



Dr.WEB

Enterprise Security Suite

Administrator Manual



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Dr.Web Enterprise Security Suite
Version 11.0.2
Administrator Manual
7/2/2020

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Doctor Web

Doctor Web develops and distributes Dr.Web information security solutions which provide efficient protection from malicious software and spam.

Doctor Web customers can be found among home users from all over the world and in government enterprises, small companies and nationwide corporations.

Dr.Web antivirus solutions are well known since 1992 for continuing excellence in malware detection and compliance with international information security standards.

State certificates and awards received by the Dr.Web solutions, as well as the globally widespread use of our products are the best evidence of exceptional trust to the company products.

We thank all our customers for their support and devotion to the Dr.Web products!



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Chapter 1: Dr.Web Enterprise Security Suite

1.1. Introduction

1.1.1. About Manual

Documentation of Dr.Web Enterprise Security Suite anti-virus network administrator is intended to introduce general features and provide detailed information on the organisation of the complex anti-virus protection of corporate computers using Dr.Web Enterprise Security Suite.

Documentation of the anti-virus network administrator contains the following parts:

1. **Installation Manual** (the **drweb-11.0-esuite-install-manual-en.pdf** file)

Installation Manual will be useful to the organisation manager who makes the decision to purchase and install a system of comprehensive anti-virus protection.

Installation Manual explains how to build an anti-virus network and install its general components.

2. **Administrator Manual** (the **drweb-11.0-esuite-admin-manual-en.pdf** file)

Administrator Manual is meant for *anti-virus network administrator*—the employee of organisation who is responsible for the anti-virus protection of computers (workstations and servers) of this network.

Anti-virus network administrator should either have a system administrator privileges or work closely with a local network administrator, be competent in anti-virus protection strategy and know in details Dr.Web anti-virus packages for all operating systems that are used in the network.

3. **Appendices** (the **drweb-11.0-esuite-appendices-en.pdf** file)

Appendices provide technical information, describes the configuration parameters of the Anti-virus modules and explains the syntax and values of instructions used for operation with them.



Documentation contains cross-references between mentioned documents. If you download these documents to the local computer, cross-references work only if documents are located in the same folder and have their initial names.

Also, the following Manuals are provided:

1. **Anti-virus Network Quick Installation Guide**

Contains brief information on installation and initial configuration of anti-virus network components. For detailed information refer to administrator documentation.



2. **Manuals on managing stations**

Contain the information about centralized configuration of anti-virus software of workstations which is provided by anti-virus network administrator via the Dr.Web Security Control Center.

3. **User Manuals**

Contain the information about configuration of Dr.Web anti-virus software provided on protected stations directly.

All the listed Manuals are provided also within Dr.Web Enterprise Security Suite product and can be opened via Dr.Web Security Control Center.



Before reading these documents, make sure you have the latest version of the corresponding Manuals for your product version. The Manuals are constantly updated and the current version can always be found at the official web site of Doctor Web at <https://download.drweb.com/doc/>.



1.1.2. Conventions and Abbreviations

Conventions

The following symbols and text conventions are used in this guide:

Convention	Comment
	Important note or instruction.
	Warning about possible errors or important notes to which you should pay special attention.
<i>Anti-virus network</i>	A new term or an accent on a term in descriptions.
<IP-address>	Placeholders.
Save	Names of buttons, windows, menu items and other program interface elements.
CTRL	Keyboard keys names.
C:\Windows\	Names of files and folders, code examples.
Appendix A	Cross-references on the document chapters or internal hyperlinks to web pages.

Abbreviations

The following abbreviations can be used in the Manual without further interpretation:

- ACL—Access Control List,
- CDN—Content Delivery Anti-virus network,
- DB, DBMS—Database, Database Management System,
- DFS—Distributed File System,
- DNS—Domain Name System,
- Dr.Web GUS—Dr.Web Global Update System,
- FQDN—Fully Qualified Domain Name,
- GUI—Graphical User Interface, a GUI version of a program—a version using a GUI,
- LAN—Local Area Network,
- MTU—Maximum Transmission Unit,
- NAP—Network Access Protection,
- OS—Operating System,
- TTL—Time To Live,

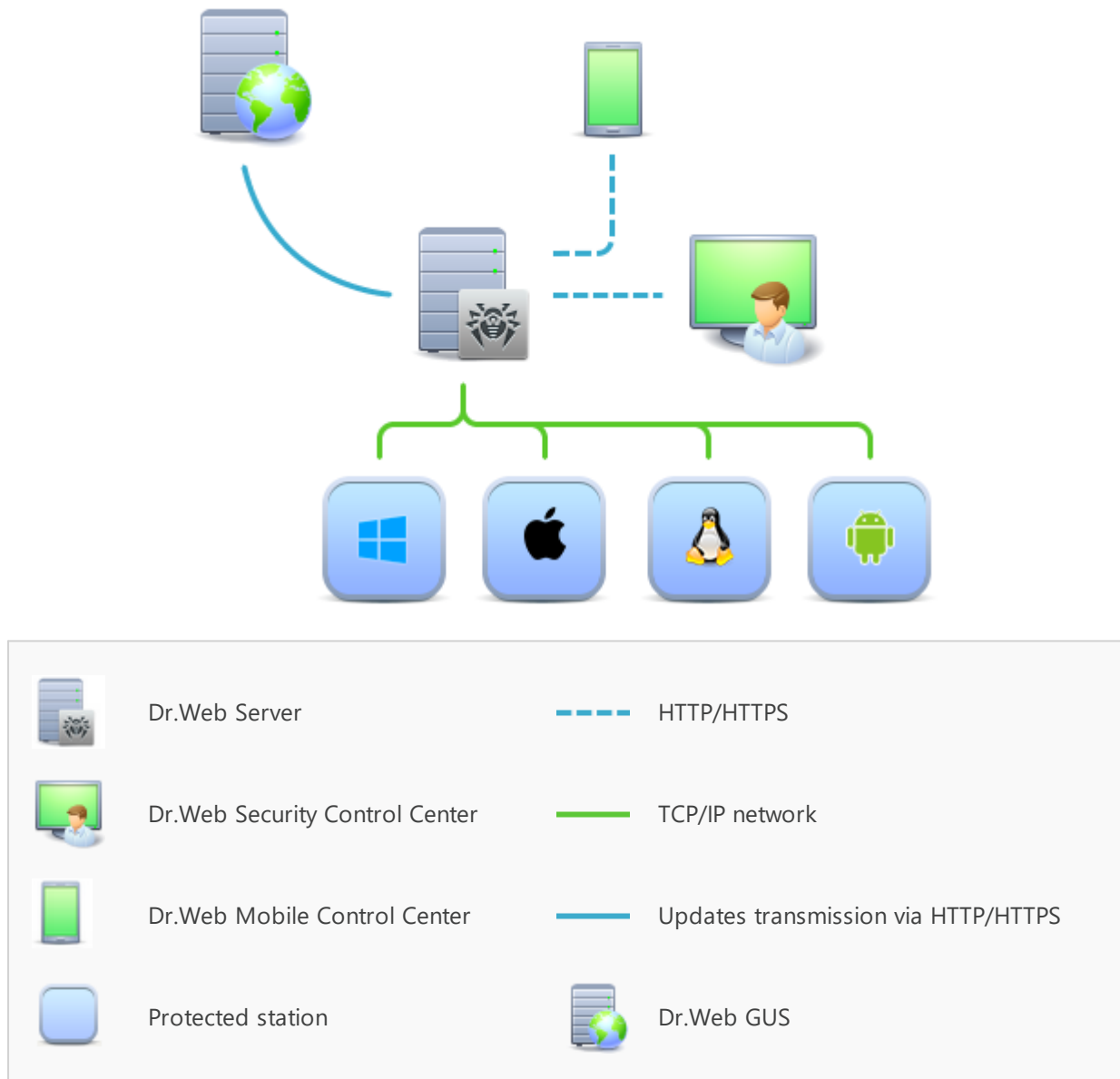


- UDS—UNIX domain socket.

1.2. About Product

Dr.Web Enterprise Security Suite is designed for organization and management of integrated and secure complex anti-virus protection either local company network including mobile devices, or home computers of employers.

An aggregate of computers and mobile devices on which Dr.Web Enterprise Security Suite cooperating components are installed, represents a single *anti-virus network*.



Picture 1-1. The logical structure of the anti-virus network

Dr.Web Enterprise Security Suite anti-virus network has a *client-server* architecture. Its components are installed on a computers and mobile devices of users and administrators as well as on a computers that function as LAN servers. Anti-virus network components exchange



information via TCP/IP network protocols. Anti-virus software can be installed (and manage them afterwards) on protected stations either via the LAN, or via the Internet.

Central Protection Server

Central protection Server is installed on a computer of anti-virus network, and installation can be performed on any computer, not only on that functioning as a LAN server. General requirements to this computer are given in the [System Requirements](#) section.

Cross-platform Server software allows to use a computer under the following operating systems as a Server:

- Windows® OS,
- UNIX® system-based OS (Linux®, FreeBSD®).

Central protection Server stores distribution kits of anti-virus packages for different OS of protected computers, updates of virus databases and anti-virus packages, license keys and package settings of protected computers. Server receives updates of anti-virus protection components and virus databases via the Internet from the Global Update System and propagate updates on protected stations.

Hierarchical structure of several Servers can be established to serve protected stations of anti-virus network.

Server supports the backup of critical data (databases, configuration files, etc.).

Server writes single log of anti-virus network events.

Single Database

The single database is connected to the central protection Server and stores statistic data on anti-virus network events, settings of the Server itself, parameters of protected stations and anti-virus components, installed on protected stations.

You can use the following types of databases:

Embedded database. The SQLite3 database that is embedded into the central protection Server directly is provided.

External database. Inbuilt drivers for connecting the following databases are provided:

- MySQL,
- Oracle,
- PostgreSQL,
- ODBC driver to connect other databases such as Microsoft SQL Server/Microsoft SQL Server Express.

You can use any database that corresponds to your demands. Your choice should be based on the needs that must be satisfied by the data store, such as: capability to service the anti-virus network of corresponding size, features of database software maintenance, administration capabilities provided by the database itself and also requirements and standards which are accepted for use in your company.



Central Protection Control Center

Central protection Control Center is automatically installed with the Server and provides the web interface for remote managing of the Server and the anti-virus network by means of editing the settings of the Server and protected computers settings stored on the Server and protected computers.

The Control Center can be opened on any computer that have the network access to the Server. The Control Center can be used almost under any operating system with full use on the following web browsers:

- Windows® Internet Explorer®,
- Microsoft Edge®,
- Mozilla® Firefox®,
- Google Chrome®.

The list of possible variants of use is given in the [System Requirements](#) section.

Central protection Control Center provides the following features:

- Serviceability of Anti-virus installation on protected stations including: remote installation on protected stations under Windows OS with preliminary browsing the network to search computers; Creation of distribution files with unique identifiers and parameters of connection to the Server to facilitate Anti-virus installation process by the administrator or possibility of Anti-virus installation by users on stations by oneself.
- Facilitate administering based on grouping of anti-virus network workstations (detailed information see in the [Groups](#) section).
- Feasibility of centralized administering of stations anti-virus packages including: uninstallation either separate components or entire Anti-virus on stations under Windows OS; configuring parameters of anti-virus package components; assigning permissions to set up and administer the anti-virus packages on protected computers for users of these computers (detailed information see in the [Chapter 7: Administration of Workstations](#) section).
- Centralized administering of workstations anti-virus check including: remote launch of anti-virus check either according the specified schedule or direct request from administrator for the Control Center; centralized configuration of check parameters and transmitting them to the workstations to launch the local check with these parameters (detailed information see in the [Anti-Virus Scanning of Stations](#) section).
- Receiving the statistic information on protected stations states, viral statistics, installed anti-virus software state, running anti-virus components state and also, the list of hardware and software on protected station (detailed information see in the [Viewing Workstation Statistics](#) section).
- Flexible administering system of Server and anti-virus network based on opportunity of permissions delimiting for different administrators and also, possibility to connect administrators via the external authorization systems such as Active Directory, LDAP,



RADIUS, PAM (detailed information see in the [Chapter 5: Anti-Virus Network Administrators](#) section).

- Managing the licensing of workstations anti-virus protection with branched system of assigning licenses to stations, groups of stations and also, granting licenses between several Servers in multiserver configuration of anti-virus network (detailed information see in the [License Manager](#) section).
- Wide set of setting to configure the Server and its separate components including: configuring schedule to maintain the Server; plug in user hooks; flexible configuration of update system of all anti-virus network components from the GUS and further propagation of updates on stations; configuring the system of administrator notifications about anti-virus network events with different methods of notification delivering; configuring neighbor connections to configure multiserver anti-virus network (detailed information see in the [Chapter 8: Configuring Dr.Web Server](#) section).



Detailed information on features for installation of anti-virus protection on workstations is given in the **Installation Manual**.

The part of the Control Center is the Web server that is automatically installed with the Server. The general task of the Web server is performing operation with web pages of the Control Center and clients network connections.

Central Protection Mobile Control Center

As a separate component, the Mobile Control Center is provided. It is designed for installation and operation on mobile devices under iOS® and Android™ OS. General requirements to the application are given in the [System Requirements](#) section.

Mobile Control Center connects to the Server according to the anti-virus network administrator credentials including via an encrypted protocol. Mobile Control Center supports the base set of Control Center functions:

1. Manage Dr.Web Server repository:
 - view the products state in the repository;
 - launch repository update from Dr.Web Global Update System.
2. Manage stations on which an update of anti-virus software is failed:
 - display failed stations;
 - update components on failed stations.
3. Display statistics information on anti-virus network state:
 - number of stations registered at Dr.Web Server and their current state (online/offline);
 - viral statistics for protected stations.
4. Manage new stations waiting for connection to Dr.Web Server:
 - approve access;
 - reject stations.



5. Manage anti-virus components installed on anti-virus network stations:
 - launch the fast or full scan either for selected stations or for all stations of selected groups;
 - setup Dr.Web Scanner reaction on malware detection;
 - view and manage files in the Quarantine either for selected stations or for all stations in the selected group.
6. Manage stations and groups:
 - view properties;
 - view and manage components composition of anti-virus package;
 - delete;
 - send custom messages to stations;
 - reboot stations under Windows OS;
 - add to favorites list for the quick assess.
7. Search for stations and groups in an anti-virus network by different parameters: name, address, ID.
8. View and manage messages on major events in an anti-virus network via the interactive Push notifications:
 - display all notifications at Dr.Web Server;
 - set reactions on notification events;
 - search notification by specified filter parameters;
 - delete notifications;
 - exclude notifications from automatic deletion.

You can download Mobile Control Center from the Control Center or directly in [App Store](#) and [Google Play](#).

Network Stations Protection

On protected computers and mobile devices of the network, the control module (Agent) and the anti-virus package for corresponding operating system are installed.

Cross-platform software allows to provide anti-virus protection of computers and mobile devices under the following operating systems:

- Windows® OS,
- UNIX® system-based OS,
- macOS®,
- Android OS.

Either user computers or LAN servers can be protected stations. Particularly, anti-virus protection of the Microsoft® Outlook® mail system is supported.



Control module performs regular updates of anti-virus components and virus databases from the Server and also, sends information on virus events on protected computer to the Server.

If the central protection Server is not accessible, it is possible to update virus databases on protected stations via the Internet from the Global Update System.

Depending on the operating system of the station, the following protection functions are provided:

Stations under Windows® OS

Anti-virus check

Scans a computer on user demand and according to the schedule. Also the remote launch of anti-virus scan of stations from the Control Center including rootkits check is supported.

File monitor

The constant file system protection in the real-time mode. Checks all launched processes and also created files on hard drives and opened files on removable media.

Mail monitor

Checks all incoming and outgoing mail messages when using the mail clients.

The spam filter is also available (if the license permits this function).

Web monitor

Checks all calls to web sites via the HTTP protocol. Neutralises malicious software in HTTP traffic (for example, in uploaded and downloaded files) and blocks the access to suspicious or incorrect resources.

Office Control

Controls access to network and local resources, in particular, limits access to web sites.

Allows to control the integrity of important files from the accidental change or virus infecting and limit the access to unwanted information for employees.

Firewall

Protects computers from external unauthorised access and prevents leak of vital data via Internet. Monitors connection attempts and data transfer via the Internet and blocks suspicious connections both on network and application levels.

Quarantine

Isolates malware and suspicious objects in the specific folder.

Self-protection

Protects files and folders of Dr.Web Enterprise Security Suite from unauthorised or accidental removal and modification by user or malicious software. If self-protection is



enabled, access to files and folders of Dr.Web Enterprise Security Suite is granted to Dr.Web processes only.

Preventive protection

Prevents of potential security threats. Controls the access to the operating system critical objects, controls drivers loading, programs autorun and system services operation and also monitors running processes and blocks them in case of detection of viral activity.

Stations under UNIX® system-based OS

Anti-virus check

Scanning engine. Provides the anti-virus scanning service (contents of files and disk boot records and other data received from other components of Dr.Web for UNIX). It queues files that are waiting to be scanned. Cures the files that can be cured.

Anti-virus check, Quarantine management

The component which scans file system objects and manages quarantined files. It receives scanning tasks from other Dr.Web for UNIX components. Checks file system directories according to a received task, transmits files for scanning to the scanning engine. It also removes infected files, moves them to quarantine, restores them from quarantine, and manages quarantine directories. The component creates and updates cache that stores information on scanned files to lessen the frequency of repeated file scanning.

Used by components that scan file system objects, such as SpIDer Guard (for Linux, SMB, NSS).

Web traffic check

ICAP server analyzing requests and traffic which goes via HTTP proxy servers. It also prevents transmitting infected files and access to the network hosts belonging to the Internet resources categories and to black lists, created by the system administrator.

File monitor for GNU/Linux system-based OS

The Linux file system monitor. It operates in a resident mode and monitors file operations (creation, opening, closing, and running of a file) in the GNU/Linux file systems. It sends to the files check component tasks to scan new and modified files or executable files upon a program startup.

