder.
2. Install the KlAkOAPI package from the KlAkOAPI.tar.gz archive on a device where Administration Server is installed.

   You can call the OpenAPI methods, run the samples and your own scripts only on devices where Administration Server and the KlAkOAPI package are installed.

Matching between user scenarios and samples of Kaspersky Security Center OpenAPI methods

Sample	Purpose of the sample	Scenario
Log KlAkParams	You can extract and process data by using the `KlAkParams` data structure. The sample shows how to work with this data structure. The sample output may be present in different ways. You can get the data to send an HTTP method or to use it in your code.	Monitoring and reporting
Create and delete a "primary/secondary" hierarchy	You can add a secondary Administration Server and establish a "primary/secondary" hierarchy. Alternately, you can disconnect the secondary Administration Server from the hierarchy.	Creating a hierarchy of Administration Servers, adding a secondary Administration Server, and deleting a hierarchy of Administration Servers
Create the group hierarchy with a structure based on the Active Directory unit	You can connect to Network Agent on the needed device by using a connection gateway, and then download a file with the network list to your device.	Adjustment of distribution points and connection gateways
Create the group hierarchy with a structure based on the cached Active Directory unit	You can connect to the primary Administration Server, download a required license key from it, and transmit this key to all the secondary Administration Servers included in a hierarchy.	Licensing of managed applications
Download network list files via connection gateway to the specified device	You can create different reports. For instance, you can generate the report of effective user rights by using this sample. This report describes the rights that a user has, depending on his or her group and role. You can download the report in the HTML, PDF, or Excel format.	Generating and viewing a report

Install a license key stored in the primary Administration Server repository onto the secondary Administration Servers	You can connect to Network Agent on the needed device by using a connection gateway, and then run the necessary task.	Starting a task manually
Create a report of effective user rights	You can assign managed devices as distribution points (previously known as update agents).	Updating Kaspersky databases and applications
Start a task for a device	You can perform various actions with administration groups. The sample shows how to do the following: • Get an identifier of the "Managed devices" root group • Move through the group hierarchy • Retrieve the full, expanded hierarchy of groups, along with their names and nesting	Configuring Administration Server
Create IP subnets based on Active Directory Site and Services	You can find out the following information: • Task progress history • Current task status • Number of tasks in different statuses You can also run a task. By default, the sample runs a task after it outputs statistics.	Managing tasks
Register distribution points for devices in a group	You can create a task. Specify the following task parameters in the sample: • Type • Method of run • Name • Device group for which the task will be used By default, the sample creates a task with the "Show message" type. You can run this task for all managed devices of Administration Server. If necessary, you can specify your own task parameters.	Creating a task
Enumerate all groups	You can get a list of all the active license keys for Kaspersky applications installed on managed devices of Administration Server. The list contains detailed data about every license key, such as a name, type, or expiration date.	Viewing information about license keys in use
Enumerate tasks, query task statistics, and run a task	You can create an account for further work.	Adding an account of an internal user
Create and run a task	You can create the application category with the needed parameters.	Creating an application category with content added manually
Enumerate license keys	You can use the SrvView class to request detailed information from the Administration Server. For instance, you can get a list of users by using this sample.	Managing users and user roles

Applications interacting with Kaspersky Security Center via OpenAPI

Some applications interact with Kaspersky Security Center via OpenAPI. Such applications include, for example, Kaspersky Anti Targeted Attack Platform or Kaspersky Security for Virtualization. This can also be a custom client application developed by you based on OpenAPI.

Applications interacting with Kaspersky Security Center via OpenAPI connect to Administration Server. If you have configured an allowlist of IP addresses for connecting to the Administration Server, add IP addresses of devices where applications using Kaspersky Security Center OpenAPI are installed. To find out whether the application that you use works by OpenAPI, see Help of this application.

Best Practices for Service Providers

This section provides information about how to configure and use Kaspersky Security Center Linux.

This section contains recommendations on how to deploy, configure, and use the application, as well as describes ways of resolving typical issues in the application operation.

Planning Kaspersky Security Center Linux deployment

When planning the deployment of Kaspersky Security Center Linux components on an organization's network, you must take into account the size and scope of the project; specifically, the following factors:

- Total number of devices
- Number of MSP clients

One Administration Server can support a maximum of 50,000 devices. If the total number of devices on an organization's network exceeds 50,000, multiple Administration Servers must be deployed on the service provider side and combined into a hierarchy for convenient centralized management.

Up to 500 virtual Servers can be created on a single Administration Server, so an individual Administration Server is required for each 500 MSP clients.

At the stage of deployment planning, the assignment of the special certificate X.509 to the Administration Server must be considered. Assignment of the X.509 certificate to the Administration Server may be useful in the following cases (partial list):

- Inspecting secure socket layer (SSL) traffic by means of an SSL termination proxy
- Specifying required values in certificate fields
- Providing the required encryption strength of a certificate

Providing internet access to Administration Server

To allow devices on the client network to access Administration Server over the internet, you have to make available the following Administration Server ports:

- 13000 TCP—Administration Server TLS port for connecting Network Agents deployed on the client network
- 8061 TCP—HTTPS port for publishing stand-alone packages using Kaspersky Security Center 14 Web Console tools
- 8060 TCP—HTTP port for publishing stand-alone packages using Kaspersky Security Center 14 Web Console tools
- 13292 TCP—TLS port required only if there are mobile devices that need to be managed
- 8080 TCP—HTTPS port for Kaspersky Security Center 14 Web Console

Kaspersky Security Center Linux standard configuration

One or several Administration Servers are deployed on the MSPs' servers. The number of Administration Servers can be selected either based on available hardware, or on the total number of MSP clients served or total number of managed devices.

One Administration Server can support up to 50,000 devices. You must consider the possibility of increasing the number of managed devices in the near future: it may be useful to connect a slightly smaller number of devices to a single Administration Server.

Up to 500 virtual Servers can be created on a single Administration Server, so an individual Administration Server is required for each 500 MSP clients.

If multiple Servers are used, it is recommended that you combine them into a hierarchy. Using a hierarchy of Administration Servers allows you to avoid dubbed policies and tasks, handle the whole set of managed devices, as if they are managed by a single Administration Server: i.e., search for devices, build selections of devices, and create reports.

On each virtual Server that corresponds to an MSP client, you must assign one or several distribution point(s). If MSP clients and the Administration Server are linked through the internet, it may be useful to create a *Download updates to the repositories of distribution points* task for the distribution points, so that they will download updates directly from Kaspersky servers, not from the Administration Server.

If some devices in the MSP client network have no direct internet access, you have to switch the distribution points to the connection gateway mode. In this case, Network Agents on devices on the MSP client network will be connected, for further synchronization, to the Administration Server—but through the gateway, not directly.

As the Administration Server, most probably, will not be able to poll the MSP client network, it may be useful to turn this function over to a distribution point.

The Administration Server will not be able to send notifications to port 15000 UDP to managed devices located behind the NAT on the MSP client network. To resolve this issue, it may be useful to enable the mode of continuous connection to the Administration Server in the properties of devices acting as distribution points and running in connection gateway mode (**Do not disconnect from the Administration Server** option). The continuous connection mode is available if the total number of distribution points does not exceed 300.

An MSP client might want to manage Android and iOS devices of the employees. Administration Server manages mobile devices through TLS, TCP port 13292.