File monitor for Samba directories

Monitor of Samba shared file system directories. It operates as a resident mode and monitors file operations (creation, opening, closing, and read or write operations) in directories used by SMB file server Samba. It sends to the files check component contents of new and modified files for the check.



NSS file monitor

NSS volumes monitor (Novell Storage Services). It operates as a resident mode and monitors file operations (creation, opening, closing and write operations) on NSS volumes mounted in the specified file system point. It sends to the files check component contents of new and modified files for the check.

Internet connections check

The component for monitoring network traffic and URLs. It is designed to check data downloaded from the network to the local host and transmitted from it to the external network for threats. The components also prevents connections with the network hosts, included not only to the unwanted categories of web resources, but also to black lists created by the system administrator.

Mail monitor

The component for scanning of emails. Analyzes the messages of email protocols, sorts out emails and prepares them for scanning for threats. It can operate in two modes:

1. A filter for mail servers(Sendmail, Postfix, etc.) connected via the interface Milter, Spamd or Rspamd.
2. A transparent proxy of mail protocols (SMTP, POP3, IMAP). In this mode, it uses SpIDer Gate.

Stations under macOS®

Anti-virus check

Scans a computer on user demand and according to the schedule. Also the remote launch of anti-virus scan of stations from the Control Center is supported.

File monitor

The constant file system protection in the real-time mode. Checks all launched processes and also created files on hard drives and opened files on removable media.

Web monitor

Checks all calls to web sites via the HTTP protocol. Neutralises malicious software in HTTP traffic (for example, in uploaded and downloaded files) and blocks the access to suspicious or incorrect resources.

Quarantine

Isolates malware and suspicious objects in the specific folder.



Mobile devices under Android OS

Anti-virus check

Scans a mobile device on user demand and according to the schedule. Also the remote launch of anti-virus scan of stations from the Control Center is supported.

File monitor

The constant file system protection in the real-time mode. The check of all files as they are saved in the memory of the device.

Calls and SMS Filter

Filtering the incoming phone calls and SMS allows to block the undesired messages and calls, such as advertisements or messages and calls from unknown numbers.

Anti-theft

Detect the device location or lock its functions in case it has been lost or stolen.

Restricting Internet Access

URL filter allows to protect user of the mobile device from unsolicited Internet sites.

Firewall

Protects the mobile device from external unauthorised access and prevents leak of vital data via Internet. Monitors connection attempts and data transfer via the Internet and blocks suspicious connections both on network and application levels.

Security Troubleshooting

Diagnostic and analysis of the security of mobile device and resolving the detected problems and vulnerabilities.

Application launch control

Blocks the launch on mobile device those applications that are not included into the list of allowed by administrator.

Providing a Connection between Anti-virus Network Components

To provide stable and secure connection between anti-virus network components, the following features are presented:

Dr.Web Proxy server

Proxy server can be optionally included in an anti-virus network. The main function of the Proxy server is to provide connection between the Server and protected stations in case if direct connection is impossible.

The Proxy server allows using any computer included in an anti-virus network for the following purposes:



- As update relay center to reduce the network load on the Server and on connection between the Server and the Proxy server, as well as to reduce the time required for protected stations to get updates by using the caching function.
- As a distribution center of virus events coming from protected stations to the Server, which also reduces network load and allows keeping up with cases when, for example, a group of stations is located in a network segment, which is isolated from the segment the Server is in.

Traffic compression

Special compression algorithms are applicable for transferring data between the anti-virus network components to reduced network traffic to minimum.

Traffic encryption

Data transferred between the anti-virus network components can be encrypted to provide additional secure level.

Additional Features

NAP Validator

NAP Validator is provided as a separate component and allows to use Microsoft Network Access Protection (NAP) technology to check health of protected stations software. The resulting security is achieved through the implementation of the requirements for performance of network stations.

Repository loader

Dr.Web Repository loader is provided as a separate utility and allows to download products of Dr.Web Enterprise Security Suite from the Global Update System. It can be used for downloading of Dr.Web Enterprise Security Suite products updates to place them on the Server not connected to the Internet.

1.3. System Requirements

For Dr.Web Enterprise Security Suite to be installed and function the following is required:


- Anti-virus network computers should have access to Dr.Web Server or to the Proxy server.
- For interaction between the anti-virus components, the following ports must be opened on used computers:

Port numbers	Protocols	Connection directions	Purpose
2193	TCP	<ul style="list-style-type: none">• incoming, outgoing for the Server and Proxy server• outgoing for the Agent	For connection between the Server and anti-virus components and for interserver communications.



Port numbers	Protocols	Connection directions	Purpose
	UDP	incoming, outgoing	Also is used by Proxy server to establish a connection with clients. For the Network Scanner.
139, 445	TCP	<ul style="list-style-type: none">incoming for the Serverincoming, outgoing for the Agentoutgoing for the computer on which the Control Center is opened	For the Network Installer.
	UDP	incoming, outgoing	
9080	HTTP	<ul style="list-style-type: none">incoming for the Serveroutgoing for the computer on which the Control Center is opened	For Dr.Web Security Control Center.
9081	HTTPS		
10101	TCP		For Server remote diagnostic utility.
80	HTTP	outgoing	For receiving updates from GUS.
443	HTTPS		

Dr.Web Server requires:

Component	Requirement
CPU	CPU that supports SSE2 instructions and has 1,3 GHz or faster clock frequency.
RAM	<ul style="list-style-type: none">Minimal requirements: 1 GB.Recommended requirements: 2 GB and more.
Free disk space	<p>Up to 12 GB: up to 8 GB for a embedded database (installation catalog) and up to 4GB for the system temporary catalog (for work files).</p> <p>Depending on the Server settings, additional space may be required to store temporary files, e.g. to store personal installation packages of Agents (app. 17 MB for each) in the <code>var\installers-cache</code> subfolder of Dr.Web Server installation folder.</p> <div style="background-color: #e6f2e6; padding: 10px;"> To install the Server, it is required on Windows OS system disk or in the <code>/var/tmp</code> for UNIX system-based OS (or in the other temporary files folder, if it is redefined), not dependently on the Server installation folder, at least 4,3 GB for the general distribution kit and 2,5 GB for the extra distribution kit of free system disk space to launch the installer and unpack temporary files.</div>



Component	Requirement
Operating system	<ul style="list-style-type: none">• Windows;• Linux;• FreeBSD. <p>Complete list of supported OS see in the Appendices document, in Appendix A.</p>
Supported virtual and cloud environments	<p>Can be used under operating systems meeting the above-mentioned requirements, in virtual and cloud environments, including:</p> <ul style="list-style-type: none">• VMware;• Hyper-V;• Xen;• KVM.
Other	<p>For the installation of Dr.Web Server for UNIX system-based OS, the following libraries are required: <code>lsb v. 3</code> or later, <code>glibc v. 2.7</code> and later.</p> <p>To use Oracle DB, the Linux kernel AIO access library (<code>libaio</code>) is required.</p>



Additional utilities supplied with Dr.Web Server (are available for downloading via the Control Center, in the **Administration** → **Utilities** section) must be launched on a computer that meets the system requirements for Dr.Web Server.

Dr.Web Proxy Server requires:

Component	Requirement
CPU	CPU that supports SSE2 instructions and has 1,3 GHz or faster clock frequency.
RAM	Not less than 1 GB.
Free disk space	Not less than 1 GB.
Operating system	<ul style="list-style-type: none">• Windows;• Linux;• FreeBSD. <p>Complete list of supported OS see in the Appendices document, in Appendix A.</p>
Other	For the installation of Proxy Server for UNIX system-based OS: <code>lsb v. 3</code> or later.

**Dr.Web Security Control Center requires:**

a) Web browser:

Web browser	Support
Windows Internet Explorer 11	Supported.
Microsoft Edge 0.10 and later	
Mozilla Firefox 25 and later	
Google Chrome 30 and later	
Opera® 10 and later	Allowed to be used, but operating is not guaranteed.
Safari® 4 and later	

For the Windows Internet Explorer web browser, please note the following features:

- Full operability of the Control Center under web browser with the **Enhanced Security Configuration for Windows Internet Explorer** mode enabled is not guaranteed.
- If you install Server on a computer with a '_' (underline) character in the name, configuration of Server with Dr.Web Security Control Center by use of Windows Internet Explorer will not be available. In this case, use other web browser.
- For proper operation of the Control Center, IP address and/or DNS name of computer with installed Dr.Web Server must be added to the trusted sites of a web browser, on which you open Control Center.
- For proper opening of Control Center via the **Start** menu under Windows 8 and Windows Server 2012 OS with tiled interface, set the following parameters of a web browser: **Tools** → **Programs** → **Opening Internet Explorer** set the **Always in Internet Explorer** flag.
- For proper operation with the Control Center via the Windows Internet Explorer web browser using the secure `https` protocol, you must install all the latest updates to the web browser.
- Operation with the Control Center via the Windows Internet Explorer web browser in the compatibility mode is not supported.

b) Recommended screen resolution to use Dr.Web Security Control Center is 1280x1024 pt.

**Dr.Web Mobile Control Center requires:**

Requirements are differ depending on the operating system on which the application is installed:

Operating system	Requirement	
	Operating system version	Device
iOS	iOS 8 and later	Apple® iPhone® Apple® iPad®
Android	Android 4.0 and later	–

The NAP requires:**For the Server**

- Windows Server® 2008 OS.

For the Agents

- Windows XP SP3 OS, Windows Vista OS, Windows Server 2008 OS.

Dr.Web Agent and the full anti-virus package require:

Requirements are differ depending on the operating system on which anti-virus solution is installed (the full list of supported OS see in the **Appendices** document, in [Appendix A. The Complete List of Supported OS Versions](#)):

- Windows OS:

Component	Requirement
CPU	1 GHz CPU or faster.
Free RAM	Not less than 512 MB.
Free disk space	1 GB for executable files + extra disk space for logs and temporary files.
Other	<ol style="list-style-type: none">1. Dr.Web Agent for Windows context help requires Windows® Internet Explorer® 6.0 or later.2. For Dr.Web for Outlook extension the Microsoft Outlook client from the Microsoft Office package is required:<ul style="list-style-type: none">• Outlook 2000;• Outlook 2002;• Outlook 2003;



Component	Requirement
	<ul style="list-style-type: none">• Outlook 2007;• Outlook 2010 SP2;• Outlook 2013;• Outlook 2016.

- Linux system-based OS:

Component	Requirement
CPU	CPU with the following Intel/AMD architecture and command system are supported: 32-bit (IA-32, x86); 64-bit (x86-64, x64, amd64).
Free RAM	Not less than 512 MB.
Free disk space	Not less than 400 MB of free disk space on a volume on which Anti-virus folders are placed.

- macOS, Android OS: configuration requirements coincide with the requirements for operating system.

Dr.Web Agent can be used under operating systems meeting the above-mentioned requirements, in virtual and cloud environments, including:

- VMware;
- Hyper-V;
- Xen;
- KVM.



No other anti-virus software (including other versions of Dr.Web anti-virus programs) should be installed on the workstations of an anti-virus network managed by Dr.Web Enterprise Security Suite.



Functionality of Agents is described in the user manuals for corresponding OS.

1.4. Distribution Kit

The program software is distributed depending on the OS of the selected Dr.Web Server:

1. For UNIX system-base OS:

- `drweb-11.00.2-<build>-esuite-server-<OS_version>.tar.gz.run`

Dr.Web Server general distribution kit



- `drweb-11.00.2-<build>-esuite-extra-<OS_version>.tar.gz.run`
Dr.Web Server extra distribution kit
- `drweb-11.00.2-<build>-esuite-proxy-<OS_version>.tar.gz.run`
Dr.Web Proxy Server
- `drweb-reloader-<OS>-<bitness>`
Console version of Dr.Web Repository Loader

2. For Windows OS:

- `drweb-11.00.2-<build>-esuite-server-<OS_version>.exe`
Dr.Web Server general distribution kit
- `drweb-11.00.2-<build>-esuite-extra-<OS_version>.exe`
Dr.Web Server extra distribution kit
- `drweb-11.00.2-<build>-esuite-proxy-<OS_version>.exe`
Dr.Web Proxy Server
- `drweb-11.05.4-<build>-esuite-agent-activedirectory.msi`
Dr.Web Agent for Active Directory
- `drweb-11.00.1-<build>-esuite-modify-ad-schema-<OS_version>.exe`
Utility for Active Directory scheme modification
- `drweb-11.00.1-<build>-esuite-aduac-<OS_version>.msi`
Utility to change attributes for Active Directory objects
- `drweb-11.00.1-<build>-esuite-napshv-<OS_version>.msi`
NAP Validator
- `drweb-11.05.2-<build>-esuite-agent-full-windows.exe`
Dr.Web Agent full installer. Also included into the extra distribution kit of Dr.Web Server.
- `drweb-reloader-windows-<bitness>.exe`
Console version of Dr.Web Repository Loader
- `drweb-reloader-gui-windows-<bitness>.exe`
GUI version of Dr.Web Repository Loader

Dr.Web Server distribution kit contains two packages:

1. *General distribution kit*—basic distribution kit to install Dr.Web Server. Composition is similar to composition of previous versions of Dr.Web Enterprise Security Suite distribution. General distribution kit performs the installation of Dr.Web Server itself and includes anti-virus protection packages for stations under Windows OS only.
2. *Extra distribution kit*—includes distributions of all products, which are provided for installation on protected stations under all supported OS.

The package is installed as an additional on a computer with Dr.Web Server *general distribution kit* installed.



Extra distribution kit must be installed from the same type of package as a general distribution kit.

Dr.Web Server general distribution kit contains the following components:

- Dr.Web Server software for the respective OS,
- Dr.Web Agents software and anti-virus packages software for stations under Windows OS,
- Dr.Web Security Control Center software,
- Virus databases,
- Dr.Web Security Control Center extension,
- Dr.Web Server FrontDoor extension,
- Manuals, templates, and examples.

In addition to the distribution kit, serial numbers are also supplied. Having registered these serial numbers one can get files with a Server key and an Agent key.



Chapter 2: Licensing

The license is required for the operation of Dr.Web Enterprise Security Suite anti-virus solution.

Dr.Web Enterprise Security Suite license compound and price depend on the number of protected stations including the servers within Dr.Web Enterprise Security Suite network in a position of protected stations.



Before purchasing a license for a Dr.Web Enterprise Security Suite solution you should carefully consider this information and discuss all the details with your local distributor. The number of Dr.Web Servers running the network does not affect the license price.

License Key File

Rights to use Dr.Web Enterprise Security Suite are regulated by license key files.



A license key file is write-protected by the mechanism of electronic signature. Editing a file makes it invalid. To avoid occasionally corrupting of a license key file, you must not modify and/or save it after opening in a text editor.

License key files come in a zip-archive, which contains one or several key files for protected stations.

The user can receive the key files by one of the following ways:

- A license key file is included into Dr.Web Enterprise Security Suite anti-virus distribution kit at a purchasing, if license files were included at kitting. However, generally only serial numbers are provided.
- A license key file is sent to users by email after the product serial number has been registered at Doctor web company web site at <https://products.drweb.com/register/> unless other address specified in the registration card attached to the product. Visit the web site above, fill the form with the buyer information and in the corresponding field, type the registration serial number (it is written on the registration card). An archive with key files will be sent to the designated email address. Also, you will be allowed to download the key files directly from the web site.
- A license key file can be provided on a separate carrier.

It is recommended to keep a license key file until its expiration and use it during the reinstallation and restoring the program components. In case a license key file is lost, you can repeat the registration on the web site specified above and restore the license key file. Note that you will need to enter the same registration serial number and the same buyer information as during the first registration, you can change the email address only. In this case, a license key file will be sent to the new address.



To familiarize yourself with the anti-virus, you can use demo key files. Such key files provide the full functionality of the main anti-virus components but have a limited term of use. Demo key files are sent upon request made through the web form at <https://download.drweb.com/demoreq/biz/>. Your request will be examined individually. In case of approval, an archive with license key files will be sent to the designated email address.



The use of key files during the installation is described in **Installation Manual**, p. [Installing Dr.Web Server](#).

The use of key files for already deployed anti-virus network is described in p. [License Manager](#).

2.1. Licensing Features

1. Dr.Web Server is not licensed.



Server UUID which was stored in the Server license key in the previous versions of Dr.Web Enterprise Security Suite, now is stored in the Server configuration file (starting from the 10 version).

- During the new Server installation, the new UUID is generated.
- During the Server update from the earlier versions, UUID is automatically taken from the Server key of previous version (the `enterprise.key` file from the `etc` folder of the previous Server installation) and is written to the configuration file of the installing Server.

When updating the Servers cluster, the Server which is responsible for database updating, gets a license key. For other Servers it is necessary to add a license keys manually.

2. License keys are relevant for protected stations only. You can assign a license either for separate stations or for stations groups: in this case, a license key is valid for all stations which inherit it from this group. To assign a key file simultaneously for all stations of anti-virus network, for which personal settings of license key are not specified, assign the license key for the **Everyone** group.
3. A license key file can be set during the installation of Dr.Web Server (see **Installation Manual**, p. [Installing Dr.Web Server](#)).
However, the Server can be installed without a license key. A license can be added later either locally or received via the interserver communication.
4. Via the interserver communication, optional number of licenses from keys at this Server can be donated to a neighbor Server for a specified time slot.
5. You can use several different licenses, e.g. with different license validity time or different set of anti-virus components for protected stations. Each license key can be assigned for several licensing objects (groups and stations) simultaneously. For one licensing object can be assigned several license keys simultaneously.
6. When you assigning several keys to the object, please consider the following features:



- a) If lists of allowed anti-virus components in several keys of one object differ, then the list of allowed components for this station is defined by intersection of keys components sets. E.g., if for stations group a key with Anti-spam support and a key without Anti-spam support are assigned, then the Anti-spam cannot be installed on the stations.
- b) Settings for object licensing are calculated according of all keys assigned to this object. If keys expiration dates are differ, after nearest expiration date is out, you need to replace or remove expired key manually. If expired key limits an anti-virus components installation, it is necessary to adjust licensing object settings in the [Installing Components](#) section.
- c) The number of licenses of the object is calculated as a sum of licenses from all the keys which are assigned to this object. Also consider the opportunity to donate licenses via the interserver connection to a neighbor Server (see p. 4). In this case, you should subtract the licenses donated to a neighbor Server from the total number of licenses.

2.2. Licenses Propagation via Interserver Connections

In anti-virus network with several Servers, the optional number of licenses can be propagated between the Servers for a certain time period.



To be able to propagate the licenses between the Servers, you must configure interserver connections as described in the [Setting Connections between Several Dr.Web Servers](#) section.

The propagation is available for the following types on neighbor connection:

- The parent Server donates licenses, the child Server receives licenses according to the settings of the connection for licenses propagation (cannot be changed).
- Propagating licenses between peer Servers. In this case, for the Server that donates licenses, in the neighbor connection settings, in the **Licenses** section, the **Send** flag must be set; and for the Server that receives licenses—the **Receive** flag.

To configure the Server that will donate licenses

1. Open the Control Center of the anti-virus network Server that will donate licenses to neighbor Servers.
2. In the main menu of the Control Center, select the **Administration** item, in the [control menu](#), select **License Manager**.
3. Add a license key, as described in the [License manager](#) section, if a key has not been added earlier. The number of licenses in the key must correspond to the total number of served stations by both this Server and all Servers that will get licenses from this key.

In the common case, you can have only one license key, the licenses from which will be propagated between all the Servers.

4. Count the number of licenses that you can donate to neighbor Servers from this key. Please consider that neighbor Servers also can donate the part of licenses to other Servers. In this



case, you must donate from the key of the parent Server the summary number of licenses that are planned to propagate further along the chain. Also, please consider that the parent Server will not be able to use the propagated licenses till the end of propagation period of these licenses and their return.

5. Configure the propagation of licenses to neighbor Servers from the license key, as described in the [License Manager](#) section.

In the **License expiration date** option, specify the final expiration date of licenses donation. Donation period can be either less than the validity of the license itself, or equal to it. At the end of the specified period, all licenses will be called back from the neighbor Servers and get back to the list of free licenses of the initial license key. If necessary, you can edit this period at any time, as described in the [License Manager](#) section.

6. If necessary, change the settings of licenses propagation. For this, open the **Dr.Web Server configuration** section.

7. On the **Licenses** tab, specify the following settings for the Server that donates licenses:

- **Automatic renewal period of donated licenses**—time period for which licenses are donated from the key on this Server. After this period, the donated licenses are automatically renewed for the same period. Automatic renewal is performed before the expiration of the license propagation period specified in the License Manager at the step 5.
This mechanism provides returning of licenses to the parent Server if the child Server will be turned off and will not be able to return donated licenses.
- **License synchronization period**—interval for synchronizing information about donating licenses between Servers. Licenses synchronization allows to detect that the number of licenses donated by the parent Server and received by the child Server are not equal. This mechanism allows to detect malfunctions and cases of forgery during licenses donation.
- **Period of report sending on license usage**—period of report sending by neighbor Servers on usage of donated licenses to the parent Server. The option is specified on the parent Server but is used by the child Server when sending the reports.
- **Period of active stations counting for the license report**—period for counting the number of active stations for sending the report on license usage. The option is specified on the parent Server but is used by the child Server when sending the reports.

8. Save the changes and restart the Server.

To configure the Server that will receive licenses

1. Open the Control Center of the anti-virus network Server that will receive licenses from neighbor Server.
2. If necessary, change the settings of licenses propagation. For this, open the **Dr.Web Server configuration** section.
3. On the **Licenses** tab, specify the **Interval for preliminary renewal of accepted licenses**—time interval before the expiration of the licenses automatic renewal period, received from a neighbor Server, starting from which this Server requests the preliminary automatic renewal of these licenses.



Using this option depends on the type of connection selected in the **Connection options** setting in the neighbor Servers configuration (see [Setting Connections between Several Dr.Web Servers](#)):

- For the periodic connection type: if the reconnection period specified in the neighbor settings is greater than **Automatic renewal period of donated licenses** specified on the Server that donated licenses, when automatic renewal of these licenses will be initiated earlier than the **Automatic renewal period of donated licenses** expires.
- For the permanent connection: this option is not used.

4. Save the changes and restart the Server.

2.3. Automatic Licenses Update


Dr.Web Enterprise Security Suite license can be automatically updated.

Automatic update of licenses includes the following issues:

- When a license key is expiring, it can be automatically replaced by the program with a license key that has been purchased in advance.
- Automatic update is performed for a specific license key for which the renewal has been purchased.
- The license key for the automatic update is placed on Doctor Web company servers until its expiration date.

Procedure of Automatic Update of Licenses

The procedure of automatic update of licenses are launched in the following cases:

- When administrator clicks the  **Check for updates and replace license keys** button on the toolbar in the [License Manager](#) of the Control Center.
- When the **Update repository** task from the [Dr.Web Server schedule](#) is executing. At this, the **Update license keys** flag must be set in the task settings.



Automatic update of the license key is executed only if the updating license is from this Server: initially is added manually or get via the automatic update. For the licenses that have been received from the neighbor Servers via the interserver communications, the automatic update procedure is not launched.

The procedure of automatic update of licenses contains the following stages:

1. Check the presence of a license key on Doctor Web company servers (GUS).
2. Download a license key from the GUS to the Server with further adding the key into the database and the License Manager.
3. Propagate the new license key on objects of the previous key.



Depending on the results of each stage, the procedure can be completed on any of them.

The following results of the automatic update are possible:

1. *The license key for automatic update is absent on GUS.*

No actions are performed.

2. *The license key for automatic update is available on GUS. The compound of licenses components differs in the current and the new keys (the new key does not have any of components from the current key) or/and the new license key has fewer licenses than the current license key.*

A new license is downloaded from Doctor Web company servers, is added into the License Manager and the Server database but not propagated on licensing objects. In this case, a license key must be propagated manually.

Administrator will receive the **License key cannot be automatically updated** notification. The specific reason why the license key cannot be automatically propagated, is given in the notification.

3. *The license key for automatic update is available on GUS. The compound of licensed components is matched in the current and the new license keys or the new key licensing more components than the current key but it includes all components of the current key; the number of licenses in the new license key is more or equal the number of licenses in the current license key.*

A new license is downloaded from Doctor Web company servers, is added into the License Manager and the Server database and propagated on all licensing objects on which the previous license has been propagated including neighbor Servers.

The old license will be removed when it will not be used by any of child Servers. Thus, if at the moment of the automatic update the child Server has been offline, the old license is stored until this child Server will be connected.

The old license will be stored until administrator remove it manually in the following cases:

- If the license received during the automatic update cannot be propagated on the child Server (the Server is always offline).
- In version of the used protocol of the neighbor Server does not support the automatic update functional. At this, licenses will be donated to a neighbor Server but will not be propagated.

Administrator will receive the **License key automatically updated** notification. Notifications about the update are sent from each Server that got the new license.



All notifications that are sent to administrator, are managed in the **Administration** → **Notifications configuration** section.

The **Automatic update of a license key** [user hook](#) is executed after sending each notification.



Manual Update of Licenses

If you purchased a license key for automatic update of your current key, you do not need to add a new key manually in the License Manager. Depending on the situation (variant 2 in the procedure above), you may need only manual propagating on the licensing objects.

But if before the [procedure of automatic update of licenses](#), you have added via the License Manager a new key that is purposed for automatic update according to the 3 variant (see the procedure above), when during the task execution, only the propagation of a new license key is performed. At this, the following variants are possible:

- a) A new license key has been propagated manually on all objects of the previous (updated) key. In this case, during the execution of the update task, no changes will be made.
- b) A new license key has been propagated manually not on all objects of the previous (updated) key. In this case, during the execution of the update task, a new key will be propagated on all other objects of the previous key that still have not received the update.

If a new license key has been manually propagated in addition on objects that were not in the list of the previous key, when after execution of the task, a new key remains propagated on these objects as well. At this, the following variants are possible:

- Number of licenses is enough for all licensing objects: for objects of the previous key and for objects assigned to a new key manually. This situation is possible if a new key contains more licenses. In this case, during the execution of the update task, no changes will be made.
- Number of licenses is not enough for all licensing objects that the previous key has, because licenses have been assigned manually to other objects. For objects that did not get a license, the update will not performed, but the previous key will be deleted anyway and the objects will remain without a license. When an available license appears, all objects that did not get a license, will receive a new license key. At this, the actions depend on a type of licensing objects:
 - If a stations of this Server did not get licenses from a new key, when the check of available licenses will be performed at each attempt of a station connection to the Server. If an available license is found on a station connect, this license will be assigned to the station.
 - If a neighbor Server did not get licenses from a new key, when the check of available licenses will be performed automatically about once in a minute. When available licenses appear, they will be donated to neighbor Servers.

License Key File

Please note the following features of automatic update:

- During the automatic update, a new license is downloaded from Doctor Web company servers, its information is saved in the Server database and is displayed in the License Manager. A license key file is not created.



- To get a license key file, use the **Administration** → **License Manager** → **Export the key** option. Also, a license key file can be get by executing the **Automatic update of a license key** user hook.
- When a license is removed, its information is deleted from the License Manager and from the Server database, but a license key file is remained in the Server folder.



Chapter 3: Getting Started

3.1. Creating Anti-virus Network

Quick start to an anti-virus network deployment:

1. Make a plan of the anti-virus network structure, include all protected computers and mobile devices.

Select a computer to perform the functions of Dr.Web Server. The anti-virus network can incorporate several Dr.Web Servers. The features of such configuration are described in p. [Peculiarities of a Network with Several Dr.Web Servers](#).



Dr.Web Server can be installed on any computer, not only on a computer functioning as a LAN server. General system requirements to this computer are described in p. [System Requirements](#).

On all protected stations including LAN servers, the same Dr.Web Agent version is installed. Difference is in the installing anti-virus components list which is defined by the settings on the Server.

To install Dr.Web Server and Dr.Web Agent, one-time access (physical or via tools of remote control and program launch) to the correspondent computers is required. All further steps will be taken from the anti-virus network administrator's workplace (which can also be outside the local network) and will not require access to Dr.Web Servers and workstations.

When planning the anti-virus network, it is also recommended that a list of persons is made up, who are to be granted access to the Control Center as required by their job duties, as well as a list of roles with respective responsibilities assigned to each role. An [administrative group](#) shall be created for every role. Specific administrators can be linked with the roles by having their accounts placed into administrative groups. If necessary, administrative groups (roles) can be grouped hierarchically as a multilevel system allowing for individual [editing of administrative permissions](#) for each level.



To guarantee that Dr.Web Agent works properly on a server Windows OS starting from Windows Server 2016, make sure to manually disable Windows Defender using group policies.



3.2. Setting the Network Connections

General Information

The following clients are connected to Dr.Web Server:

- Dr.Web Agents
- Network Installers of Dr.Web Agents
- Neighbor Dr.Web Servers
- Dr.Web Proxy servers.

Connection is always initiated by a client.

The following schemas for connection to the Server are available:

1. Using [Direct connections](#).

This approach has a lot of advantages, but it is not preferable in some situations (also, there are some situations, that are not compatible with this approach).

2. Using [Server Detection Service](#).

Clients use this Service by default (if the other is not set obviously).

You can use this approach, if the resetting of all system is needed, in particular, if you need to move the Server to another computer or change the IP-address of a computer with the Server.

3. Using the [SRV protocol](#).

This approach allows to search the Server by name of a computer or Server service via the SRV records at DNS server.

If you configure the anti-virus network for using the direct connections, the Server Detection Service can be disabled. To do this, at the transport settings (**Administration** → **Dr.Web Server configuration** → the **Network** tab → the **Transport** tab) leave the **Cluster address** field empty.

Firewall Setup

For anti-virus network components communication, all ports and interfaces, which are used by this components, must be opened on all computers in the anti-virus network.

During the Server installation, the installer automatically adds ports and interfaces of the Server to exceptions of Windows operating system firewall.

If any other firewall besides built-in Windows firewall is in use on a computer, the network administrator should set up it manually.



3.2.1. Direct Connections

Dr.Web Server Setup

In the Server settings the address must be set (see the **Appendices** document, p. [Appendix E. The Specification of Network Addresses](#)) to listen for accepting incoming TCP-connections.

You can specify this parameter in the following Servers settings: **Administration** → **Dr.Web Server configuration** → **Network** tab → **Transport** tab → **Address** field.

By default, the following parameters are set to "listen" by the Server:

- **Address:** empty value—use *all network interfaces* for this computer, on which the Server is installed.
- **Port:** 2193—use the 2193 port.



The 2193 port is registered for Dr.Web Enterprise Management Service in IANA.

For the proper functioning of all Dr.Web Enterprise Security Suite anti-virus network, it is enough for the Server to listen at least one TCP-port, which is known by all clients.

Dr.Web Agent Setup

During the Agent installation, the Server address (IP-address or hostname of the computer, on which the Server is launched) can be directly set in installation parameters:

```
drwinst /server <Server_Address>
```

For the Agent installation it is recommended to use the Server name, registered in DNS service. This will simplify the setting of the anti-virus network in case of moving Dr.Web Server to another computer.

By default the `drwinst` instruction launched without parameters will scan the network for Dr.Web Servers and will try to install Agent from the first found Server (the *Multicasting* mode with using [Server Detection Service](#)).

Thus, the Server address become known for the Agent during installation.

You can change the Server address in the Agent settings manually later.

3.2.2. Dr.Web Server Detection Service

In this connection scheme, client does not know the Server address preliminary. Before establishing each connection, the Server will be searched in the network. To do this, the client



sends the broadcast query and waits for the respond, that includes Server address. After the client gets respond, it will establish a connection with the Server.

To realize this scheme, the Server must "listen" the network for such queries.

Several variants of realization of this scheme is available. Most important is that the Server search method at the clients side must be matched with the Server respond part.

The *Multicast over UDP* mode is used by default in Dr.Web Enterprise Security Suite:

1. Server gets registered in the multicast group with an address specified in the Server settings.
2. Agents during Server search, send multicast requests to the group address specified at the step 1.

Server listens by default (similarly to direct connections): `udp/231.0.0.1:2193`

This parameter is set at the Servers settings: **Administration** → **Dr.Web Server configuration** → the **Network** tab → the **Transport** tab → **Multicast group** field.

3.2.3. Using SRV Protocol

Clients under Windows OS support SRV client network protocol (format description is given in the **Appendices** document, p. [Appendix E. The Specification of Network Addresses](#)).

Accessing the Server via the SRV records are implemented by the following way:

1. During the Server installation, registration in Active Directory domain is set up, installer registers corresponding SRV record on DNS server.



SRV record is registered on DNS server according to the RFC2782 (see <http://tools.ietf.org/html/rfc2782>).

2. In a request for connecting the Server, client specifies access via the `srv` protocol.

For example, launch the Agent installer:

- with explicit specification of a service name `myservice`:
`drwinst /server "srv/myservice"`
- without specification of a service name. At this, SRV record with the `drwcs` default name will be searched.
`drwinst /server "srv/"`

3. Transparently for the user, the client uses functional of SRV protocol to access to the Server.



If the Server is not specified directly, the `drwcs` is used by default as a name of the service.



3.3. Providing a Secure Connection

3.3.1. Traffic Encryption and Compression

The encryption mode is used to ensure the security for data transmitted over an insecure channel and to avoid the possible disclosure of valuable information and substitution of software downloaded to the protected stations.

Dr.Web Enterprise Security Suite anti-virus network uses the following cryptographic means:

- Electronic digital signature (GOST R 34.10-2001).
- Asymmetric encryption (VKO GOST R 34.10-2001 – RFC 4357).
- Symmetric encryption (GOST 28147-89).
- Cryptographic hash function (GOST R 34.11-94).

Dr.Web Enterprise Security Suite anti-virus network allows to encrypt the traffic between Server and the following clients:

- Dr.Web Agents.
- Dr.Web Agent installers.
- Neighbor Dr.Web Servers.
- Dr.Web Proxy-servers.

As traffic between components, in particular the traffic between Servers, can be considerable, the anti-virus network provides for compression of this traffic. The setting of the compression policy and the compatibility of settings on different clients are the same as those for encryption.

Settings Compatibility Policy

The encryption and compression policy is set separately for each component of the anti-virus network, at this, settings of other components should be compatible with the settings of the Server.

When coordinating encryption and compression settings on the Server and a client, please consider that certain combinations are incompatible and, if selected, will result in disconnecting the client from the Server.

[Table 3-1](#) describes what settings provide the connection between the Server and the clients encrypted/compressed (+), when the connection will be non-encrypted/uncompressed (–) and what combinations are incompatible (**Error**).

**Table 3-1. Compatibility of the encryption and compression policy settings**

Client settings	Server settings		
	Yes	Possible	No
Yes	+	+	Error
Possible	+	+	–
No	Error	–	–



Encryption of traffic creates a considerable load on computers those capacities are close to the minimal system requirements for the components installed on them. So, when traffic encryption is not required to provide additional security, you can disable this mode.

To disable encryption mode, you should step by step switch the Server and other components to the **Possible** mode first, avoiding formation of incompatible client-Server pairs.

Using the compression mode reduces traffic, but considerably increases the memory usage and the computational load on computers, more than the encryption.

Connection via Dr.Web Proxy Server

If you want to connect clients to the Server via Dr.Web Proxy server, you must consider the encryption and compression settings on all three components. At this:

- Settings of the Server and the Proxy server (here it plays a role of a client) must be conformed by the [table 3-1](#).
- Settings of the client and the Proxy server (here it plays a role of the Server) must be conformed by the [table 3-1](#).