About distribution points

Device with Network Agent installed can be used as distribution point. In this mode, Network Agent can perform the following functions:

- Transfer files to client devices, including:
  - Updates of Kaspersky databases and software modules

    The updates can be retrieved either from the Administration Server or from Kaspersky servers. In the latter case, the *Download updates to the repositories of distribution points* task must be created for the device serving as the distribution point.
  - Third-party software updates

    - Installation packages

- Install software (including initial deployment of Network Agents) on other devices.

- Poll the network to detect new devices and update information about existing ones. A distribution point can apply the same device discovery methods as the Administration Server.

Deployment of distribution points on an organization's network pursues the following objectives:

- Reduce the load on the Administration Server if it functions as the update source.

- Optimize internet traffic since, in this case, each device on the MSP client network does not have to access Kaspersky servers or the Administration Server for updates.

- Provide the Administration Server access to devices behind the NAT (relative to the Administration Server) of the MSP client network, which allows the Administration Server to perform the following actions:

    - Send notifications to devices over UDP on the IPv4 or IPv6 network

    - Poll the IPv4 or IPv6 network

    - Perform initial deployment

    - Act as a push server

A distribution point is assigned for an administration group. In this case, the distribution point's scope includes all devices within the administration group and all of its subgroups. However, the device acting as the distribution point does not have to be included in the administration group to which it has been assigned.

You can make a distribution point function as a connection gateway. In this case, devices in the scope of this distribution point will be connected to the Administration Server through the gateway, not directly. You can use this mode in scenarios that do not allow the establishment of a direct connection between devices with Network Agent and an Administration Server.

Devices functioning as distribution points must be protected, including physical protection, against any unauthorized access.

A hierarchy of Administration Servers

An MSP may run multiple Administration Servers. It can be inconvenient to administer several separate Administration Servers, so a hierarchy can be applied.

In a hierarchy, Kaspersky Security Center Linux Administration Server can only work as a secondary Server managed by a primary Administration Server of Windows-based Kaspersky Security Center or Kaspersky Security Center Cloud Console.

A "primary/secondary" configuration for two Administration Servers provides the following options:

- A secondary Administration Server inherits policies and tasks from the primary Administration Server, thus preventing duplication of settings.

- Selections of devices on the primary Administration Server can include devices from secondary Administration Servers.

- Reports on the primary Administration Server can contain data (including detailed information) from secondary Administration Servers.

The primary Administration Server only receives data from non-virtual secondary Administration Servers within the scope of the options listed above. This limitation does not apply to virtual Administration Servers, which share the database with their primary Administration Server.

Virtual Administration Servers

On the basis of a physical Administration Server, multiple virtual Administration Servers can be created, which will be similar to secondary Administration Servers. Compared to the discretionary access model, which is based on access control lists (ACLs), the virtual Administration Server model is more functional and provides a larger degree of isolation. In addition to a dedicated structure of administration groups for assigned devices with policies and tasks, each virtual Administration Server features its own group of unassigned devices, own sets of reports, selected devices and events, installation packages, moving rules, etc. For maximum mutual isolation of MSP clients, we recommend that you choose virtual Administration Servers as the functionality to be used. In addition, creating a virtual Administration Server for each MSP client allows you to provide clients basic options of network administration through Kaspersky Security Center 14 Web Console.

Virtual Administration Servers are very similar to secondary Administration Servers, but with the following distinctions:

- A virtual Administration Server lacks most global settings and its own TCP ports.
- A virtual Administration Server has no secondary Administration Servers.
- A virtual Administration Server has no other virtual Administration Servers.
- A physical Administration Server views devices, groups, events, and objects on managed devices (items in Quarantine, applications registry, etc.) of all its virtual Administration Servers.
- A virtual Administration Server can only scan the network with distribution points connected.

Deployment and initial setup

Kaspersky Security Center Linux is a distributed application. Kaspersky Security Center Linux includes the following applications:

- Administration Server—The core component, designed for managing devices of an organization and storing data in a DBMS.
- Kaspersky Security Center 14 Web Console—A web interface for Administration Server designed for basic operations. You can install this component on any device that meets the hardware and software requirements.
- Network Agent—Designed for managing the security application installed on a device, as well as getting information about that device. Network Agents are installed on devices of an organization.

Deployment of Kaspersky Security Center Linux on an organization's network is performed as follows:

- Installation of Administration Server
- Installation of Kaspersky Security Center 14 Web Console

- Installation of Network Agent and the security application on devices of the enterprise

Recommendations on Administration Server installation

This section contains recommendations on how to install Administration Server. This section also provides scenarios for using a shared folder on the Administration Server device in order to deploy Network Agent on client devices.

Creating accounts for the Administration Server services on a failover cluster

Before you start deployment of Kaspersky Security Center on a failover cluster, you must create accounts for Kaspersky Security Center services.

To do this, perform the following steps on the active node, passive node, and the file server:

1. Create a group with the name 'kladmins' and assign the same GID to all three groups.
2. Create a user account with the name 'ksc' and assign the same UID to all three user accounts. Set the primary group to 'kladmins' for the created accounts.
3. Create a user account with the name 'rightless' and assign the same UID to all three user accounts. Set the primary group to 'kladmins' for the created accounts.

Selecting a DBMS

The following table lists the valid DBMS options, as well as the recommendations and restrictions on their use.

Recommendations and restrictions on DBMS

DBMS	Recommendations and restrictions
MySQL (see supported versions)	Use this DBMS if you intend to run a single Administration Server for less than 20,000 devices.
MariaDB (see supported versions)	Use this DBMS if you intend to run a single Administration Server for less than 20,000 devices.
PostgreSQL, Postgres Pro (see supported versions)	Use this DBMS if you intend to run a single Administration Server for less than 50,000 devices.

For information about how to install the selected DBMS, refer to its documentation.

It is recommended to disable the Software inventory task and disable (in the Kaspersky Endpoint Security policy settings) notifications of Administration Server on started applications.

If you decide to install PostgreSQL or Postgres Pro DBMS, ensure that you specified a password for the superuser. If the password is not specified, Administration Server might not be able to connect to the database.

If you install MySQL, MariaDB, PostgreSQL, or Postgres Pro, use the recommended settings to ensure the DBMS functions properly.

If you use a PostgreSQL, MariaDB or MySQL DBMS, the **Events** tab may display an incomplete list of events for the selected client device. This occurs when the DBMS stores a very large amount of events. You can increase the number of displayed events by doing either of the following:

- Removing unnecessary events.
- Reducing the storage term for unnecessary events.

To see a full list of events logged on the Administration Server for the device, use Reports.

Specifying the address of the Administration Server

When installing Administration Server, you must specify the DNS name or static IP address of the Administration Server. This address will be used as the default address when creating installation packages of Network Agent. After that, you will be able to change the address of the Administration Server host by using Kaspersky Security Center 14 Web Console tools; the address will not change automatically in Network Agent installation packages that have been already created.

Deploying Network Agent and security applications

To manage devices in an organization and to protect them against security threats, you have to install Network Agent and a Kaspersky security application on each of them.

For information about protection deployment, refer to the Deploying Network Agent and the security application section.

In Microsoft Windows XP, Network Agent might not perform the following operations correctly: downloading updates directly from Kaspersky servers (as a distribution point) and functioning as a KSN proxy server (as a distribution point).

Configuring protection on a client organization's network

After Administration Server installation is complete, Kaspersky Security Center 14 Web Console launches and prompts you to perform the initial setup through the relevant wizard. When the quick start wizard is running, the following policies and tasks are created in the root administration group:

- Policy of Kaspersky Endpoint Security
- Group task for updating Kaspersky Endpoint Security
- Group task for scanning a device with Kaspersky Endpoint Security
- Policy of Network Agent
- Vulnerability scan task (task of Network Agent)

- Updates installation and vulnerabilities fix task (task of Network Agent)

Policies and tasks are created with the default settings, which may turn out to be sub-optimal or even inadmissible for the organization. Therefore, you must check the properties of objects that have been created and modify them manually, if necessary.

This section contains information about manual configuration of policies, tasks, and other settings of Administration Server, and information about the distribution point, building an administration group structure and hierarchy of tasks, and other settings.

Manual setup of the Kaspersky Endpoint Security policy

This section provides recommendations on how to configure the Kaspersky Endpoint Security policy, which is created by the quick start wizard. You can perform the setup in the policy properties window.

When editing a setting, keep in mind that you can lock or unlock the setting in order to prohibit or allow editing its value on a workstation.

Configuring the policy in the Advanced Threat Protection section

For a full description of the settings in this section, please refer to the Kaspersky Endpoint Security for Windows documentation.

In the **Advanced Threat Protection** section, you can configure the use of Kaspersky Security Network for Kaspersky Endpoint Security for Windows. You can also configure Kaspersky Endpoint Security for Windows modules, such as Behavior Detection, Exploit Prevention, Host Intrusion Prevention, and Remediation Engine.

In the **Kaspersky Security Network** subsection, we recommend that you enable the **Kaspersky Security Network** option. Using this option helps to redistribute and optimize traffic on the network. If the **Kaspersky Security Network** option is disabled, you can enable direct use of KSN servers.

Configuring the policy in the Essential Threat Protection section

For a full description of the settings in this section, please refer to the Kaspersky Endpoint Security for Windows documentation.

In the **Essential Threat Protection** section of the policy properties window, we recommend that you specify additional settings in the **Firewall** and **File Threat Protection** subsections.

The **Firewall** subsection contains settings that allow you to control the network activity of applications on the client devices. A client device uses a network to which one of the following statuses is assigned: public, local, or trusted. Depending on the network status, Kaspersky Endpoint Security can allow or deny network activity on a device. When you add a new network to your organization, you must assign an appropriate network status to it. For example, if the client device is a laptop, we recommend that this device use the public or trusted network, because the laptop is not always connected to the local network. In the **Firewall** subsection, you can check whether you correctly assigned statuses to the networks used in your organization.

To check the list of networks:

1. In the policy properties, go to **Essential Threat Protection** → **Firewall**.
2. In the **Available networks** section, click the **Settings** button.
3. In the **Firewall** window that opens, go to the **Networks** tab to view the list of networks.

In the **File Threat Protection** subsection, you can disable the scanning of network drives. Scanning network drives can place a significant load on network drives. It is more convenient to perform indirect scanning, on file servers.

To disable scanning of network drives:

1. In the policy properties, go to **Essential Threat Protection** → **File Threat Protection**.
2. In the **Security level** section, click the **Settings** button.
3. In the **File Threat Protection** window that opens, on the **General** tab clear the **All network drives** check box.

Configuring the policy in the General Settings section

For the full description of the settings in this section, please refer to the Kaspersky Endpoint Security documentation.

Described below are advanced setup actions, which we recommend that you perform in the policy properties window of Kaspersky Endpoint Security, in the **General Settings** section.

General Settings section, Reports and Storage subsection

In the **Data transfer to Administration Server** section, please note the **About started applications** check box. If this check box is selected, the Administration Server database saves information about all versions of all software modules on the networked devices. This information may require a significant amount of disk space in the Kaspersky Security Center Linux database (dozens of gigabytes). Therefore, if the **About started applications** check box is still selected in the top-level policy, it must be cleared.

General Settings section, Interface subsection

If the threat protection in the organization's network must be managed in centralized mode through Administration Console, you must disable the display of the Kaspersky Endpoint Security user interface on workstations (by clearing the **Display application interface** check box in the **Interaction with user** section), and enable password protection (by selecting the **Enable password protection** check box in the **Password protection** section).

Configuring the policy in the Event configuration section

In the **Event configuration** section, you should disable the saving of any events on Administration Server, except for the following ones:

- On the **Critical** tab:

- *Application autorun is disabled*
- *Access denied*
- *Application startup prohibited*
- *Disinfection impossible*
- *End User License Agreement violated*
- *Could not load encryption module*
- *Cannot start two tasks at the same time*
- *Active threat detected. Advanced Disinfection should be started*
- *Network attack detected*
- *Not all components were updated*
- *Activation error*
- *Error enabling portable mode*
- *Error in interaction with Kaspersky Security Center*
- *Error disabling portable mode*
- *Error changing application components*
- *Error applying file encryption / decryption rules*
- *Policy cannot be applied*
- *Process terminated*
- *Network activity blocked*

- On the **Functional failure** tab: *Invalid task settings. Settings not applied*
- On the **Warning** tab:
  - *Self-Defense is disabled*
  - *Incorrect reserve key*
  - *User has opted out of the encryption policy*
- On the **Info** tab: *Application startup prohibited in test mode*

Manual setup of the group update task for Kaspersky Endpoint Security

If the Administration Server acts as the update source, the optimal and recommended schedule option for Kaspersky Endpoint Security is **When new updates are downloaded to the repository** with the **Use automatically randomized delay for task starts** check box selected.

If a local task for downloading updates from Kaspersky servers to the repository is created on each distribution point, periodic scheduling will be optimal and recommended for the Kaspersky Endpoint Security group update task. In this case, the randomization interval value should be set on 1 hour.

Manual setup of the group task for scanning a device with Kaspersky Endpoint Security

The quick start wizard creates a group task for scanning a device. If the automatically specified schedule of the group scanning task is not appropriate for your organization, you must manually set up the most convenient schedule for this task based on the workplace rules adopted in the organization.

For example, the task is assigned a **Run on Fridays at 7:00 PM** schedule with automatic randomization, and the **Run missed tasks** check box is cleared. This means that if the devices in the organization are shut down on Fridays, for example, at 6:30 PM, the device scan task will never run. In this case you need to set up the group scanning task manually.

Scheduling the Find vulnerabilities and required updates task

The Quick Start Wizard creates the *Find vulnerabilities and required updates* task for Network Agent. By default, the task is assigned a **Run on Tuesdays at 7:00 PM** schedule with automatic randomization, and the **Run missed tasks** check box is selected.

If the organization's workplace rules provide for shutting down all devices at this time, the *Find vulnerabilities and required updates task* will run after the devices are turned on again, that is, on Wednesday morning. Such activity may be undesirable because a vulnerability scan may increase the load on CPUs and disk subsystems. You must set up the most convenient schedule for the task based on the workplace rules adopted in the organization.

Manual setup of the group task for updates installation and vulnerabilities fix

The Quick Start Wizard creates a group task for updates installation and vulnerabilities fix for Network Agent. By default, the task is set up to run every day at 01:00 AM, with automatic randomization, and the **Run missed tasks** option is not enabled.