Ability to establish a connection via the Proxy server depends on a version of the Server and a client that support certain encryption technologies:

- If the Server and the client support TLS encryption that is used in the version 11.0.2, it is enough to perform the [above conditions](#) to establish the working connection.
- If one of the components does not support TLS encryption: the Server and/or a client has the version 10 or earlier providing the GHOST encryption, the addition check is performed according to the [table 3-2](#).

**Table 3-2. Compatibility of the encryption and compression policy settings at using the Proxy server**

Client connection settings	Server connection settings			
	Nothing	Compression	Encryption	All
Nothing	Normal mode	Normal mode	Error	Error
Compression	Normal mode	Normal mode	Error	Error
Encryption	Error	Error	Transparent mode	Error
All	Error	Error	Error	Transparent mode

Abbreviations

Server and client connection settings	
Nothing	Neither compression nor encryption is supported.
Compression	Only compression is supported.
Encryption	Only encryption is supported.
All	Both, compression and encryption are supported.
Result connection	
Normal mode	Established connection implies the operation in the normal mode—using commands processing and caching.
Transparent mode	Established connection implies the operation in the transparent mode—without commands processing and without caching. Encryption protocol version is taken minimal: if one of the components (the Server or the Agent) has version 11, and the other has version 10, the encryption of version 10 is used.
Error	Connection of the Proxy server both with the Server and with the client will be terminated.

Thus, if the Server and the Agent have different version: one has version 11, and other has version 10 and previous, then the following limitations are applied to the established connections via the Proxy server:

- Data can be cached on the Proxy server only if both of connections with the Server and with the client are established without using the encryption.
- The encryption will be used only if both of connections with the Server and with the client are established with using the encryption and the same compression parameters (compression is used for both connections or not used for both of them).



Encryption and Compression Settings on the Server

To specify the encryption and compression policies of the Server

1. Select the **Administration** item in the main menu of the Control Center.
2. In the opened window, click **Dr.Web Server configuration** in the control menu.
3. On the **Network** → **Transport** tab, select the necessary variant in the **Encryption** and **Compression** drop-down lists:
 - **Yes**—enables obligatory traffic encryption (or compression) with all clients (is set by default for encryption, if the parameter has not been modified during the Server installation).
 - **Possible**—instructs to encrypt (or compress) traffic with those components those settings do not prohibit it.
 - **No**—encryption (or compression) is not supported (is set by default for compression, if the parameter has not been modified during the Server installation).




When configuring encryption and compression on the Server, please consider the features of the clients which are planning to be connected to this Server. Not all clients support traffic encryption and compression.

Encryption and Compression Settings on the Proxy Server

To centralized specify the encryption and compression policies for the Proxy server



If the Proxy server is not connected to Dr.Web Server for remote settings control, configure the connection as described in the **Installation Manual**, p. [Connecting the Proxy Server to Dr.Web Server](#).

1. Open the Control Center of the managing Server for the Proxy server.
2. Select the **Anti-virus network** item in the main menu of the Control Center, in the hierarchical list of the opened window, click the name of the Proxy server settings of which you want to edit or its primary group if the Proxy server settings are inherited.
3. In the opened control menu, select **Dr.Web Proxy server**. Settings section opens.
4. Go to the **Listen** tab.
5. In the **Settings for connection with clients** section, in the **Encryption** and **Compression** drop-down lists, select the encryption and compression modes of traffic for channels between Proxy server and served clients: Agents and Agent installers.
6. In the **Settings for connection with Dr.Web Servers** section, you can specify the list of Servers to which the traffic will be forwarded. Select the necessary Server in the list and click  on the toolbar to edit the settings for connection with selected Dr.Web Server. In the opened window, in the **Encryption** and **Compression** drop-down lists, select the encryption



and compression modes of traffic for channels between Proxy server and the specified Server.

7. To save all the specified settings, click **Save**.

To locally specify the encryption and compression policies for the Proxy server



If the Proxy server is connected to the managing Dr.Web Server for remote configuration, then the Proxy server configuration file will be rewritten according to the settings received from the Server. In this case, you must configure the settings remotely from the Server or disable the option that allows to receive configuration from this Server.

Description of the `drwcsd-proxy.conf` configuration file is given in the **Appendices** document, in the [Appendix G4](#).

1. On the computer with the Proxy server installed, open the `drwcsd-proxy.conf` configuration file.
2. Edit the settings for encryption and compressions for connections with clients and the Servers.
3. Restart the Proxy server:
 - For Windows OS:
 - If the Proxy server is run as a service of Windows OS, restart the service by the standard means of the system.
 - If the Proxy server is run in console, press CTRL+BREAK.
 - For UNIX system-based OS:
 - Send the `SIGHUP` signal to the Proxy server daemon.
 - Execute the following command:

For Linux OS:

```
/etc/init.d/dwcp_proxy restart
```

For FreeBSD OS:

```
/usr/local/etc/rc.d/dwcp_proxy restart
```

Encryption and Compression Settings on Stations

To centralized specify the encryption and compression policies of stations

1. Select the **Anti-virus Network** item in the main menu of the Control Center, then click the name of a group or a station in the hierarchical list of the opened window.
2. In the opened control menu, select **Connection parameters**.



3. On the **General** tab, in the **Compression mode** and **Encryption mode** drop-down lists, select one of the following:
 - **Yes**—enables obligatory traffic encryption (or compression) with the Server.
 - **Possible**—instructs to encrypt (or compress) traffic with the Server if the Server settings do not prohibit it.
 - **No**—encryption (or compression) is not supported.
4. Click **Save**.
5. The changes will take effect as soon as the settings will be passed to stations. If stations are offline at the time of changing the settings, the changes will be passed as soon as stations connect to the Server.

Dr.Web Agent for Windows

Encryption and compression settings can be set at the Agent installation:

- At the remote installation from the Control Center, encryption and compression mode is set directly in the **Network installation** section settings.
- At local installation, the GUI installer does not provide encryption and compression changing, but these settings can be set using the command line switches during the installer launch (see the **Applications**, p. [H2. Network Installer](#)).

After the Agent installation, you cannot change encryption and compression settings locally on station. By default, the **Possible** mode is set (if other value has not been set at the installation), i.e. encryption and compression usage depends on the Server settings. However, the Agent settings can be changed via the Control Center (see [above](#)).

Dr.Web Anti-virus for Android

Dr.Web Anti-virus for Android does not support neither encryption nor compression. Connection will be impossible if the **Yes** value is specified for encryption and/or compression at the Server or the Proxy server (for connection via the Proxy server).

Dr.Web Anti-virus for Linux

At the anti-virus installation, you cannot change encryption and compression settings. By default, the **Possible** mode is set.

After the anti-virus installation, you can change encryption and compression settings locally on station only in the command line mode. You can find the description of a command line mode and corresponding switches in the **Dr.Web for Linux User Manual**.

Also, the station settings can be changed via the Control Center (see [above](#)).



Dr.Web Anti-virus for macOS

You cannot change encryption and compression settings locally on station. By default, the **Possible** mode is set, i.e. encryption and compression usage depends on the Server settings

The station settings can be changed via the Control Center (see [above](#)).

3.3.2. Tools to Ensure Secure Connection

At Dr.Web Server installation, the following tools are created to ensure the secure connection between components of the anti-virus network:

1. The Server private encryption key `drwcsd.pri`.

Is stored at the Server and is not passed to other components of the anti-virus network.

If the private key is lost, the connection between components of the anti-virus network must be restored manually (create all the keys and certificates and also propagate them to all components of the network).

The private key is used in the following ways:

a) *Creating public keys and certificates.*

The public encryption key and the certificate are created automatically from the private encryption key during the Server installation. At this, the private key can be either newly created or used existing (for example, from the previous Server installation). Also encryption keys and certificates can be created at any time using the `drwsign` Server utility (see the **Appendices** document, p. [H9.1. Digital Keys and Certificates Generation Utility](#)).

Information on public keys and certificates is given below.

b) *The Server authentication.*

The Server is authenticated by remote clients on the basis of an electronic digital signature (once within each connection).

The Server performs the digital sign of a message by a private key and sends the message to a client. A client checks the signature of a received message using the certificate.

c) *Decrypting the data.*

When the traffic between the Server and clients are encrypted, the decryption of the data sent by a client is performed at the Server using the private key.

2. The Server public encryption key `drwcsd.pub`.

Is available to all components of the anti-virus network. A public key is always can be generated from a private key (see [above](#)). At each creation from the same private key you will get the same public key.



Starting from the version 11 of the Server, a public key is used for connection with previous versions of clients. The rest of the functionality is transferred to a certificate, which, among other things, contains a public encryption key.

3. The Server certificate `drwcsd-certificate.pem`.

Is available to all components of the anti-virus network. Certificate contains a public encryption key. Certificate can be generated from a private key (see [above](#)). At each creation from the same private key you will get a new certificate.

Clients connected to the Server, are bind to a specific certificate, so if the certificate is lost on client, it can be restored only if the same certificate is used by any other network component: in this case, certificate can be copied to a client from the Server or from the other client.

Certificate is used in the following ways:

a) *The Server authentication.*

The Server is authenticated by remote clients on the basis of an electronic digital signature (once within each connection).

The Server performs the digital sign of a message by a private key and sends the message to a client. A client checks the signature of a received message using the certificate (particularly, a public key specified in the certificate). In the previous version of the Server, to do this, a public key was used directly.

A client must have one or several trusted certificates from the Server to which a client can be connected.

b) *Encrypting the data.*

When the traffic between the Server and clients are encrypted, the encryption of the data is performed by a client using a public key.

c) *Implementation of a TLS session between the Server and remote clients.*

d) *The Proxy server authentication.*

Dr.Web Proxy server is authenticated by remote clients on the basis of an electronic digital signature (once within each connection).

The Proxy server performs the digital sign of its certificates by a private key and a certificate of the Dr.Web Server. The client which trusts Dr.Web Server certificate will be automatically trust to certificates that are signed by it.

4. Web server private key.

Is stored at the Server and is not passed to other components of the anti-virus network. Usage details are given below.

5. Web server certificate.

Is available to all components of the anti-virus network.

Is used to implement a TLS session between web server and a browser (over HTTPS).



At the Server installation, on the basis of a private key of a web server, self-signed certificate is generated that will not be accepted by web browsers because it was not released by a well-known certification authority.

To make a secure connection (HTTPS) available, you must perform on of the following:

- Add a self-signed certificate to trusted certificates or to exclusions for all stations and web browsers on which the Control Center is opened.
- Get a certificate signed by a well-known certification authority.

3.3.3. Connecting Clients to Dr.Web Server

To be able to connect to Dr.Web Server, a client must have the Server certificate not depending on the encryption of traffic between the Server and a client.

The following clients can be connected to Dr.Web Server:

- **Dr.Web Agent.**

For the centralized mode of the Agents with connection to the Dr.Web Server, the station must have one or several trusted certificates from the Server to which the Agent can be connected.

Certificate that was used at installation and certificates received in the centralized settings from the Server are stored in the registry but the files of certificates are not used.

The single file of a certificate can be added using the command line switch into the Agent installation folder (but not to the registry) and into the common list of used certificates. This certificate is used, among other things, to be able to connect to the Server in case an error in the centralized settings.

If the certificate is absent or the certificate is invalid, the Agent will not be able to connect to the Server but will remain operating and updating in the [Mobile mode](#) if it is allowed for this station.

- **Dr.Web Agent Installers.**

When installing the Agent, together with the selected installation file, the Server certificate must be on a station.

If you launch the installation package generated in the Control Center, the certificate is included into the installation package and additional specifying of the certificate file is not required.

After the Agent installation, the certificate data are written into the registry and the certificate file itself is no longer used.

If the certificate is absent or the certificate is invalid, the installer will not be able to install the Agent (applies to all types of the Agent installation files).



- **Neighbor Dr.Web Servers.**

When establishing a connection between neighbor Dr.Web Servers of version 11, on each configuring Server you must specify the certificate of the Server connection to which is establishing (see the p. [Setting Connections between Several Dr.Web Servers](#)).

If at least one certificate is absent or invalid, you will not be able to establish the multiserver connection.

- **Dr.Web Proxy servers.**

To connect the Proxy server to Dr.Web Server with possibility of remote control via the Control Center, you must have a certificate on a station with the Proxy Server installed. At this, the Proxy server can also support encrypting.

If the certificate is absent, the Proxy server will remain its operation but remote control and also encryption and caching will not available.



In case of general update of the entire anti-virus network from a previous version that uses public keys to a new version that uses certificates, no other additional actions are required.

Installation of the Agent distributed with the Server of version 11 with connecting to the Server of version 10 and vice versa is not recommended.



Chapter 4: Components of an Anti-Virus Network and Their Interface

4.1. Dr.Web Server

An anti-virus network built with Dr.Web Enterprise Security Suite must have at least one Dr.Web Server.



To increase the reliability and productivity of an anti-virus network and distribute the computational load properly, Dr.Web Enterprise Security Suite anti-virus can also be used in the multiserver mode. In this case the Server software is installed on several computers.

Dr.Web Server is a memory-resident component. Dr.Web Server software is developed for various OS (see the **Appendices** document, p. [Appendix A](#)).

Basic Functions

Dr.Web Server performs the following tasks:

- initializes of installation of the Agent software and anti-virus packages on a selected computer or a group of computers;
- requests the version number of the anti-virus package and the creation dates and version numbers of the virus databases on all protected computers;
- updates the content of the centralized installation folder and the updates folder;
- updates virus databases and executable files of the anti-virus packages, as well as executable files of the program on protected computers.

Collecting Information on Anti-Virus Network

Communicating with Dr.Web Agents, Dr.Web Server collects and logs information on operation of the anti-virus packages. Information is logged in the general log file implemented as a database. In small networks (not more than 200-300 computers) an embedded database can be used. In larger networks it is recommended to use an external database.



An embedded DB can be used, if at most 200-300 stations are connected to the Server. If the hardware configuration of the computer with Dr.Web Server and the load level of other executing tasks are permissible, up to 1000 stations can be connected.

Otherwise, you must use an external DB.



If you use an external DB and more than 10 000 stations are connected to the Server, it is recommended to perform the following minimal requirements:

- 3 GHz processor CPU,
- RAM at least 4 GB for Dr.Web Server and at least 8 GB for the DB server,
- UNIX system-based OS.

The following information is collected and stored in the general log file:

- versions of the anti-virus packages on protected computers,
- time and date of the software installation and update on workstations,
- versions and dates of virus databases updates,
- OS versions of protected computers, processor type, OS system catalogs location, etc.,
- configuration and settings of anti-virus packages,
- data on virus events, including names of detected viruses, detection dates, actions, results of curing, etc.

Dr.Web Server notifies the administrator on virus events occurring on protected computers by email or through the Windows OS standard broadcast notification system. You can set the alerts as described in p. [Setting Alerts](#).

Web Server

Web server is a part of Dr.Web Security Control Center and performs the following general functions:

- authentication and authorization of administrators in the Control Center;
- automation of Control Center pages operation;
- support for dynamically generated pages of Control Center;
- support for HTTPS-protected client connections.

4.1.1. Dr.Web Server Management under Windows® OS

Dr.Web Server Interface and Management

As a rule, Dr.Web Server can be managed via Dr.Web Security Control Center which acts as an interface for the Server.

Elements for configuration and management the Server are placed during the installation to the **Programs** main Windows OS menu, to the **Dr.Web Server** folder:

- The **Server control** folder contains the following commands:
 - **Detailed logging**—set the **All** level of detail for the Server operation log.



- **Start**—start the Server service.
- **Stop**—stop the Server service.
- **Reload repository**—reread the Server repository from disk.
- **Reload templates**—reread the administrator notifications templates.
- **Restart**—restart the Server service.
- **Verify database**—start the verification of the embedded database.
- **Default logging**—set the **Information** level of detail for the Server operation log.



After the execution of the **Detailed logging** and **Default logging** commands, the service must be restarted to apply changes. For this, run the **Restart** command.



Extended logging settings are available in the [Log](#) section of the Control Center.

Corresponding commands are described in detail in the **Appendices** document, p. [H3](#).
[Dr.Web Server](#).

- The **Web interface** item opens Dr.Web Security Control Center and connects to the Server installed at this computer (at the <http://localhost:9080>).
- The **Documentation** item opens administrator documentation in HTML format.

Dr.Web Server folder has the following structure:

Default installation folder (can be changed during the installation): `C:\Program Files\DrWeb Server`

- `bin`—Dr.Web Server executable files.
- `ds-modules`—unpacked script modules.
- `etc`—general configuration files of anti-virus network components.
- `fonts`—fonts for PDF documents.
- `var`—contains the following subfolders:
 - `backup`—backups of DB and other critical data.
 - `extensions`—scripts of user hooks meant to automate the performance of certain tasks.
 - `file-cache`—file cache.
 - `installers-cache`—cache to store Agent personal and group installation packages when stations are created via the Control Center. Created at installation packages creation.
 - `plugins`—temporary plug-ins objects.
 - `objects`—Control Center objects cache.
 - `reports`—temporary folder for generating and storing reports. Created when necessary.
 - `repository`—repository folder to store actual updates of virus bases, anti-virus packages files and anti-virus network components. It contains subfolders for the program



components software which include subfolders for their versions depending on the OS. The folder should be accessible for writing to the user under which the Server is launched (the **LocalSystem** as a rule).

- `sessions`—Control Center sessions.
- `tmp`—temporary files.
- `twin-cache`—unpacked virus bases for backward compatibility with previous versions of Dr.Web Agents. Also, can contain other unpacked repository files, e.g., the Agent installer.
- `upload`—folder to download temporary files which are specified via the Control Center. Created at large files downloading.
- `vfs`—packed script modules and language packages.
- `webmin`—Control Center elements.
- `websockets`—web sockets scripts.

Backup folder (can be changed during the deinstallation): `<installation_drive> : \Drweb Backup`.



The content of the updates catalog `\var\repository` is automatically downloaded from the updates server through HTTP/HTTPS protocol according to the Server schedule, or the anti-virus network administrator can manually place the updates to the catalog.