If the organization's workplace rules provide for shutting down devices overnight, the update installation will never run. You must set up the most convenient schedule for the vulnerability scan task based on the workplace rules adopted in the organization. It is also important to keep in mind that installation of updates may require restarting the device.

Building a structure of administration groups and assigning distribution points

A structure of administration groups in Kaspersky Security Center Linux performs the following functions:

- Sets the scope of policies.

  There is an alternate way of applying relevant settings on devices, by using policy profiles. In this case, the scope of policies is set, for example, with device tags or user roles.

- Sets the scope of group tasks.

  There is an approach to defining the scope of group tasks that is not based on a hierarchy of administration groups: use of tasks for device selections and tasks for specific devices.

- Sets access rights to devices, virtual Administration Servers, and secondary Administration Servers.

- Assigns distribution points.

When building the structure of administration groups, you must take into account the topology of the organization's network for the optimum assignment of distribution points. The optimum distribution of distribution points allows you to save traffic on the organization's network.

Depending on the organizational schema and network topology adopted by the MSP client, the following standard configurations can be applied to the structure of administration groups:

- Single office

- Multiple small detached offices

Standard MSP client configuration: Single office

In a standard "single-office" configuration, all devices are on the organization's network so they can "see" each other. The organization's network may consist of a few separate parts (networks or network segments) linked by narrow channels.

The following methods of building the structure of administration groups are possible:

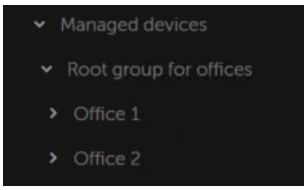
- Building the structure of administration groups taking into account the network topology. The structure of administration groups may not reflect the network topology with absolute precision. A match between the separate parts of the network and certain administration groups would be enough. You can use automatic assignment of distribution points or assign them manually.

- Building the structure of administration groups, without taking the network topology into account. In this case, you must disable automatic assignment of distribution points and then assign one or several devices to act as distribution points for a root administration group in each of the separate parts of the network, for example, for the **Managed devices** group. All distribution points will be at the same level and will feature the same scope spanning all devices on the organization's network. In this case, each of Network Agents will connect to the distribution point that has the shortest route. The route to a distribution point can be traced with the tracert utility or the traceroute utility.

Standard MSP client configuration: Multiple small remote offices

This standard configuration provides for a number of small remote offices, which may be communicated with the head office via the internet. Each remote office is located behind the NAT, that is, connection from one remote office to another is not possible because offices are isolated from one another.

The configuration must be reflected in the structure of administration groups: a separate administration group must be created for each remote office (groups **Office 1** and **Office 2** in the figure below).



Remote offices are included in the administration group structure

One or multiple distribution points must be assigned to each administration group corresponding to an office. Distribution points must be devices at the remote office that have a sufficient amount of free disk space. Devices deployed in the **Office 1** group, for example, will access distribution points assigned to the **Office 1** administration group.

If some users move between offices physically, with their laptops, you must select two or more devices (in addition to the existing distribution points) in each remote office and assign them to act as distribution points for a top-level administration group (**Root group for offices** in the figure above).

Example: A laptop is deployed in the **Office 1** administration group and then is moved physically to the office that corresponds to the **Office 2** administration group. After the laptop is moved, Network Agent attempts to access the distribution points assigned to the **Office 1** group, but those distribution points are unavailable. Then, Network Agent starts attempting to access the distribution points that have been assigned to the **Root group for offices**. Because remote offices are isolated from one another, attempts to access distribution points assigned to the **Root group for offices** administration group will only be successful when Network Agent attempts to access distribution points in the **Office 2** group. That is, the laptop will remain in the administration group that corresponds to the initial office, but the laptop will use the distribution point of the office where it is physically located at the moment.

Hierarchy of policies, using policy profiles

This section provides information about how to apply policies to devices in administration groups. This section also provides information about policy profiles.

Hierarchy of policies

In Kaspersky Security Center Linux, you use policies for defining a single collection of settings to multiple devices. For example, the policy scope of application P defined for administration group G includes managed devices with application P installed that have been deployed in group G and all of its subgroups, except for subgroups where the **Inherit from parent group** check box is cleared in the properties.

A policy differs from any local setting by lock icons (🔒) next to its settings. If a setting (or a group of settings) is locked in the policy properties, you must, first, use this setting (or group of settings) when creating effective settings and, second, you must write the settings or group of settings to the downstream policy.

Creation of the effective settings on a device can be described as follows: the values of all settings that have not been locked are taken from the policy, then they are overwritten with the values of local settings, and then the resulting collection is overwritten with the values of locked settings taken from the policy.

Policies of the same application affect each other through the hierarchy of administration groups: Locked settings from the upstream policy overwrite the same settings from the downstream policy.

There is a special policy for out-of-office users. This policy takes effect on a device when the device switches into out-of-office mode. Out-of-office policies do not affect other policies through the hierarchy of administration groups.

Policy profiles

Applying policies to devices only through the hierarchy of administration groups may be inconvenient in many circumstances. It may be necessary to create several instances of a single policy that differ in one or two settings for different administration groups, and synchronize the contents of those policies in the future.

To help you avoid such problems, Kaspersky Security Center Linux supports *policy profiles*. A policy profile is a named subset of policy settings. This subset is distributed on target devices together with the policy, supplementing it under a specific condition called the *profile activation condition*. Profiles only contain settings that differ from the "basic" policy, which is active on the client device (computer or mobile device). Activation of a profile modifies the policy settings that were active on the device before the profile was activated. Those settings take values that have been specified in the profile.

The following restrictions are currently imposed on policy profiles:

- A policy can include a maximum 100 profiles.
- A policy profile cannot contain other profiles.
- A policy profile cannot contain notification settings.

Contents of a profile

A policy profile contains the following constituent parts:

- Name. Profiles with identical names affect each other through the hierarchy of administration groups with common rules.
- Subset of policy settings. Unlike the policy, which contains all the settings, a profile only contains settings that are actually required (locked settings).
- Activation condition is a logical expression with the device properties. A profile is active (supplements the policy) only when the profile activation condition becomes true. In all other cases, the profile is inactive and ignored. The following device properties can be included in that logical expression:
  - Status of out-of-office mode.
  - Properties of network environment—Name of the active rule for Network Agent connection.
  - Presence or absence of specified tags on the device.
  - Device location in Active Directory unit: explicit (the device is right in the specified OU), or implicit (the device is in an OU, which is within the specified OU at any nesting level).
  - Device's membership in an Active Directory security group (explicit or implicit).
  - Device owner's membership in an Active Directory security group (explicit or implicit).
- Profile disabling check box. Disabled profiles are always ignored and their respective activation conditions are not verified.
- Profile priority. The activation conditions of different profiles are independent, so several profiles can be activated simultaneously. If active profiles contain non-overlapping collections of settings, no problems will arise. However, if two active profiles contain different values of the same setting, an ambiguity will occur. This

ambiguity is to be avoided through profile priorities: The value of the ambiguous variable will be taken from the profile that has the higher priority (the one that is rated higher in the list of profiles).

Behavior of profiles when policies affect each other through the hierarchy

Profiles with the same name are merged according to the policy merge rules. Profiles of an upstream policy have a higher priority than profiles of a downstream policy. If editing settings is prohibited in the upstream policy (it is locked), the downstream policy uses the profile activation conditions from the upstream one. If editing settings is allowed in the upstream policy, the profile activation conditions from the downstream policy are used.

Since a policy profile may contain the **Device is offline** property in its activation condition, profiles completely replace the feature of policies for out-of-office users, which will no longer be supported.

A policy for out-of-office users may contain profiles, but its profiles can only be activated after the device switches into out-of-office mode.

Tasks

Kaspersky Security Center manages Kaspersky security applications installed on devices by creating and running *tasks*. Tasks are required for installing, launching, and stopping applications, scanning files, updating databases and software modules, and performing other actions on applications.

Tasks for a specific application can be created only if the management plug-in for that application is installed.

Tasks can be performed on the Administration Server and on devices.

The following tasks are performed on the Administration Server:

- Automatic distribution of reports
- Downloading of updates to the repository of the Administration Server
- Backup of Administration Server data
- Maintenance of the database

The following types of tasks are performed on devices:

- *Local tasks*—Tasks that are performed on a specific device

  Local tasks can be modified either by the administrator, by using Kaspersky Security Center 14 Web Console, or by the user of a remote device (for example, through the security application interface). If a local task has been modified simultaneously by the administrator and the user of a managed device, the changes made by the administrator will take effect because they have a higher priority.

- *Group tasks*—Tasks that are performed on all devices of a specific group

  Unless otherwise specified in the task properties, a group task also affects all subgroups of the selected group. A group task also affects (optionally) devices that have been connected to secondary and virtual Administration Servers deployed in the group or any of its subgroups.

- *Global tasks*—Tasks that are performed on a set of devices, regardless of whether they are included in any group

For each application, you can create any number of group tasks, global tasks, or local tasks.

You can make changes to the settings of tasks, view the progress of tasks, and copy, export, import, and delete tasks.

A task is started on a device only if the application for which the task was created is running.

Results of tasks are saved in the Syslog event log and the Kaspersky Security Center event log, both centrally on the Administration Server and locally on each device.

Do not include private data in task settings. For example, avoid specifying the domain administrator password.

Device moving rules

We recommend that you automate the allocation of devices to administration groups through *device moving rules*. A device moving rule consists of three main parts: a name, an execution condition (logical expression with the device attributes), and a target administration group. A rule moves a device to the target administration group if the device attributes meet the rule execution condition.

All device moving rules have priorities. The Administration Server checks the device attributes as to whether they meet the execution condition of each rule, in ascending order of priority. If the device attributes meet the execution condition of a rule, the device is moved to the target group, so the rule processing is complete for this device. If the device attributes meet the conditions of multiple rules, the device is moved to the target group of the rule with the highest priority (that is, has the highest rank in the list of rules).

Device moving rules can be created implicitly. For example, in the properties of an installation package or a remote installation task, you can specify the administration group to which the device must be moved after Network Agent is installed on it. Also, device moving rules can be created explicitly by the administrator of Kaspersky Security Center Linux, in the **DEVICES** → **MOVING RULES** section.

By default, a device moving rule is intended for one-time initial allocation of devices to administration groups. The rule moves devices from the unassigned devices group only once. If a device once was moved by this rule, the rule will never move it again, even if you return the device to the unassigned devices group manually. This is the recommended way of applying moving rules.

You can move devices that have already been allocated to some of the administration groups. To do this, in the properties of a rule, clear the **Move only devices that do not belong to an administration group** check box.

Applying moving rules to devices that have already been allocated to some of the administration groups, significantly increases the load on the Administration Server.

The **Move only devices that do not belong to an administration group** check box is locked in the properties of automatically created moving rules. Such rules are created when you add the *Install application remotely* task or create a stand-alone installation package.

You can create a moving rule that would affect a single device repeatedly.

We strongly recommend that you avoid moving a single device from one group to another repeatedly (for example, in order to apply a special policy to that device, run a special group task, or update the device through a specific distribution point).

Such scenarios are not supported, because they increase the load on Administration Server and network traffic to an extreme degree. These scenarios also conflict with the operating principles of Kaspersky Security Center Linux (particularly in the area of access rights, events, and reports). Another solution must be found, for example, through the use of policy profiles, tasks for device selections, assignment of Network Agents according to the standard scenario.

Software categorization

The main tool for monitoring the running of applications are *Kaspersky categories* (hereinafter also referred to as *KL categories*). KL categories help Kaspersky Security Center Linux administrators to simplify the support of software categorization and minimize traffic going to managed devices.

User categories must only be created for applications that cannot be classified in any of the existing KL categories (for example, for custom-made software). User categories are created on the basis of an application installation package (MSI) or a folder with installation packages.

If a large collection of software is available, which has not been categorized through KL categories, it may be useful to create an automatically updated category. The checksums of executable files will be automatically added to this category on every modification of the folder containing distribution packages.

Backup and restoration of Administration Server settings

Backup of the settings of Administration Server and its database is performed through the backup task and klbackup utility. A backup copy includes all the main settings and objects pertaining to the Administration Server, such as certificates, primary keys for encryption of drives on managed devices, keys for various licenses, structure of administration groups with all of its contents, tasks, policies, etc. With a backup copy you can recover the operation of an Administration Server as soon as possible, spending from a dozen minutes to a couple of hours on this.

If no backup copy is available, a failure may lead to an irrevocable loss of certificates and all Administration Server settings. This will necessitate reconfiguring Kaspersky Security Center Linux from scratch, and performing initial deployment of Network Agent on the organization's network again. All primary keys for encryption of drives on managed devices will also be lost, risking irrevocable loss of encrypted data on devices with Kaspersky Endpoint Security. Therefore, do not neglect regular backups of Administration Server using the standard backup task.

The quick start wizard creates the backup task for Administration Server settings and sets it to run daily, at 4:00 AM. Backup copies are saved by default in the folder %ALLUSERSPROFILE%\Application Data\KasperskySC.

Because a backup copy contains important data, the backup task and klbackup utility provide for password protection of backup copies. By default, the backup task is created with a blank password. You must set a password in the properties of the backup task. Neglecting this requirement causes a situation where all keys of Administration Server certificates, keys for licenses, and primary keys for encryption of drives on managed devices remain unencrypted.

In addition to the regular backup, you must also create a backup copy prior to every significant change, including installation of Administration Server upgrades and patches.

Restoration from a backup copy is performed with the utility klbackup on an operable instance of Administration Server that has just been installed and has the same version (or later) for which the backup copy was created.

The instance of Administration Server on which the restoration is to be performed, must use a DBMS of the same type and the same or later version. The version of Administration Server can be the same (with an identical or later patch), or later.

This section describes standard scenarios for restoring settings and objects of Administration Server.

A device with Administration Server is inoperable

If a device with Administration Server is inoperable due to a failure, you are recommended to perform the following actions:

- The new Administration Server must be assigned the same address: DNS name or static IP address (depending on which of them was set when Network Agents were deployed).
- Install Administration Server, using a DBMS of the same type, of the same (or later) version. You can install the same version of Server with the same (or later) patch, or a later version. After installation, do not perform the initial setup through the wizard.
- Run the klbackup utility and perform restoration.

The settings of Administration Server or the database are corrupted

If Administration Server is inoperable due to corrupted settings or database (e.g., after a power surge), you are recommended to use the following restoration scenario:

1. Scan the file system on the damaged device.
2. Uninstall the inoperable version of Administration Server.
3. Reinstall Administration Server, using a DBMS of the same type and of the same (or later) version. You can install the same version of Server with the same (or later) patch, or a later version. After installation, do not perform the initial setup through the wizard.
4. Run the klbackup utility and perform restoration.