General Configuration Files

File	Description	Default folder
<code>agent.key</code> (name may vary)	Agent license key	etc
<code>certificate.pem</code>	SSL certificate	
<code>database.conf</code>	database settings template with default parameters	
<code>download.conf</code>	network settings for generating of the Agent installation packages	
<code>drwcsd.conf</code> (name may vary)	Server configuration file	
<code>drwcsd.conf.distr</code>	Server configuration file template with default parameters	
<code>drwcsd.pri</code>	private encryption key	
<code>enterprise.key</code> (name may vary)	Server license key file. The file is saved if it presented after the upgrade from the previous versions. For the new Server 11.0.2 installation, the file is absent	





File	Description	Default folder
frontdoor.conf	configuration file for the Server remote diagnostic utility	
http-alerter-certs.pem	certificates for verification of the apple-notify.drweb.com host for push notification sending	
private-key.pem	RSA private key	
yalocator.apikey	API key for the Yandex.Locator extension	
webmin.conf	Control Center configuration file	
auth-ads.conf	configuration file for administrators external authorization via Active Directory	
auth-ldap.conf	configuration file for administrators external authorization via LDAP	
auth-radius.conf	configuration file for administrators external authorization via RADIUS	
database.sqlite	embedded database	var
drwcsd.pub	public encryption key	webmin\install

Start and Stop Dr.Web Server

By default, Dr.Web Server automatically starts after installation and every time after restarting the operating system.

Also you can start or start, restart or stop Dr.Web Server by one of the following ways:

- General case:
 - Using the corresponding command, located in the **Start** → **Programs** → **Dr.Web Server** menu.
 - Via the services management tools in the **Administrative Tools** section at the **Control Panel** of Windows OS.
- Stop and restart via the Control Center:
 - In the **Administration** section, use buttons:  to restart,  to stop.
- Using the console commands run from the `bin` subfolder of the Server installation folder (see also the **Appendices** document, p. [H4. Dr.Web Server](#)):
 - `drwcsd start`—start the Server.
 - `drwcsd restart`—total restart of the Server service.
 - `drwcsd stop`—normal shutdown of the Server.



Please note, if you need the Server to read environment variables, the service must be rebooted via the services management tools or via the console command.

4.1.2. Dr.Web Server Management under UNIX® System-Based OS

Interface and Dr.Web Server Management

Dr.Web Server has no interface. As a rule, Dr.Web Server can be managed via Dr.Web Security Control Center which acts as an interface for the Server.

Dr.Web Server installation folder has the following structure:

`/opt/drwcs/` for Linux OS and `/usr/local/drwcs` for FreeBSD OS:

- `bin`—Dr.Web Server executable files.
- `doc`—license agreements files.
- `ds-modules`—unpacked script modules.
- `fonts`—fonts for PDF documents.
- `lib`—libraries set for the Server operation.
- `vfs`—packed script modules and language packages.
- `webmin`—Control Center elements.
- `websockets`—web sockets scripts.

`/var/opt/drwcs/` for Linux OS and `/var/drwcs` for FreeBSD OS:

- `backup`—backups of DB and other critical data.
- `coredump`—Server crash dumps. Created at dumps appearance.
- `database.sqlite`—Server embedded database. Created if the embedded database is used.
- `etc`—general configuration files of anti-virus network components.
- `extensions`—scripts of user hooks meant to automate the performance of certain tasks.
- `installers-cache`—cache to store Agent personal and group installation packages when stations are created via the Control Center. Created at installation packages creation.
- `file-cache`—file cache.
- `log`—Server log files.
- `plugins`—temporary plug-ins objects.
- `objects`—Control Center objects cache.
- `reports`—temporary folder for generating and storing reports. Created when necessary.



- `repository`—repository folder to store actual updates of virus bases, anti-virus packages files and anti-virus network components. The folder contains subfolders for the program components software which include subfolders for their versions depending on the OS. The folder should be accessible for writing to the user under which the Server is launched (the `drwcs` as a rule).
- `run`—Server process ID.
- `sessions`—Control Center sessions.
- `tmp`—temporary files.
- `twin-cache`—unpacked virus bases for backward compatibility with previous versions of Dr.Web Agents. Also, can contain other unpacked repository files, e.g., the Agent installer.
- `upload`—folder to download temporary files which are specified via the Control Center. Created at large files downloading.

`/etc/opt/drweb.com/` for Linux OS and `/usr/local/etc/drweb.com` for FreeBSD OS:

- `software/drweb-esuite.remove`—script to remove the Server.
- + possible extra files and folders.

`/usr/local/etc/rc.d/` for FreeBSD OS:

- `drwcsd`—script to start and stop the Server.

`/var/tmp/drwcs`—backup after the Server removal.

General Configuration Files

File	Description	Default folder
<code>agent.key</code> (name may vary)	Agent license key	<ul style="list-style-type: none"> • for Linux OS: <code>/var/opt/drwcs/etc</code> • for FreeBSD OS: <code>/var/drwcs/etc</code>
<code>certificate.pem</code>	SSL certificate	
<code>common.conf</code>	configuration file (for some of UNIX system-based OS)	
<code>database.conf</code>	database settings template with default parameters	
<code>download.conf</code>	network settings for generating of the Agent installation packages	
<code>drwcsd.conf</code> (name may vary)	Server configuration file	
<code>drwcsd.conf.distr</code>	Server configuration file template with default parameters	



File	Description	Default folder
<code>drwcsd.pri</code>	private encryption key	
<code>enterprise.key</code> (name may vary)	Server license key file. The file is saved if it presented after the upgrade from the previous versions. For the new Server 11.0.2 installation, the file is absent	
<code>frontdoor.conf</code>	configuration file for the Server remote diagnostic utility	
<code>http-alerter-certs.pem</code>	certificates for verification of the <code>apple-notify.drweb.com</code> host for push notification sending	
<code>private-key.pem</code>	RSA private key	
<code>yalocator.apikey</code>	API key for the Yandex.Locator extension	
<code>webmin.conf</code>	Control Center configuration file	
<code>auth-ldap.conf</code>	configuration file for administrators external authorization via LDAP	
<code>auth-pam.conf</code>	configuration file for administrators external authorization via PAM	
<code>auth-radius.conf</code>	configuration file for administrators external authorization via RADIUS	
<code>database.sqlite</code>	embedded database	<ul style="list-style-type: none">• for Linux OS: <code>/var/opt/drwcs</code>• for FreeBSD OS: <code>/var/drwcs</code>
<code>drwcsd.pub</code>	public encryption key	<ul style="list-style-type: none">• for Linux OS: <code>/opt/drwcs/webmin/install</code>• for FreeBSD OS: <code>/usr/local/drwcs/webmin/install</code>



Start and Stop Dr.Web Server

By default, Dr.Web Server automatically starts after installation and every time after restarting the operating system.

Also you can start or start, restart or stop Dr.Web Server by one of the following ways:

- Stop and restart via the Control Center:



- In the **Administration** section, use buttons:  to restart,  to stop.
- Using the corresponding console command (see also the **Appendices** document, p. [H4.Dr.Web Server](#)):
 - Start:
 - for FreeBSD OS:
`# /usr/local/etc/rc.d/drwcsd start`
 - for Linux OS:
`# /etc/init.d/drwcsd start`
 - Restart:
 - for FreeBSD OS:
`# /usr/local/etc/rc.d/drwcsd restart`
 - for Linux OS:
`# /etc/init.d/drwcsd restart`
 - Stop:
 - for FreeBSD OS:
`# /usr/local/etc/rc.d/drwcsd stop`
 - For Linux OS:
`# /etc/init.d/drwcsd stop`



Please note, if you need the Server to read environment variables, the service must be rebooted via the console command.

4.2. Workstations Protection



Detailed description of anti-virus components settings which are configured via the Control Center, is given in the **Administrator Manual** on managing stations for corresponding operating system.

Protected computer with installed anti-virus package as per its functions in the anti-virus network is called a workstation of anti-virus network. Please note: according to its LAN functions, such computer can be both a workstation or mobile device and a LAN server.

Workstations are protected by Dr.Web anti-virus packages designed for correspondent operating systems.

Anti-virus packages are installed on protected stations and get connected to Dr.Web Server. Each station is included in one or several groups registered on this Server (for more, see p. [System and User Groups](#)). Stations and Dr.Web Server communicate through the protocol used in the local network (TCP/IP of 4 or 6 version).



Installation

Anti-virus package can be installed on a workstation by one of the following ways:

1. Locally. Local installation is performed directly on a user's computer or mobile device. Installation may be implemented either by administrator or by user.
2. Remotely. Remote installation is available for stations under Windows OS only and performed in the Control Center through the LAN. Installation is implemented by an anti-virus network administrator. At this, user intervention is not required.



Detailed description of anti-virus packages installation procedures on workstations you can find in the **Installation Manual**.

Management

When connection with Dr.Web Server is established, administrator is able to use the following functions implemented by anti-virus package on a station:

- Centralized configuration of Anti-virus on workstations via the Control Center.
At this, administrator can either deny or grant user's permissions to change Anti-virus settings on stations on one's own.
- Configure the schedule for anti-virus scans and other tasks to execute on a station.
- Get scan statistics and other information on anti-virus components operation and on stations state.
- Start and stop anti-virus scans and etc.

Update

Dr.Web Server downloads updates and distributes them to connected stations. Thus, optimal threats protection is implemented, maintained and adjusted automatically regardless of workstation users' computer skills.

In case an anti-virus station is disconnected from the anti-virus network, Anti-virus on station uses the local copy of the settings and the anti-virus protection on a workstation retains its functionality (up to the expiry of the user's license), but the software is not updated. If a station is allowed to use the *Mobile mode*, after connection with the Server is lost, the virus bases can be updated directly from the GUS.

The principle of stations operation in the Mobile mode is described in p. [Updating Mobile Agents](#).



4.3. Dr.Web Security Control Center

To manage the anti-virus network and set up the Server, the in-built Dr.Web Security Control Center serves.



For correct functioning of Dr.Web Security Control Center under Windows Internet Explorer browser, you must add Dr.Web Security Control Center address to the list of trusted sites in the web browser settings: **Tools** → **Internet Options** → **Security** → **Trusted Sites**.

For correct functioning of Dr.Web Security Control Center under Chrome browser, you should turn on cookies.

Connecting to Dr.Web Server

From any computer with network access to the Server, Dr.Web Security Control Center is available at the following address:

`http://<Server_Address>:9080`

or

`https://<Server_Address>:9081`

where `<Server_Address>` is the IP address or domain name for the computer on which Dr.Web Server is installed.



Ports numbers for HTTP connection and for protected HTTPS connection are differ: 9080 and 9081 correspondingly.

In the authorisation request dialogue window, specify the administrator's credentials. For default administrator:

- Name—**admin**.
- Password:
 - for Windows OS—password that was set during the Server installation.
 - for UNIX system-based OS—password that was automatically created during the Server installation (see also **Installation Manual**, p. [Installing Dr.Web Server for UNIX® System-Based OS](#)).

If you connect through https protocol (secure SSL connection), the browser requests you to approve the Server certificate. Warnings and indications of distrust to the certificate may display, because the certificate is unknown to your browser. You need to approve the certificate to connect to Dr.Web Security Control Center.



Some browsers, e.g. **Firefox 3** and later report errors when connecting through HTTPS and refuse connection to Dr.Web Security Control Center. To solve this problem, add Dr.Web Security Control Center to the list of exceptions by clicking **Add site** in the warning message. This allows connection to Dr.Web Security Control Center.

Dr.Web Security Control Center Interface

Dr.Web Security Control Center window (see figure [4-1](#)) is divided in *main menu header* and *working area*.

Main menu

The main menu consists of the following items:

- [Administration](#) section,
- [Anti-virus network](#) section,
- [Search panel](#),
- the name of the current administrator logged into Dr.Web Security Control Center. Also, the [interserver connections menu](#) may be available,
- [Events](#) section,
- [Preferences](#) section,
- [Help](#) section,
- **Logout** to close the current Dr.Web Security Control Center session.

Working Area

The *working area* is used to perform all the main functions of Dr.Web Security Control Center. It consists of two or three panels depending on the actions which are being performed. Items in the panels are nested from left to right:

- the [control menu](#) is always located in the left part of the working area,
- depending on the selected item, one or two additional panels are displayed. In the latter case, the rightmost panel contains the settings of elements from the central panel.

The interface language must be set individually for each administrator account (see p. [Managing Administrator Accounts](#)).

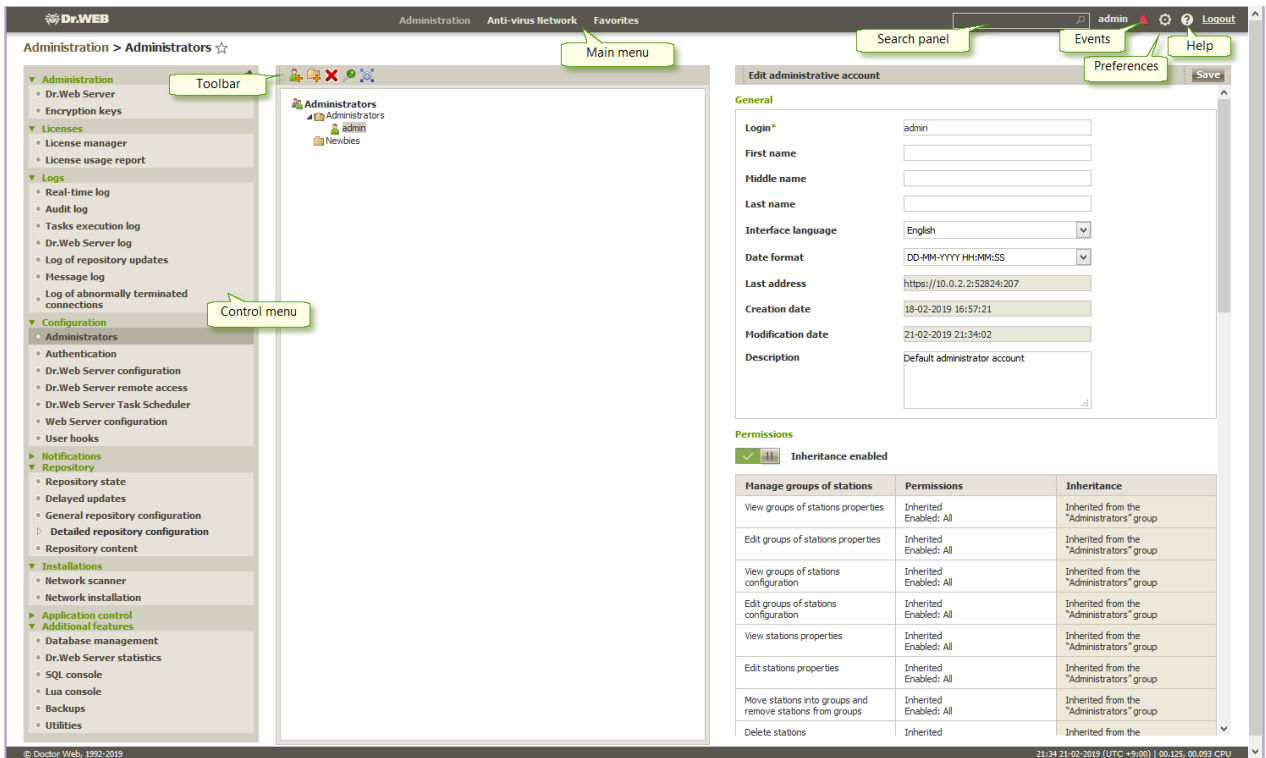


Figure 4-1. Dr.Web Security Control Center window. Click the main menu option to see the description

Control Menu

To view and edit the information in the opened window, use the control menu resided in the left part of the window.

The control menu can be minimized. At this, only section names of the menu are displayed. On mouse over the correspondent section, available menu options of this section will be displayed.

To manage the control menu displaying, you the following icons in the upper right corner:

- Unpin menu** – disable pinning and display the menu in the minimized view.
- Pin menu** – pin maximized menu position.

Interserver Connections Menu



Information on multiserver anti-virus networking and configuring neighbors is given in the [Peculiarities of a Network with Several Dr.Web Servers](#) section.



If interserver connections with other Dr.Web Servers are configured, the following functions are added to the administrator login on the main menu:

- Next to the administrator login, the name of current Dr.Web Server is shown.



- Clicking on administrator login opens drop-down list with connected neighbor Servers. If the name for a neighbor is not specified, its identifier is given.

On neighbor click, two options are possible:

- The Control Center of neighbor Server opens if the IP address of the Control Center was specified during connection configuring.
The action is similar to the  →  button on the toolbar when managing neighbors.
- If the Control Center address of this neighbor Server is not set, the neighbors setup section opens to specify the IP address.

4.3.1. Administration



Select the **Administration** item in the main menu of Dr.Web Security Control Center.

Control Menu

To view and edit the information in the opened window, use the control menu resided in the left part of the window.

The control menu consists of the following items:

1. Administration

- **Dr.Web Server**—opens the panel which shows basic information about the Server and lets you restart or shutdown it via the  and  buttons in the top right part of the panel. Also if Dr.Web Server has updates downloaded, from this section you can access the [Dr.Web Server Updates](#) section with the Server versions list to update and back up.
- **Encryption keys**—allows to export (save locally) public and primary encryption keys and also the Server certificate.

2. Licenses

- [License Manager](#)—allows to manage the license key files.
- [License usage report](#)—contains information on licenses usage, including neighbor Servers.

3. Logs

- [Real time log](#)—allows to view the list of events and changes on the Server operation and displayed in real time (at the moment of an event appearance).
- [Audit log](#)—allows to view the list of events and changes carried via the control subsystems of Dr.Web Enterprise Security Suite.
- **Tasks execution log**—contains the list of Server tasks with completion marks and comments.
- [Dr.Web Server log](#)—contains the list of events on the Server operation.



- [Log of repository updates](#) the list of updates from GUS, that includes detailed information on updated products revisions.
- [Message Log](#)—contains all text messages that were sent by administrator to stations of the anti-virus network.