It is prohibited to restore Administration Server in any way other than through the klbackup utility.

Any attempts to restore Administration Server through third-party software will inevitably lead to desynchronization of data on nodes of the distributed application Kaspersky Security Center Linux and, consequently, to improper functioning of the application.

About connection profiles for out-of-office users

Out-of-office users of laptops (hereinafter also referred to as "devices") may need to change the method of connecting to an Administration Server or switch between Administration Servers depending on the current location of the device on the enterprise network.

Connection profiles are supported only for devices running Windows and macOS.

Using different addresses of a single Administration Server

Devices with Network Agent installed can connect to the Administration Server either from the organization's intranet or from the internet. This situation may require Network Agent to use different addresses for connection to Administration Server: the external Administration Server address for the Internet connection and the internal Administration Server address for the internal network connection.

To do this, you must add a profile (for connection to Administration Server from the Internet) to the Network Agent policy. Add the profile in the policy properties (**Connectivity** section, **Connection profiles** subsection). In the profile creation window, you must disable the **Use to receive updates only** option and select the **Synchronize connection settings with the Administration Server settings specified in this profile** option. If you use a connection gateway to access Administration Server (for example, in a Kaspersky Security Center Linux configuration as that described in Internet access: Network Agent as connection gateway in DMZ), you must specify the address of the connection gateway in the corresponding field of the connection profile.

Switching between Administration Servers depending on the current network

If the organization has multiple offices with different Administration Servers and some of the devices with Network Agent installed move between them, you need Network Agent to connect to the Administration Server of the local network in the office where the device is currently located.

In this case, you must create a profile for connection to Administration Server in the properties of the policy of Network Agent for each of the offices, except for the home office where the original home Administration Server is located. You must specify the addresses of Administration Servers in connection profiles and enable or disable the **Use to receive updates only** option:

- Select the option if you need Network Agent to be synchronized with the home Administration Server, while using the local Server for downloading updates only.
- Disable this option if it is necessary for Network Agent to be managed completely by the local Administration Server.

After that, you must set up the conditions of switching to the newly created profiles: at least one condition for each of the offices, except for the home office. Every condition's purpose consists in detection of items that are specific for an office's network environment. If a condition is true, the corresponding profile gets activated. If none of the conditions is true, Network Agent switches to the home Administration Server.

Remote access to managed devices

This section provides information about remote access to managed devices.

Using the "Do not disconnect from the Administration Server" option to provide continuous connectivity between a managed device and the Administration Server

If you do not use push servers, Kaspersky Security Center Linux does not provide continuous connectivity between managed devices and the Administration Server. Network Agents on managed devices periodically establish connections and synchronize with the Administration Server. The interval between those synchronization sessions is defined in a policy of Network Agent. If an early synchronization is required, the Administration Server (or a distribution point, if it is in use) sends a signed network packet over an IPv4 or IPv6 network to the UDP port of the Network Agent. By default, the port number is 15000. If no connection through UDP is possible between the Administration Server and a managed device, synchronization will run at the next regular connection of Network Agent to the Administration Server within the synchronization interval.

Some operations cannot be performed without an early connection between Network Agent and the Administration Server, such as running and stopping local tasks or receiving statistics for a managed application. To resolve this issue, if you are not using push servers, you can use the **Do not disconnect from the Administration Server** option to make sure that there is continuous connectivity between a managed device and the Administration Server.

To provide continuous connectivity between a managed device and the Administration Server:

1. In the main menu, go to **DEVICES** → **MANAGED DEVICES**.

   The list of managed devices is displayed.

2. In the list of managed devices, click the link with the name of the required device.

3. In the device properties window, in the **General** section, enable the **Do not disconnect from the Administration Server** option.

Continuous connectivity is established between the managed device and the Administration Server.

The maximum total number of devices with the **Do not disconnect from the Administration Server** option selected is 300.

About checking the time of connection between a device and the Administration Server

Upon shutting down a device, Network Agent notifies the Administration Server of this event. In Kaspersky Security Center 14 Web Console that device is displayed as shut down. However, Network Agent cannot notify Administration Server of all such events. The Administration Server, therefore, periodically analyzes the **Connected to Administration Server** attribute (the value of this attribute is displayed in Kaspersky Security Center 14 Web Console, in the device properties, in the **General** section) for each device and compares it against the synchronization interval from the current settings of Network Agent. If a device has not responded over more than three successive synchronization intervals, that device is marked as shut down.

About forced synchronization

Although Kaspersky Security Center Linux automatically synchronizes the status, settings, tasks, and policies for managed devices, in some cases the administrator needs to know exactly whether synchronization has already been performed for a specified device at the present moment.

The properties window of a managed device contains the **Force synchronization** button. When Kaspersky Security Center 14 Linux executes the synchronization command, the Administration Server attempts to connect to the device. If this attempt is successful, forced synchronization will be performed. Otherwise, synchronization will be forced only after the next scheduled connection between Network Agent and the Administration Server.

Integration between Kaspersky Security Center 14 Web Console and other Kaspersky solutions

This section describes how to configure access from Kaspersky Security Center 14 Web Console to another Kaspersky application, such as Kaspersky Anti Targeted Attack (KATA) and Kaspersky Endpoint Detection and Response (KEDR). Also this section describes how to configure export to SIEM systems.

Configuring access to KATA/KEDR Web Console

Kaspersky Anti Targeted Attack (KATA) and Kaspersky Endpoint Detection and Response (KEDR) are two functional blocks of Kaspersky Anti Targeted Attack Platform. You can manage these functional blocks through Web Console for Kaspersky Anti Targeted Attack Platform (KATA/KEDR Web Console). If you use both Kaspersky Security Center 14 Web Console and KATA/KEDR Web Console, you can configure access to KATA/KEDR Web Console directly from the interface of Kaspersky Security Center 14 Web Console.

To configure access to KATA/KEDR Web Console:

1. In the main application window, click **Console settings** in the upper part of the screen.
2. In the drop-down menu, select **Integration**.

   The Console settings window opens.
3. On the **Integration** tab, enter the URL of KATA/KEDR Web Console in the **URL to KATA/KEDR Web Console** field.
4. Click the **Save** button.

The **Advanced management** drop-down list is added to the main application window. You can use this menu to open KATA/KEDR Web Console. After you click **Advanced Cybersecurity**, a new tab opens in your browser with the URL that you specified.

Contact Technical Support

This section describes how to get technical support and the terms on which it is available.

How to get technical support

If you can't find a solution to your issue in the Kaspersky Security Center Linux documentation or in any of the sources of information about Kaspersky Security Center Linux, contact Kaspersky Technical Support. Technical Support specialists will answer all your questions about installing and using Kaspersky Security Center Linux.

Kaspersky provides support of Kaspersky Security Center Linux during its lifecycle (see the application support lifecycle page). Before contacting Technical Support, please read the support rules.

You can contact Technical Support in one of the following ways:

- By visiting the Technical Support website
- By sending a request to 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. You can use Kaspersky CompanyAccount to track the status of your online requests and store a history of them as well.

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 dump files of Administration Server

Dump files of Administration Server contains all information about the Administration Server processes at a point in time. Dump files of Administration Server are stored in the /var/lib/systemd/coredump directory. Dump files are stored as long as Kaspersky Security Center is in use, and are deleted permanently when the it is removed. Dump files are not sent to Kaspersky automatically.