4. Configuration

- [Administrators](#)—opens the panel for managing anti-virus network administrator accounts.
- [Authentication](#)—opens the panel to manage authentication methods of Dr.Web Security Control Center administrators (see [Authentication of Administrators](#)).
- [Dr.Web Server configuration](#)—opens the panel with main settings of the Server.
- [Dr.Web Server remote access](#)—contains settings for connecting Server remote diagnostics utility.
- [Dr.Web Server Task Scheduler](#)—opens the panel with Server task scheduler settings.
- [Web server configuration](#)—opens the panel with general settings of the Web server.
- [User hooks](#).
- [Message Templates](#)—the templates list of arbitrary text messages sent by administrator to stations of the anti-virus network.

5. Notifications

- [Web console notifications](#)—allows to view and manage administrator notifications which are received via the **Web console** method.
- [Unsent notifications](#)—allows to track and manage administrative notifications failed to be sent according to the settings of the **Notification Configuration** section.
- [Notifications configuration](#)—allows to configure administrative notifications on anti-virus network events.

6. Repository

- [Repository state](#)—allows to check repository state: date of last update of repository components and their state. And also, update repository from GUS.
- [Delayed updates](#)—contains the list of products that are temporary disabled for updating in the **Detailed repository configuration** section.
- [General repository configuration](#)—opens the window to configure settings of connection to the GUS and repository updates for all products.
- [Detailed repository configuration](#)—allows to setup revisions configuration for each repository product separately.
- [Repository content](#)—allows to view and manage current repository content as files and folders of repository folder.
- **Search by known hashes of threats**—allows to search in bulletins with known hashes of threats. To search in the hash table fields, click .



The section is available only if the usage of bulletins of known threat hashes is licensed. You can check the license in the information on a license key that can be found in the [License Manager](#) section, the **Allowed lists of hash bulletins** parameter (the license in at least one of the license keys used by the Server is sufficient).

7. Installations

- [Network Scanner](#)—allows to specify a list of networks, search for installed anti-virus software in networks to determine protection status of computers, and install anti-virus software.
- **Network installation**—allows to simplify installation of the Agent software on certain workstations (see **Installation Manual**, p. [Installing Dr.Web Agent Software via Dr.Web Security Control Center](#)).

8. Additional features

- [Database management](#)—allows direct maintenance of Dr.Web Server database.
- [Dr.Web Server statistics](#)—contains statistics of this Server operating.
- **SQL console**—allows to execute SQL queries to the database which Dr.Web Server uses.
- **Lua console**—allows to execute LUA scripts both typed in the console directly or loaded from a file.



Together with the access to the lua console, administrator gets the access to all file system within the Server folder and some system commands on a computer with the Server installed.

To forbid the access to the lua console, disable the **Use additional features** permission for the correspondent administrator (see [Administrators and Administrative groups](#)).

- [Backups](#)—allows to view and save backups composition of the Server critical data.
- **Utilities**—opens the section with additional utilities for interaction with Dr.Web Enterprise Security Suite:
 - [Dr.Web Repository Loader](#) to download Dr.Web Enterprise Security Suite products from the Global Update System. Graphical version of Dr.Web Repository Loader is available for Windows OS only.
 - **Dr.Web Server remote diagnostics utility** allows remotely connect to Dr.Web Server for basic controlling and viewing the operation statistics. Graphical version of the utility is available for Windows OS only. See also [Dr.Web Server Remote Access](#).
 - **Dr.Web Server remote scriptable diagnostics utility** allows remotely connect to Dr.Web Server for basic controlling and viewing the operation statistics. This version of the utility is adapted for use in scripts. See also [Dr.Web Server Remote Access](#).
 - **Digital keys and certificates generation utility** allows to generate encryption keys and digital certificates as well as perform and verify digital signatures of files. The



utility is an important tool for ensuring the security of connections between components of anti-virus network.

- **Dr.Web Mobile Control Center** for administrating the anti-virus network based on Dr.Web Enterprise Security Suite. Designed for installation and operation on mobile devices under iOS and Android OS.



To get information on command line switches to use the utilities, please refer the **Appendices** document, the **H9. Utilities** section.

4.3.2. Anti-Virus Network

Select the **Anti-virus network** item in the main menu of Dr.Web Security Control Center.

Control Menu

To view and edit the information in the opened window, use the control menu resided in the left part of the window.

Control Menu contains the following components:

1. General

- [Charts](#)
- **Security identifiers**
- [Protection components](#)
- [Quarantine](#)
- **User sessions**
- **Inactive stations**
- [Hardware and software](#)
- [Properties](#)
- [Group membership rules](#) (when user groups are selected)
- [Dr.Web Proxy server](#) (when Proxy servers or their group are selected)

2. Statistics

3. Configuration

- [Dr.Web Proxy server](#) (when Proxy server or the **Proxies** group and its subgroups are selected)
- [Permissions](#)
- [Task Scheduler](#)
- [Installing components](#)
- [Connection parameters](#)



- [Update Restrictions](#)
- **Dr.Web Agent for UNIX**—allows to configure the period of sending the statistics on detected threats for stations under UNIX system-based OS.
- The list of anti-virus components for operating system of selected station or by list of operating systems when a group is selected.



Detailed description of anti-virus components settings which are configured via the Control Center, is given in the **Administrator Manual** on managing stations for corresponding operating system.

Hierarchical List of Anti-Virus Network

In the middle part of the window there is a hierarchical list of the anti-virus network. The list (catalog) represents the tree structure of the anti-virus network elements. The nodes in this structure are [groups](#) and [workstations](#) within these groups.

You can perform the following through the hierarchical list elements:

- Left-click the name of a group or station to display the control menu (at the left part of the window) of corresponding element and brief element information on a property pane (at the right part of the window).
- Left-click the icon of the group to open or to hide the contents of a group.
- Left-click the icon of the station to open the properties sheet of this station.




















To select several elements of the hierarchical list, press and hold CTRL or SHIFT during selection.

The appearance of the icon depends on the type and status of this element (see [table 4-1](#)).

Table 4-1. Icons of elements in the hierarchical list

Icon	Description
Groups. General icons	
	Groups always shown in the hierarchical list.
	Groups are not displayed in the hierarchical list if: <ul style="list-style-type: none"> • for groups the Setup group visibility → Hide if empty option is set and currently groups do not contain stations, • for groups the Setup group visibility → Hide option is set and currently, in the Settings of tree view section, the Show hidden groups flag is cleared.



Icon	Description
Workstations. General icons	
	Available workstations with installed anti-virus software.
	Available workstations with installed anti-virus software. Severity of the station state is Medium . To determine the required administrator actions, please clarify the situation at this station in the Status section. To display the sign, select the  Settings of tree view → Show stations states severity option on the toolbar.
	Available workstations with installed anti-virus software. Severity of the station state is Maximal or High . To determine the required administrator actions, please clarify the situation at this station in the Status section. To display the sign, select the  Settings of tree view → Show stations states severity option on the toolbar.
	The station is unavailable.
	Anti-virus software on the station is uninstalled.
	Station state during remote network installation of the Agent. Station is in this state from the moment of successful Agent installation on the station till the moment of its first connection to the Server.
	Proxy server not connected to your Server.
	Proxy server is connected to your Server, but it does not use the specified settings.
	Proxy server is connected to your Server, and it uses the specified settings.
Additional icons	
	Icon of personal settings is displayed over the general stations and groups icons for which personal settings are specified (or group includes stations with personal settings). To display the sign, select the  Settings of tree view → Show personal settings icon option on the toolbar. E.g., if online workstation with installed anti-virus software has a personal settings, its icon looks as follows:  .
	Icon of membership rules is displayed next to the general icon of groups for which rules of automatic stations placing are set. To display the sign, select the  Settings of tree view → Show membership rules icon option on the toolbar. E.g., if a groups that is always shown in the hierarchical list has membership rules specified, its icon looks as follows:  .





Management of the anti-virus network catalog elements is carried out via the toolbar of the hierarchical list.

Toolbar

The toolbar of the hierarchical list contains the following elements:


★ **General**—manage the general parameters of the hierarchical list. Select the corresponding item in the drop-down list:


 **Edit**—open settings of the station or group in the right pane of Dr.Web Security Control Center.


 **Remove selected objects**—remove an items from the hierarchical list. Select the items in the list and click **Remove selected objects**.


 **Remove membership rules**—remove rules for automatic including stations to groups.


 **Set this group as primary**—determine the selected group as primary for all workstations in it.

 **Set a primary group for stations**—assign a primary group for selected workstations. If a group is selected in the hierarchical list instead of workstations, the specified primary group will be assigned to all workstations from this group.


 **Merge stations**—join workstations under a single account in the hierarchical list. It can be used if a workstation had been registered under several accounts.


 **Remove personal settings**—remove individual settings of selected objects. Settings of the parent group will be used. All workstations inside a group will also have their settings removed.

 **Send message to stations**—send notifications to users of workstations.


 **Reset password**—delete the user password for access to anti-virus components settings on selected stations. The option is available only for stations under Windows OS.


 **Reboot station**—launch reboot station process remotely.

 **Uninstall Dr.Web Agent**—remove the Agents and anti-virus software from the selected workstation(s) or group(s).

 **Install Dr.Web Agent**—open the [Network scanner](#) for Agent installation to the selected stations. This option is enabled only if new approved stations or stations with deinstalled Agent are selected.

 **Restore deleted stations**—restore stations deleted earlier. This option is active only if stations from the **Deleted** subgroup of the **Status** group are selected.


 **Mail installation files**—send installation files for stations selected in the list to email addresses, specified in this section parameters.

 **Open the Dr.Web Security Control Center for the selected neighbor server in another window**. This option is enabled when you select a neighbor Server in the anti-virus network tree.




+ Add a network object—add a new element of anti-virus network. Click the corresponding item in the drop-down menu:

 **Create station**—add a new station (see **Installation Manual**, p. [Creation of a New User Account](#)).


 **Create group**—add a new group.


 **Create neighbor**—add a neighbor Dr.Web Server connection.


 **Create policy**—add a new policy to set stations settings.


 **Create Proxy server**—add a new account to connect the Proxy server (see **Installation Manual**, p. [Creating of the Proxy Server Account](#)).

Data Export:

 **Save data in CSV file**—save common data about selected stations of the anti-virus network to CSV file.


 **Save data in HTML file**—save common data about selected stations of the anti-virus network to HTML file.


 **Save data in XML file**—save common data about selected stations of the anti-virus network to XML file.


 **Save data in PDF file**—save common data about selected stations of the anti-virus network to PDF file.





The listed above options from the **Data Export** section export information only on selected stations and stations included into selected groups.

 **Export configuration**—save the configuration of the selected objects of anti-virus network to a file. For this option, you will be prompt to select configuration sections to save.


 **Import configuration**—load the configuration of the selected objects of anti-virus network from a file. For this option, you will be prompt to select the file to load the configuration and also loaded configuration sections.

 **Export statistics**—save the anti-virus components statistics for the selected objects of anti-virus network to a file. For this option, you will be prompt to select the statistic sections to save and the export format.

 **Propagate configuration**—propagate configuration of the selected objects to other objects of anti-virus network. For this option, you will be prompt to select objects to propagate configuration to and also propagated configuration sections.


 **Setup group visibility**—change the appearance of groups in the list. Select one of the following in the drop-down list (the icon of the group will change, see [table 4-1](#)):


 **Hide**—means that the group will not be displayed in the hierarchical list.


 **Hide if empty**—means that the group will not be displayed if the group is empty (does not contain any workstations).


 **Show**—means that the group will always be displayed in the hierarchical list.




 **Components management**—manage the components on the workstation. Select the necessary action in the drop-down menu:


 **Recover failed components**—force to recover the state of the components that operating with errors. Recovering uses the product revision that is currently installed on the station.


 **Interrupt running components**—prescribes to stop operating of all running anti-virus components at the station.


 **Scan**—scan stations in one of the modes, selected in the drop-down menu:


 **Dr.Web Agent Scanner. Express scan.** In this mode the following objects are scanned:


- main memory (RAM),
- boot sectors of all disks,
- autorun objects,
- root directory of the boot sector,
- root directory of Windows OS installation disk,
- system directory of Windows OS,
- My documents folder,
- temporary directory of the system,
- temporary directory of the user.


 **Dr.Web Agent Scanner. Complete scan.** In this mode all hard disks and removable disks (including the boot sectors) will be fully scanned.


 **Dr.Web Agent Scanner. Custom scan.** In this mode you will be able to choose files and folders to scan.

 **Unapproved stations**—manage newbies list—stations, which registration is not approved (see the [New Stations Approval Policy](#) section for more details). This option is active only if stations of the **Newbies** subgroup of the **Status** group are selected. When the registration is approved, stations will be automatically removed from the pre-installed **Newbies** group. To manage stations registration, select one of the following options from the drop-down list:

 **Approve selected stations and set a primary group**—confirm access of the station to the Server and to set a primary group from the offered list.

 **Cancel action specified to execute on connect**—cancel the action on unapproved stations which was specified earlier to execute at the moment when the station connects to the Server.

 **Reject selected stations**—forbid access of the station to the Server.

 **Settings of tree view**—adjust the appearance of the anti-virus network tree. To enable parameter, set the corresponding flags in the drop-down menu:

- for groups:
 - **All groups membership**—duplicate displaying of a station in the list if a stations is a member of several groups simultaneously (only for groups under the white folder icon,






see [table 4-1](#)). If the flag is set, the station will be shown in all member groups. If the flag is cleared, the station will be shown only once in the list.

- **Show hidden groups**—show all groups included in the anti-virus network. If you clear the flag, all empty groups (not containing stations) will be hidden. It may be convenient to remove extra data, for example, when there are many empty groups.
- for the Server clients (stations, Proxy servers and neighbor Servers):
 - **Show clients identifiers**—show clients unique identifiers.
 - **Show clients names**—show clients names, if such are given.



You cannot disable displaying both identifiers and names of stations at the same time. One of the **Show clients identifiers** and **Show clients names** parameters will be always selected.

- **Show clients addresses**—show clients IP-addresses.
- **Show station servers**—show names or addresses of Dr.Web Servers to which stations are connected. Relevant to the stations within Dr.Web Servers cluster.
- **Show stations states severity**—show severity of active stations status. At this, the color differentiation will be used for stations depending on their status (see [table 4-1](#)). If the option is disabled, for station statuses with the  and  icons, the common icon  will be displayed.
- for all elements:
 - **Show personal settings icon**—show the marker which shows whether individual settings are present on the icons of groups and the Server clients: stations, Proxy servers and neighbor Servers.
 - **Show descriptions**—show descriptions of groups and the Server clients: stations, Proxy servers and neighbor Servers (the descriptions are set in the properties of an element).
 - **Show the number of clients**—show the number of the Server clients: stations, Proxy servers and neighbor Servers for all the groups of an anti-virus network into which these clients are included.
 - **Show membership rules icon**—show the marker on stations icons which are added to groups automatically according to the membership rules, also on groups icons stations of which are added automatically.

↑↓ **Settings of clients sorting**—change the parameter that is used for sorting and the sorting order of the Server clients: stations, Proxy servers and neighbor Servers in the anti-virus tree.

- To select the parameter to use for sorting, set the one of the following flags (only one parameter can be selected):
 - **Identifier**—sort by unique identifiers of clients.
 - **Name**—sort by names of clients.
 - **Address**—sort by network addresses of clients. Clients without network address will be displayed in random order without sorting.
 - **Creation date**—sort by date of creation of a client account on the Server.



- **Date of last connection**—sort by date of last connection of clients to the Server.
- To select the sorting order, set the one of the following flags:
 - **Sort ascending.**
 - **Sort descending.**



The **Settings of tree view** and **Settings of clients sorting** sections are interdependent:

- If you select the sorting parameter in the **Settings of clients sorting** section, displaying of this parameter automatically enables in the **Settings of tree view** section if it was disabled.
- If in the **Settings of tree view** section, you disable the displaying of a parameter that is selected for sorting in the **Settings of clients sorting** section, when sorting by this parameter is automatically switched to sorting by name of a station. If displaying of station names is disabled, then sorting is switched to station identifier (name and identifier cannot be disabled at the same time).

Property Pane

The property pane shows the properties and settings of workstations.

To display the property pane

1. Select the name of a station or a group in the hierarchical list.
2. A pane with properties of selected workstation or group opens in the right pane of Dr.Web Security Control Center. Detailed description of these settings is given in the [Editing Groups](#) and [Station Properties](#).

4.3.3. Favorites

The control Center allows you to save bookmarks on interface pages into the favorites list for the convenience of the administrating. For example, to jump quickly to the most frequently visited pages of the Control Center.

Manage Favorites List

1. In the main menu of the Control Center, select **Favorites**.
2. The list of Control Center pages that have been added to bookmarks will be opened.
3. In the list of favorite pages, you can:
 - Open the page that has been included into the favorites list. To do this, click the bookmark that corresponds to this page in the favorites list.
 - Remove all bookmarks from the favorites list. To do this, select the **Clear favorites** option.



Add a Bookmark to the Favorites

1. Open the Control Center page that you want to add to the favorites.
2. Next to the page name under the control menu, click ☆.
3. It opens the **Add a bookmark** window. In the **Name** field, the page name is added automatically in the following format: <Main menu item> > <Control menu item>. You can edit the bookmark name, if necessary.
4. The following actions are available:
 - To save a page in the favorites list, click **Add**. The icon next to a page name will be changed to ★.
 - To close the window without changing the list of favorite pages, click **Cancel**.

Edit and Remove a Bookmark from the Favorites

1. Open the Control Center page that you want to edit or remove from the favorites.
2. Next to the page name under the control menu, click ★.
3. It opens the **Edit the bookmark** window. The following actions are available:
 - To edit a bookmark, change its name in the **Name** field. Click **Refresh** to apply changes.
 - To remove a page from the favorites list, click **Delete**. The icon next to a page name will be changed to ☆.

4.3.4. Search Panel

The *search panel* locates at the top right part of Dr.Web Security Control Center and used to simplify searching for elements. The panel may find both groups and separate stations according to specified parameters.

To find a workstation or group of workstations

1. Select the search criterion in the drop-down list of the search panel:
 - **Station**—to search stations by name,
 - **Organization**—to search user groups that represent an organization,
 - **Station ID**—to search stations by unique identifiers,
 - **Group ID**—to search groups by unique identifiers,
 - **User ID**—to search stations by user unique identifiers,
 - **User name**—to search stations by user name on station,
 - **IP address**—to search stations by IP address,
 - **Hardware**— to search stations by the name or category of hardware installed on the station,
 - **Software**—to search stations by the name of software installed on the station.




- **Configuration**—to search stations by defined parameter values of anti-virus components installed on stations. When you select this criterion, the search panel opens with the following settings:
 - **Component**—in the drop-down list, select the name of anti-virus component in the settings of which the search will be performed. To make the components selection from the list easier, you can use the search: start entering the name into the component field, and the system automatically suggests variants containing the entered symbols.
 - **Parameter**—in the drop-down list, select the name of a parameter, values of which are available for the search. Parameters with the complex structure of allowable values are not available for the search.
 - **Value**—set the value of the parameter selected below. Depending on allowable values of a specific parameter, you will be supported with either the drop-down list with allowable values or the entry field to specify the values by a user via the keyboard.

To start searching by component parameters, click **Search**.

2. For all search criterion except the **Configuration** (see above), specify a parameter value to search. At this, you can set:
 - specific string for full match with search value,
 - a mask for search string: the * and ? symbols are allowed.
3. Press ENTER to start the search. Extended search panel and the anti-virus tree will be opened.
4. The search results contain a hierarchical list of elements according the search parameters.
 - If you searched for a workstation, occurrence of the workstation in groups will be displayed.
 - If no elements are found, the message **Nothing found** will be displayed in the empty hierarchical list.

4.3.5. Events

To notify administrator on events requiring attention, the section displayed under the  **Events** icon on the main menu is provided.

The icon may take the following states:



—no new notifications on events in the network.




—new notifications on minor events.



—new notifications on major events requiring administrator intervention.


The following actions are available for the events list:

1. The icon click opens the drop-down list of anti-virus network events. At this, the icon automatically changes to .
2. The click on notification string on event opens the Control Center section that responsible for corresponding functions.



- The stub of every notification in the events list is marked with a color corresponding to the severity of the events (same as the icon). When opening a section that responsible for the notification functions, the notifications is considered as read and the stub changes color into gray.

Table 4-2. The list of available notifications on events in anti-virus network

Event	Severity	Control Center section	Description
Notifications on newbies	minor	Anti-virus Network The Newbies group opens in the hierarchical tree of anti-virus network	New stations connected to the Server and waiting for approval of an access by administrator. It is possible if the Approve access manually value is set for the Newbies registration mode option in the Server configuration .
Unread news	minor	 Support → News	Unread news of Doctor Web company are available.
New notifications	minor	Administration → Web console notifications	New administrator notifications which are received via the Web console method are available.
Critical notifications	major		
Server updates are available	major	Administration → Dr.Web Server	Dr.Web Server update is downloaded into repository and available for installation.
Server configuration has been changed. Server restart required.	major	Administration → Dr.Web Server configuration	Settings of the Server configuration file has been changed after Server start. To take new settings, the Server must be restarted.
Web server configuration has been changed. Server restart required.	major	Administration → Web Server configuration	Settings of the Web server configuration file has been changed after Server start. To take new settings, the Server must be restarted.

4.3.6. Preferences

To open the section of Control Center preferences, click  **Preferences** in the main menu.



All settings of this section are valid only for the current administrator account.

The control menu located in the left pane of the window, consists of the following items:

- [My account](#).
- [Interface](#).



- [Subscription](#).

My Account


Using this section, you can manage the current account of the administrator of the anti-virus network (see also p. [Administrators and administrative groups](#)).

General



Values of fields, marked with the * sign, must be obligatory specified.

You can edit the following settings, if necessary:

- **Login**—administrator account login to access Dr.Web Security Control Center.
- **First name**, **Middle name** and **Last name** of the administrator.
- **Interface language** used by the administrator.
- **Date format**, which is used by this administrator during editing settings that contain dates. The following formats are available:
 - European: DD-MM-YYYY HH:MM:SS
 - American: MM/DD/YYYY HH:MM:SS
- Account **Description**.
- To change the password, click  **New password** at the toolbar.

The following parameters are read only:

- Dates of creation and last modification of the account.
- **Status**. Displays the network address of the last connection under this account.

Permissions


Description of administrative rights and its editing see in the [Editing Administrators](#) section.

Click **Save** after you have changed all necessary parameters.



Interface




Tree Settings

Parameters of this section let you adjust the appearance of the list, and they are similar to the settings, located in the  **Settings of tree view** option of the toolbar of the **Anti-virus network** item of the main menu:

- for groups:
 - **All groups membership**—duplicate displaying of a station in the list if a station is a member of several groups simultaneously (only for groups under the white folder icon, see [table 4-1](#)). If the flag is set, the station will be shown in all member groups. If the flag is cleared, the station will be shown only once in the list.
 - **Show hidden groups**—show all groups included in the anti-virus network. If you clear the flag, all empty groups (not containing stations) will be hidden. It may be convenient to remove extra data, for example, when there are many empty groups.
- for the Server clients (stations, Proxy servers and neighbor Servers):
 - **Show clients identifiers**—show clients unique identifiers.
 - **Show clients names**—show clients names, if such are given.




You cannot disable displaying both identifiers and names of stations at the same time. One of the **Show clients identifiers** and **Show clients names** parameters will be always selected.

- **Show clients addresses**—show clients IP-addresses.
 - **Show station servers**—show names or addresses of Dr.Web Servers to which stations are connected. Relevant to the stations within Dr.Web Servers cluster.
 - **Show stations states severity**—show severity of active stations status. At this, the color differentiation will be used for stations depending on their status (see [table 4-1](#)). If the option is disabled, for station statuses with the  and  icons, the common icon  will be displayed.
- for all elements:
 - **Show personal settings icon**—show the marker which shows whether individual settings are present on the icons of groups and the Server clients: stations, Proxy servers and neighbor Servers.
 - **Show descriptions**—show descriptions of groups and the Server clients: stations, Proxy servers and neighbor Servers (the descriptions are set in the properties of an element).
 - **Show the number of clients**—show the number of the Server clients: stations, Proxy servers and neighbor Servers for all the groups of an anti-virus network into which these clients are included.



- **Show membership rules icon**—show the marker on stations icons which are added to groups automatically according to the membership rules, also on groups icons stations of which are added automatically.

Settings of clients sorting

Parameters of this section let you to change the parameter that is used for sorting and the sorting order of the Server clients: stations, Proxy servers and neighbor Servers in the anti-virus tree, and they are similar to the settings, located in the  **Settings of clients sorting** option of the toolbar of the **Anti-virus network** item of the main menu:

- To select the parameter to use for sorting, set the one of the following flags (only one parameter can be selected):
 - **Identifier**—sort by unique identifiers of clients.
 - **Name**—sort by names of clients.
 - **Address**—sort by network addresses of clients. Clients without network address will be displayed in random order without sorting.
 - **Creation date**—sort by date of creation of a client account on the Server.
 - **Date of last connection**—sort by date of last connection of clients to the Server.
- To select the sorting order, set the one of the following flags:
 - **Sort ascending.**
 - **Sort descending.**

Time Interval

In this section, you can specify settings of time interval to display statistics data (see [Viewing Workstation Statistics](#) section):

- In the **Default interval for viewing statistics data** drop-down list, specify the time interval, which is set as default for all sections of statistics data.

When you open the page for the first time, statistics will be displayed for this time interval. You can change the time interval at statistics pages directly, if necessary.

- Set the **Save last interval for statistics data** flag, to save the interval, specified last time at statistics sections.

If the flag is set, when you open the page for the first time, statistics will be displayed for the last period, specified at the Web browser.

If the flag is cleared, when you open the page for the first time, statistics will be displayed for the period, specified in the **Default interval for viewing statistics data** drop-down list.

Authorization

In the **Session timeout** drop down list, select time period after which the user session of Control Center in a web browser is automatically terminated.



PDF Export

In this section you can specify text settings for statistic data export to the PDF format:

- In the **Reports font** drop down list, select the font, which is used at reports export to PDF format.
- In the **Reports font size** field, specify the font size of general text of statistic tables, which is used at reports export to PDF format.

Reports

In this section you can specify view settings for statistic data in the Reports section of the Control Center:


- In the **Number of lines per page** field, specify the maximal number of lines on one report page for paginal view of statistic.
- Set the **Show charts** flag to show charts on statistic reports pages. If the flag is cleared, charts viewing is disabled.


Subscription

In this section you can setup the subscription on Doctor Web company news.

Set the **Automatic subscription to new sections** flag to add new sections in the **News** page of Control Center automatically.

4.3.7. Support

To get help on using Dr.Web Enterprise Security Suite, click  **Support** in the main menu. The opened context menu contains the following options:

- **Help**—opens a page of the administrator documentation that corresponds the currently opened section of the Control Center. If the current section of the Control Center does not have the correspondent documentation page, the **Help** option is not displayed in the context menu of the  icon.
- **Support**—opens the **Support** section of the Control Center (see below).

Support

The control menu of the **Support** section contains the following elements:

1. General

- **Forum**—opens official forums of Doctor Web company.
- **News**—open the news page of Doctor Web company.



- **Contact technical support service**—opens the web page of Doctor Web technical support.
- **Send a suspect file**—opens a web form for sending a virus to Dr.Web Virus Laboratory.
- **Report false alarm in Office Control**—opens a web form for sending a message about false alarm or detection failure in Office Control module.

2. Administrative Documentation

- **Administrator manual**—opens administrator documentation in HTML format.
- **Installation manual**—opens documentation on Dr.Web Enterprise Security Suite installation in HTML format.
- **Anti-virus Network Quick Installation Guide**—opens the quick installation guide to establish the anti-virus network, in HTML format. It is recommended to read this instruction before you start the establishing the anti-virus network, installing and configuring the components.
- **Appendices**—opens appendices of administrator manual in HTML format.
- **Web API Manual**—opens administrator documentation on XML Web API (see also the **Appendices** document, p. [Appendix L. Integration of Web API and Dr.Web Enterprise Security Suite](#)) in HTML format.
- **Release notes**—opens release notes for Dr.Web Enterprise Security Suite of installed version.
- **Administrator Manuals on Managing Stations**—opens administrator documentation on managing stations for corresponding operating system in HTML format from the list. These manuals contain the information about centralized configuration of anti-virus software of workstations which is provided by anti-virus network administrator via Dr.Web Security Control Center. The manual describes the settings of corresponding anti-virus solution and features of centralized configuration of the software.

- 3. **User Documentation**—opens user documentation for corresponding operating system in HTML format from the list.

4.4. Dr.Web Security Control Center Components

4.4.1. Network Scanner

Network Scanner Functions

- Scan (browse) the network for workstations.
- Detect Dr.Web Agents on stations.
- Install Dr.Web Agent on the detected stations as instructed by the administrator. Dr.Web Agent installation is described in detail in the **Installation Manual**, p. [Installing Dr.Web Agent Software via Dr.Web Security Control Center](#).



Network Scanner Operation Principal

Network scanner supports the following search modes:

1. Search in Active Directory
2. Search via NetBIOS
3. Search via ICMP
4. Search via TCP
5. Additional mode: Agent detect.

Procedure when all modes are enabled

1. First three modes are run in parallel. Repeated inquiring of already inquired stations is not performed.
2. After ICMP search is complete, the TCP search is launched for stations that have not responded. If ICMP search is disabled, TCP search is launched immediately in parallel with first two modes.



ICMP search is implemented by sending ping requests that can be blocked because of network policies (e.g. by firewall settings).

For example:

If in Windows Vista and later OS network settings, the **Public location** options is set, OS will block all ping requests.

3. For stations found by search via the first four modes, the Agent detect search is launched.



Network Scanner can detect Agents of version 4.44 and older but cannot interact with Agents of earlier versions.

The Agent installed on a protected stations process respective calls of Network Scanner received at a certain port. By default, port `udp/2193` is used. Correspondingly, the default port is offered to call by the Scanner. Network Scanner decides whether the Agent is on a station or not basing on the assumption of the possibility to exchange information (request-response) via the specified port.



If the station is forbidden (for example, by a firewall) to accept packages at `udp/2193`, the Agent will not be detected and consequently Network Scanner considers that there is no Agent installed on the station.



Network Scanner Launch

To scan the network, perform the following actions:

1. Open the Network Scanner window: select the **Administration** item in the main menu of Dr.Web Security Control Center and in the opened window, select the **Network Scanner** item in the control menu. The Network Scanner window will be opened.
2. Set the **Enable ICMP search** flag to search for stations via ICMP protocol in range of specified IP addresses.
3. Set the **Enable TCP search** flag to search for stations via TCP protocol in range of specified IP addresses.

Specify the settings for this mode:

- **Quick scan.** In the quick network scan mode, only most common ports on stations are checked: 445, 139, 22, 80.
- **Extended scan.** In the extended network scan mode, a set of frequently used ports are checked. The ports are scanned in the specified order: 445, 139, 135, 1025, 1027, 3389, 22, 80, 443, 25, 21, 7, 19, 53, 110, 115, 123, 220, 464, 465, 515, 873, 990, 993, 995, 1194, 1433, 1434, 2049, 3306, 3690, 4899, 5222, 5269, 5432, 6000, 6001, 6002, 6003, 6004, 6005, 6006, 6007, 6446, 9101, 9102, 9103, 10050, 10051, 8080, 8081, 98, 2193, 8090, 8091, 24554, 60177, 60179.

- **IPv4 addresses**—the list of IPv4 addresses:

- single addresses: 10.4.0.10
- range of addresses with a hyphen: 172.16.0.1–172.16.0.123
- range of addresses with a network prefix: 192.168.0.0/24

If you set several addresses, use ";" or "," as a separator.

- **IPv6 addresses**—the list of IPv6 addresses:

- single addresses
- range of addresses with a hyphen: [FC00::0001]–[FC00::ffff]
- with a network prefix: [::ffff:10.0.0.1]/7

If you set several addresses, use ";" or "," as a separator.

4. Set the flag **Enable search by NetBIOS** to search for stations via NetBIOS protocol.

Specify the settings for this mode:

- **Domains**—domains list in which stations are searched. Use comma to divide several domains.
- Set the flag **Extended scan** to use extended scan using data from network browsers.

5. Set the flag **Enable search in Active Directory** to search for stations in the Active Directory domain.



To be able to search stations in the Active Directory domain via the Network Scanner, the web browser in which the Control Center is opened, must be launched in the name of the domain user with permissions to search objects in the Active Directory domain.

Searching for stations in the Active Directory domain is performed only using the secure `ldaps` protocol.

Specify the settings for this mode:

- **Active Directory controller**—Active Directory controller, e.g. dc.example.com.
- **Login**—Active Directory user login.
- **Password**—Active Directory user password.



For the Servers under Windows OS, settings of Active Directory search are not obligatory. Information of a user on whose behalf the Server process is run (usually, it is LocalSystem) is used as a default registration information.

For the Servers under UNIX system-based OS, the settings must be obligatory specified.

- In the **Connection security** drop-down list, select the type of encrypted data exchange:
 - **STARTTLS**—switching to secured connection is performed by using the `STARTTLS` command. The 25 port is used by default for the connection.
 - **SSL/TLS**—establish a new secured TLS connection. The 465 port is used by default for the connection.
 - **No**—do not use encryption. Data exchange will be over an unprotected connection.
6. In the General parameters section, specify common settings for all search modes:
- **Timeout (sec.)**—maximum time in seconds to wait a response from a station.
 - **Number of requests to one station**—maximum number of requests to one station waiting for the answer.
 - **Number of simultaneous requests**—maximum number of stations for simultaneous requests.
 - Set the **Show station names** flag to display either IP address and DNS name of found stations. If a station is not registered at DNS server, only its IP address displays.
 - Set the **Detect installed Agent** flag to detect installed Agent on a station.







If the **Detect installed Agent** option is disabled, all found stations will have the 🚫 state, i.e. the state of anti-virus software on a station is unknown.


- **Port**—UDP protocol port number to call the Agent during the search. The range is 1-65535. The 2193 port is used by default.
7. Click **Scan** to launch the network scanning.



8. The list of computers demonstrating where Dr.Web Enterprise Security Suite anti-virus software is installed will be loaded into this window.

Unfold the catalog elements corresponding to workgroups (domains). All elements of the catalog corresponding to workgroups and individual stations are marked with different icons the meaning of which is given below:

Icon	Description
Workgroups	
	The work groups containing inter alia computers on which Dr.Web Enterprise Security Suite anti-virus software can be installed.
	Other groups containing protected or unavailable by network computers.
Workstations	
	Active station with installed anti-virus software.
	Active station with unknown state of anti-virus software: there is no anti-virus software on a station or software detection was not perform.

You can also unfold catalog items corresponding to computers with the  icon, and check which program components are installed there.

4.5. The Interaction Scheme of an Anti-Virus Network Components

The [Figure 4-2](#) describes a general scheme of an anti-virus network built with Dr.Web Enterprise Security Suite.

The scheme illustrates an anti-virus network built with only one Server. In large companies it is worthwhile installing several Dr.Web Servers to distribute the load between them.

In this example the anti-virus network is implemented within a local network, but for the installation and operation of Dr.Web Enterprise Security Suite and anti-virus packages the computers need not be connected within any local network, Internet connection is enough.