If Administration Server crashes, you can contact Kaspersky Technical Support, a Technical Support specialist might ask you to send dump files of Administration Server for further analysis at Kaspersky.

Dump files may contain personal data. We recommend protecting information from unauthorized access before sending it to Kaspersky.

Sources of information about the application

Kaspersky Security Center page on the Kaspersky website

On the Kaspersky Security Center page on the Kaspersky website, you can view general information about the application, its functions, and features.

Kaspersky Security Center page in the Knowledge Base

The *Knowledge Base* is a section on the Kaspersky Technical Support website.

On the Kaspersky Security Center Linux page in the Knowledge Base, you can read articles that provide useful information, recommendations, and answers to frequently asked questions on how to buy, install, and use the application.

Articles in the Knowledge Base may provide answers to questions that relate both to Kaspersky Security Center as well as to other Kaspersky applications. Articles in the Knowledge Base may also contain Technical Support news.

Discuss Kaspersky applications with the community

If your question does not require an immediate answer, you can discuss it with Kaspersky experts and other users on our Forum.

On the Forum, you can view discussion topics, post your comments, and create new discussion topics.

> An internet connection is required to access website resources.

If you cannot find a solution to your problem, contact Technical Support.

Known issues

Kaspersky Security Center Linux has a number of limitations that are not critical to operation of the application:

- If a list contains more than 20 items (in this case, the items are displayed on several pages) and you select the **Select all** check box, Web Console selects only those items that are displayed on the current page.

- In the *Download updates to the Administration Server repository* task and the *Download updates to the repositories of distribution points* task, user authentication does not work if you select a password-protected local or network folder as an update source. To resolve this issue, first mount the password-protected folder, and then specify the required credentials, for example, by means of the operating system. After that, you can select this folder as an update source in an update download task. Kaspersky Security Center will not require that you enter the credentials.

- The *Change Administration Server* task does not start automatically after you set the **Immediately** option in the task schedule and save the changes.

- If you open Kaspersky Security Center 14 Web Console in different browsers and download the Administration Server certificate file in the Administration Server properties window, the downloaded files have different names.

- An error occurs when you try to restore an object from the **BACKUP** repository (**OPERATIONS** → **REPOSITORIES** → **BACKUP**) or send the object to Kaspersky.

- The settings locked in a parent policy of Kaspersky Endpoint Security for Linux are inherited, but not locked in the child policies.

- The hardware information sent from a managed device to Administration Server may not be complete; some hardware items may not be specified.

- An application category that you added to the Application control feature in the Kaspersky Endpoint Security for Linux policy can be deleted.

- A managed device that has more than one network adapter sends Administration Server information about the MAC address of the network adapter that is not the one that is used to connect to Administration Server.

- If you specify custom user accounts in the webConsoleAccount and managementServiceAccount parameters in a response file for the installation of Kaspersky Security Center 14 Web Console and these accounts belong to different security groups, Kaspersky Security Center 14 Web Console does not work after the installation.

- In Astra Linux 64-bit edition, the klnagent-astra package cannot be upgraded with klnagent64_14 package: the old package klnagent64-astra will be removed, and the new package klnagent64 will be installed instead of upgrade, so the new icon for device with klnagent64_14 package will be added. You can remove the old icon for this device.

Glossary

Active key

A key that is currently used by the application.

Additional (or reserve) license key

A key that certifies the right to use the application but is not currently being used.

Administration Console

A component of Windows-based Kaspersky Security Center (also called MMC-based Administration Console). This component provides a user interface for the administrative services of Administration Server and Network Agent. The Administration Console is an analog of Kaspersky Security Center 14 Web Console.

Administration group

A set of devices grouped by function and by installed Kaspersky applications. Devices are grouped as a single entity for the convenience of management. A group can include other groups. Group policies and group tasks can be created for each installed application in the group.

Administration Server

A component of Kaspersky Security Center that centrally stores information about all Kaspersky applications that are installed on the corporate network. It can also be used to manage these applications.

Administration Server certificate

The certificate that the Administration Server uses for the following purposes:

- Authentication of Administration Server when connecting to Kaspersky Security Center 14 Web Console
- Secure interaction between Administration Server and Network Agents on managed devices
- Authentication of Administration Servers when connecting a primary Administration Server to a secondary Administration Server

The certificate is created automatically when you install the Administration Server, and then stored on the Administration Server.

Administration Server client (Client device)

A device, server, or workstation on which Network Agent is installed and managed Kaspersky applications are running.

Administration Server data backup

Copying of the Administration Server data for backup and subsequent restoration performed by using the backup utility. The utility can save:

- Database of the Administration Server (policies, tasks, application settings, events saved on the Administration Server)
- Configuration information about the structure of administration groups and client devices
- Repository of the installation files for remote installation of applications (content of the folders: Packages, Uninstall Updates)
- Administration Server certificate

Administrator rights

The level of the user's rights and privileges required for administration of Exchange objects within an Exchange organization.

Administrator's workstation

A device from what you open Kaspersky Security Center 14 Web Console. This component provides a Kaspersky Security Center management interface.

The administrator's workstation is used to configure and manage the server side of Kaspersky Security Center. Using the administrator's workstation, the administrator builds and manages a centralized anti-virus protection system for a corporate LAN based on Kaspersky applications.

Anti-virus databases

Databases that contain information about computer security threats known to Kaspersky as of when the anti-virus databases are released. Entries in anti-virus databases allow malicious code to be detected in scanned objects. Anti-virus databases are created by Kaspersky specialists and updated hourly.

Anti-virus protection service provider

An organization that provides a client organization with anti-virus protection services based on Kaspersky solutions.

Application Shop

Component of Kaspersky Security Center. Application Shop is used for installing applications on Android devices owned by users. Application Shop allows you to publish the APK files of applications and links to applications in Google Play.

Authentication Agent

Interface that lets you complete authentication to access encrypted hard drives and load the operating system after the bootable hard drive has been encrypted.

Available update

A set of updates for Kaspersky application modules, including critical updates accumulated over a certain period of time and changes to the application's architecture.

Backup folder

Special folder for storage of Administration Server data copies created using the backup utility.

Broadcast domain

A logical area of a network in which all nodes can exchange data using a broadcasting channel at the level of OSI (Open Systems Interconnection Basic Reference Model).

Centralized application management

Remote application management using the administration services provided in Kaspersky Security Center.

Client administrator

A staff member of a client organization who is responsible for monitoring the anti-virus protection status.

Configuration profile

Policy that contains a collection of settings and restrictions for an iOS MDM mobile device.

Connection gateway

A *connection gateway* is a Network Agent acting in a special mode. A connection gateway accepts connections from other Network Agents and tunnels them to the Administration Server through its own connection with the Server. Unlike an ordinary Network Agent, a connection gateway waits for connections from the Administration Server rather than establishes connections to the Administration Server.

Demilitarized zone (DMZ)

Demilitarized zone is a segment of a local network that contains servers, which respond to requests from the global Web. In order to ensure the security of an organization's local network, access to the LAN from the demilitarized zone is protected with a firewall.

Device owner

Device owner is a user whom the administrator can contact when the need arises to perform certain operations on a device.

Direct application management

Application management through a local interface.

Distribution point

Computer that has Network Agent installed and is used for update distribution, remote installation of applications, getting information about computers in an administration group and/or broadcasting domain. Distribution points are designed to reduce the load on the Administration Server during update distribution and to optimize network traffic. Distribution points can be assigned automatically, by the Administration Server, or manually, by the administrator. Distribution point was previously known as update agent.

Event repository

A part of the Administration Server database dedicated to storage of information about events that occur in Kaspersky Security Center Linux.

Event severity

Property of an event encountered during the operation of a Kaspersky application. There are the following severity levels:

- Critical event

- Functional failure
- Warning
- Info

Events of the same type can have different severity levels depending on the situation in which the event occurred.

Group task

A task defined for an administration group and performed on all client devices included in that administration group.

Home Administration Server

Home Administration Server is the Administration Server that was specified during Network Agent installation. The home Administration Server can be used in settings of Network Agent connection profiles.

HTTPS

Secure protocol for data transfer, using encryption, between a browser and a web server. HTTPS is used to gain access to restricted information, such as corporate or financial data.

Incompatible application

An anti-virus application from a third-party developer or a Kaspersky application that does not support management through Kaspersky Security Center Linux.

Installation package

A set of files created for remote installation of a Kaspersky application by using the Kaspersky Security Center remote administration system. The installation package contains a range of settings needed to install the application and get it running immediately after installation. Settings correspond to application defaults. The installation package is created using files with the .kpd and .kud extensions included in the application distribution kit.

Internal users

The accounts of internal users are used to work with virtual Administration Servers. Kaspersky Security Center grants the rights of real users to internal users of the application.

The accounts of internal users are created and used only within Kaspersky Security Center. No data on internal users is transferred to the operating system. Kaspersky Security Center authenticates internal users.

JavaScript

A programming language that expands the performance of web pages. Web pages created using JavaScript can perform functions (for example, change the view of interface elements or open additional windows) without refreshing the web page with new data from a web server. To view pages created by using JavaScript, enable JavaScript support in the configuration of your browser.

Kaspersky Private Security Network (KPSN)

Kaspersky Private Security Network is a solution that gives users of devices with Kaspersky applications installed access to reputation databases of Kaspersky Security Network and other statistical data—without sending data from their devices to Kaspersky Security Network. Kaspersky Private Security Network is designed for corporate customers who are unable to participate in Kaspersky Security Network for any of the following reasons:

- Devices are not connected to the internet.
- Transmission of any data outside the country or the corporate LAN is prohibited by law or corporate security policies.

Kaspersky Security Center Administrator

The person managing application operations through the Kaspersky Security Center remote centralized administration system.

Kaspersky Security Center Operator

A user who monitors the status and operation of a protection system managed with Kaspersky Security Center.

Kaspersky Security Center System Health Validator (SHV)

A component of Kaspersky Security Center designed for checking the operating system's operability in case of concurrent operation of Kaspersky Security Center and Microsoft NAP.

Kaspersky Security Center Web Server

A component of Kaspersky Security Center that is installed together with Administration Server. Web Server is designed for transmission, over a network, of stand-alone installation packages, iOS MDM profiles, and files from a shared folder.

Kaspersky update servers

HTTP(S) servers at Kaspersky from which Kaspersky applications download database and application module updates.

Key file

A file in xxxxxxxx.key format that makes it possible to use a Kaspersky application under a trial or commercial license.

License term

A time period during which you have access to the application features and rights to use additional services. The services you can use depend on the type of the license.

Local installation

Installation of a security application on a device on a corporate network that presumes manual installation startup from the distribution package of the security application or manual startup of a published installation package that was pre-downloaded to the device.

Local task

A task defined and running on a single client computer.

Managed devices

Corporate networked devices that are included in an administration group.

Manual installation

Installation of a security application on a device in the corporate network from the distribution package. Manual installation requires the involvement of an administrator or another IT specialist. Usually manual installation is done if remote installation has completed with an error.

Network Agent

A Kaspersky Security Center component that enables interaction between the Administration Server and Kaspersky applications that are installed on a specific network node (workstation or server). This component is common to all of the company's applications for Microsoft® Windows®. Separate versions of Network Agent exist for Kaspersky applications developed for Unix-like OS and macOS.

Network anti-virus protection

A set of technical and organizational measures that lower the risk of allowing viruses and spam to penetrate the network of an organization, and that prevent network attacks, phishing, and other threats. Network security increases when you use security applications and services and when you apply and adhere to the corporate data security policy.

Network protection status

Current protection status, which defines the safety of corporate networked devices. The network protection status includes such factors as installed security applications, usage of license keys, and number and types of threats detected.

Policy

A policy determines an application's settings and manages the ability to configure that application on computers within an administration group. An individual policy must be created for each application. You can create multiple policies for applications installed on computers in each administration group, but only one policy can be applied at a time to each application within an administration group.

Profile

Collection of settings of Exchange mobile devices that define their behavior when connected to a Microsoft Exchange Server.

Program settings

Application settings that are common to all types of tasks and govern the overall operation of the application, such as application performance settings, report settings, and backup settings.

Protection status

Current protection status, which reflects the level of computer security.

Provisioning profile

Collection of settings for applications' operation on iOS mobile devices. A provisioning profile contains information about the license; it is linked to a specific application.

Remote installation

Installation of Kaspersky applications by using the services provided by Kaspersky Security Center Linux.

Restoration

Relocation of the original object from Quarantine or Backup to its original folder where the object had been stored before it was quarantined, disinfected or deleted, or to a user-defined folder.

Restoration of Administration Server data

Restoration of Administration Server data from the information saved in Backup by using the backup utility. The utility can restore:

- Database of the Administration Server (policies, tasks, application settings, events saved on the Administration Server)
- Configuration information about the structure of administration groups and client devices
- Repository of the installation files for remote installation of applications (content of the folders: Packages, Uninstall Updates)
- Administration Server certificate

Role group

A group of users of Exchange ActiveSync mobile devices who have been granted identical administrator rights.

Service provider's administrator

A staff member at an anti-virus protection service provider. This administrator performs installation and maintenance jobs for anti-virus protection systems based on Kaspersky anti-virus products and also provides technical support to customers.

Shared certificate

A certificate intended for identifying the user's mobile device.

SSL

A data encryption protocol used on the internet and local networks. The Secure Sockets Layer (SSL) protocol is used in web applications to create a secure connection between a client and server.

Task

Functions performed by the Kaspersky application are implemented as tasks, such as: Real-time file protection, Full computer scan, and Database update.

Task for specific devices

A task assigned to a set of client devices from arbitrary administration groups and performed on those devices.

Task settings

Application settings that are specific for each task type.

Update

The procedure of replacing or adding new files (databases or application modules) retrieved from the Kaspersky update servers.

Virtual Administration Server

A component of Kaspersky Security Center, designed for management of the protection system of a client organization's network.

Virtual Administration Server is a particular case of a secondary Administration Server and has the following restrictions as compared with a physical Administration Server:

- Virtual Administration Server can be created only on a primary Administration Server.
- Virtual Administration Server uses the primary Administration Server database in its operation. Data backup and restoration tasks, as well as update scan and download tasks, are not supported on a virtual Administration Server.
- Virtual Server does not support creation of secondary Administration Servers (including virtual Servers).

Information about third-party code

Information about third-party code is contained in the file legal_notices.txt, in the application installation directory.

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