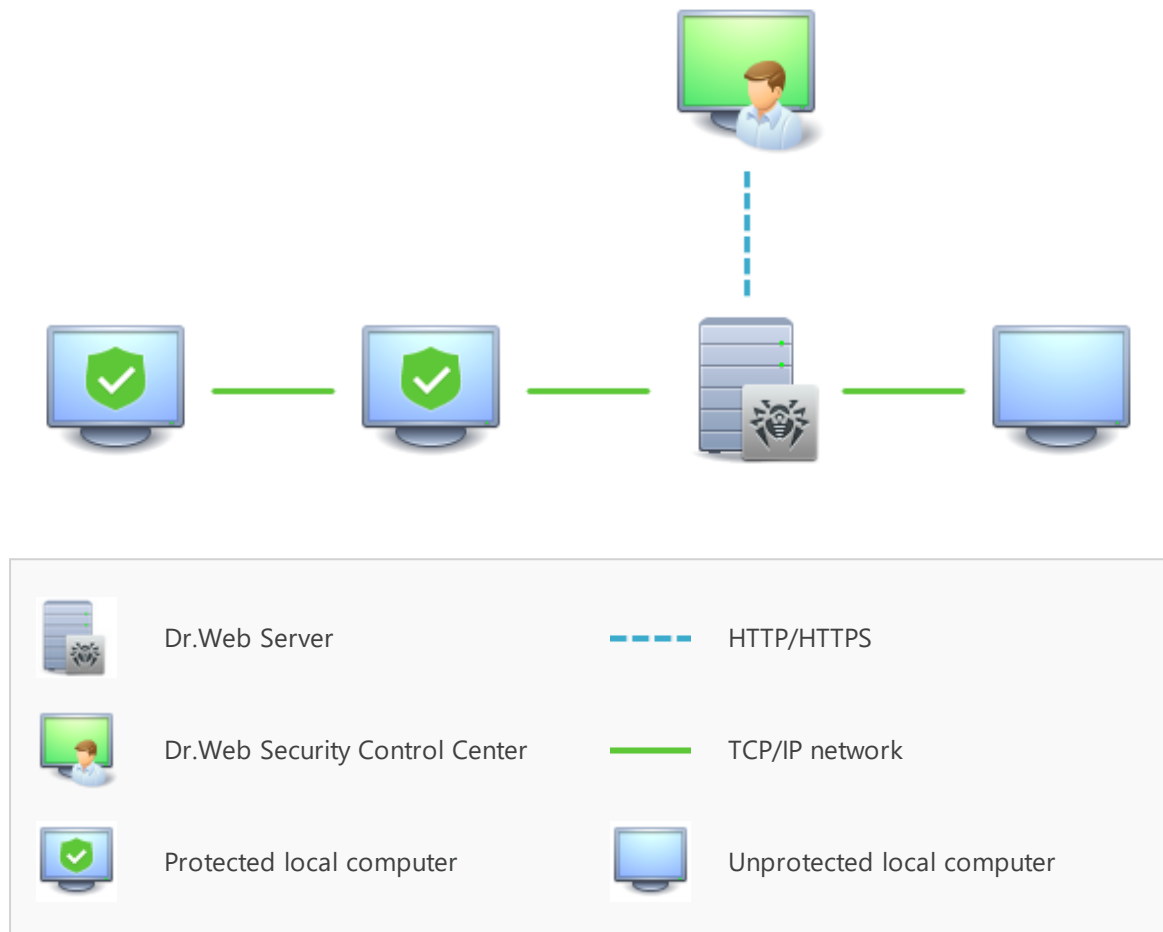


Figure 4-2. The physical structure of the anti-virus network

When Dr.Web Server is launched, the following sequence of commands is performed:

1. Dr.Web Server files are loaded from the `bin` catalog.
2. The Server Task Scheduler is loaded.
3. The content of the centralized installation catalog and update catalog is loaded, notification system is initialized.
4. Server database integrity is checked.
5. Server Task Scheduler tasks are performed.
6. The Server is waiting for information from Dr.Web Agents and commands from Dr.Web Security Control Center.

The whole stream of instructions, data and statistics in the anti-virus network always goes through Dr.Web Server. Dr.Web Security Control Center exchange information only with Servers. Based on Dr.Web Security Control Center commands, Servers transfer instructions to Dr.Web Agents and change the configuration of workstations.

Thus, the logical structure of the fragment of the anti-virus network looks as in the [Figure 4-3](#).

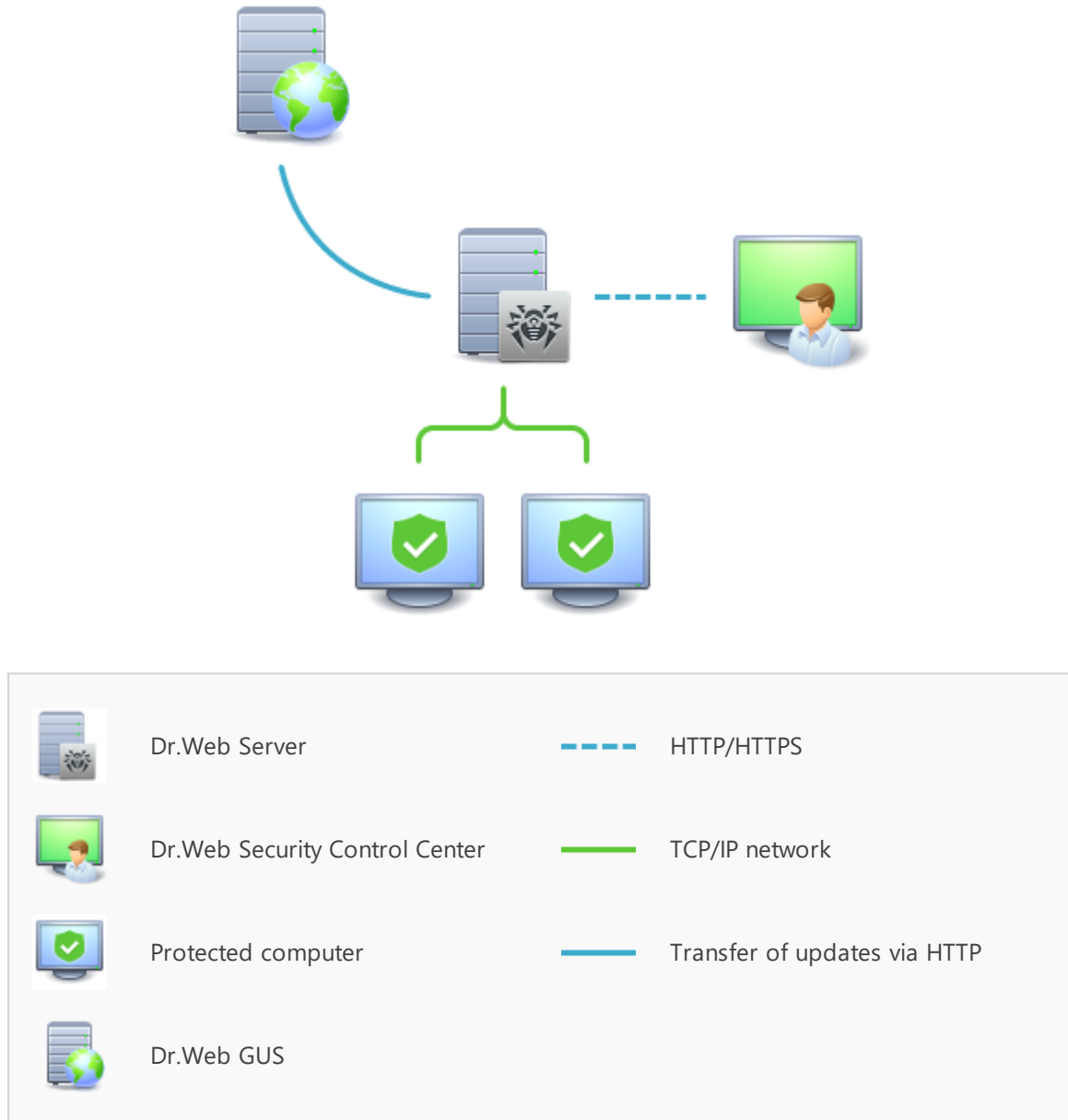


Figure 4-3. The logical structure of the anti-virus network

Between the Server and workstations (a thin continuous line in the [Figure 4-3](#)) transferring the following information:

- Agents requests for the centralized schedule and the centralized schedule of workstations,
- settings of the Agent and the anti-virus package,
- requests for scheduled tasks to be performed (scanning, updating of virus databases, etc.),
- files of anti-virus packages—when the Agent receives a task to install them,
- software and virus databases updates—when an updating task is performed,
- Agent messages on the configuration of the workstation,
- statistics (to be added to the centralized log) on the operation of Agents and anti-virus packages,



- messages on virus events and other events which should be logged.

The volume of traffic between the workstations and the Server can be quite sizeable subject to the settings and the number of the workstations. Therefore Dr.Web Enterprise Security Suite provides for the possibility to compress traffic. See the description of this optional mode in p. [Traffic Encryption and Compression](#) below.

Traffic between Dr.Web Server and Dr.Web Agent can be encrypted. This allows to avoid disclosure of data transferred via the described channel as well as to avoid substitution of software downloaded onto workstations. By default traffic encryption is enabled (for more, please read p. [Traffic Encryption and Compression](#)).

From the update web server to Dr.Web Server (a thick continuous line in the [Figure 4-3](#)) files necessary for replication of centralized catalogs of installation and updates as well as overhead information on this process are sent via HTTP. The integrity of the information (Dr.Web Enterprise Security Suite files and anti-virus packages) is provided through the checksums: a file corrupted at sending or replaced will not be received by the Server.

Between the Server and Dr.Web Security Control Center (a dashed line in [Figure 4-3](#)) data about the configuration of the Server (including information about the network layout) and workstations settings are passed. This information is visualized on Dr.Web Security Control Center, and in case a user (an anti-virus network administrator) changes any settings, the information about the changes is transferred to the Server.

Connection between Dr.Web Security Control Center and a certain Server is established only after an anti-virus network administrator is authenticated by his login name and password on the given Server.



Chapter 5: Anti-Virus Network Administrators

It is recommended to appoint a reliable, qualified employer experienced in the administration of a local network and competent in anti-virus protection as an administrator of the anti-virus network. Such employer should have full access to the installation folders of Dr.Web Server. Depending on organization security policy and staffing situation, such employer should either be a local network administrator or work closely with such person.



To manage the anti-virus network, it is not necessary to have administrator rights on computers included in the anti-virus network. However, remote installation and removal of the Agent software is possible within a local network only and requires administrator's rights in the local network, and checkout of Dr.Web Server requires full access to its installation folder.

When planning the anti-virus network, it is also recommended that a list of persons is made up, who are to be granted access to the Control Center as required by their job duties, as well as a list of roles with respective responsibilities assigned to each role. An [administrative group](#) shall be created for every role. Specific administrators can be linked with the roles by having their accounts placed into administrative groups. If necessary, administrative groups (roles) can be grouped hierarchically as a multilevel system allowing for individual [editing of administrative permissions](#) for each level.

5.1. Authentication of Administrators

To connect to Dr.Web Server, administrator can authenticate by the following ways:

- With storing administrative account information in the Server DB.
- Using the common LDAP/AD settings that allow to connect to LDAP and Active Directory servers.
- Via the RADIUS protocol.
- Via PAM (only for UNIX system-based OS).

At update of the Server from a previous version, also can be available the following authentication types (if they were enabled in previous version):



After disabling these authentication types, their sections will be excluded from the Control Center settings.

At the first Server installation, these sections are not provided.

- Via the Active Directory (for Servers under Windows OS).
- Via the LDAP protocol.

**Authentication methods are used sequentially according to the following rules:**

1. Authentication of administrator from the Server DB is always tried first.
2. The order of usage of authentication methods via the external systems depends on the order of their following in the settings, specified in the Control Center.
3. Authentication methods via the external systems are disabled by default.

To swap the usage of authentication methods

1. Select **Administration** in the main menu of the Control Center.
2. Select **Authentication** in the control menu.
3. In the opened window, list of authentications types is represented in the order of use. To change this order, drag and drop authentication methods in the list and place them in the necessary order of use the authentication.
4. To apply changes, you must restart the Server.



Administrative login must be unique.

Administrators are not allowed to connect via external authentication systems if an administrator with the same login already exists at the Server.

After each saving of changes in the **Authentication** section, the backup copy of the previous version of the configuration file with administrators authentication parameters is saved automatically. Only 10 last copies are stored.

Files are placed in the same folder as the configuration file itself and named according to the following format:

`<file_name>_<creation_time>`

where `<file_name>` depends on authentication system: `auth-ads.conf`, `auth-ldap.conf`, `auth-radius.conf`, `auth-pam.conf`.

You can use created backup copies particularly to restore the configuration file if the Control Center interface is not available.

5.1.1. Authentication of Administrators from the Server DB

Authentication method with storing administrative account information in the Server DB is used by default.

To manage administrators list

1. Select **Administration** in the main menu of the Control Center.
2. Select **Administrators** in the control menu. The list of all administrators registered in the DB will be opened.



See the [Administrators and Administrative groups](#) section for details.

5.1.2. LDAP/AD Authentication

To enable LDAP/AD authentication

1. Select **Administration** in the main menu of the Control Center.
2. Select **Authentication** in the control menu.
3. In the opened window, select **LDAP/AD authentication** section.
4. Set the **Use LDAP/AD authentication** flag.
5. Click **Save**.
6. Restart the Server to apply changes.

You can configure authentication using LDAP protocol at any LDAP server. Also you can use this mechanism to configure the Server under UNIX system-based OS for authentication in Active Directory on a domain controller.

For the convenience of a user, the section provides the ability to switch between simplified or extended versions of authentication settings via LDAP/AD.



Settings of LDAP/AD authentication are stored in the `auth-ldap-rfc4515.conf` configuration file.

Configuration files with typical settings are also provided: `auth-ldap-rfc4515-check-group.conf`, `auth-ldap-rfc4515-check-group-novar.conf`, `auth-ldap-rfc4515-simple-login.conf`.

General xml attributes are described in the **Appendices** document, in the [Appendix C3](#) section.

5.1.3. RADIUS Authentication

To enable RADIUS authentication

1. Select **Administration** in the main menu of the Control Center.
2. Select **Authentication** in the control menu.
3. In the opened window, select **RADIUS authentication** section.
4. Set the **Use RADIUS authentication** flag.
5. Click **Save**.
6. Restart the Server to apply changes.

To use the RADIUS authentication protocol, you must install a server that implements this protocol, e.g., `freeradius` (for more details, see <http://freeradius.org/>).



In the Control Center you can specify the following parameters for the RADIUS server communication:

- **Server, Port, Password**—parameters for connection to the RADIUS server: IP address/DNS name, port number, password (secret) correspondingly.
- **Timeout**—time for waiting the response from the RADIUS server, in seconds.
- **Retries number**—maximum number of retries to connect the RADIUS server.

Also, you can setup additional RADIUS parameters via the following tools:

- The `auth-radius.conf` configuration file located in the `etc` folder of the Server.

Besides parameters that are specified via the Control Center, in the configuration file you can specify the NAS identifier value. This identifier according to the RFC 2865, can be used instead of IP address/DNS name as a client's identifier for connection to the RADIUS server. In the configuration file it is stored in the following form:

```
<!-- NAS identifier, optional, default - hostname -->
<nas-id value="drwcs"/>
```

- The `dictionary.drweb` dictionary located in the `etc` folder of the Server.
The dictionary stores the list of RADIUS attributes of Doctor Web company (VSA—Vendor-Specific Attributes).

5.1.4. PAM Authentication

To enable PAM authentication

1. Select **Administration** in the main menu of the Control Center.
2. Select **Authentication** in the control menu.
3. In the opened window, select **PAM authentication** section.
4. Set the **Use PAM authentication** flag.
5. Click **Save**.
6. Restart the Server to apply changes.

PAM authentication under UNIX system-based OS is performed by using pluggable authentication modules.

To configure PAM authentication parameters, you can use one of the following ways:

- Configure authentication methods via the Control Center: in the **Administration** → **Authentication** → **PAM authentication** section.
- The `auth-pam.xml` configuration file located in the `etc` folder of the Server. Configuration file example is:

```
...
<!-- Enable this authorization module -->
  <enabled value="no" />
<!-- This authorization module number in the stack -->
```



```

<order value="50" />
<!-- PAM service name -->
<service name="drwcs" />
<!-- PAM data to be queried: PAM stack must return INT zero/non-zero -->
<admin-flag mandatory="no" name="DrWeb_ESuite_Admin" />
...

```

Description of PAM authentication parameters which are configured at Dr.Web Enterprise Security Suite side

Control Center items	auth-pam.xml file items			Description
	Tag	Attribute	Available values	
Use PAM authentication flag	<code><enabled></code>	<code>value</code>	yes no	Flag that defines whether the PAM authentication method is used.
Use Drag and Drop	<code><order></code>	<code>value</code>	positive integer, coordinated with other methods values	Serial number of PAM authentication if several authentication methods are used.
Service name field	<code><service></code>	<code>name</code>	-	Service name which is used to create PAM context. PAM can read politics for this service from the <code>/etc/pam.d/<service name></code> or from the <code>/etc/pam.conf</code> , if the file does not exist. If the parameter is not set (no <code><service></code> tag in the configuration file), the <code>drwcs</code> name is used by default.
Control flag is mandatory flag	<code><admin-flag></code>	<code>mandatory</code>	yes no	Parameter defines whether the control flag identifying a user as an administrator is mandatory. By default is <code>yes</code> .
Control flag name field	<code><admin-flag></code>	<code>name</code>	-	Key string according to which PAM modules read the flag. By default is <code>DrWeb_ESuite_Admin</code> .

When configuring operating of PAM authentication modules, use parameters which are set at Dr.Web Enterprise Security Suite side, and consider default values which are used if parameters are not specified.



5.1.5. Active Directory Authentication



This section is available for configuration via the Control Center only at update of the Server from the previous version. After disabling this authentication type, its section will be excluded from the Control Center settings.

At the first Server installation, these section is not available.

To enable Active Directory authentication

1. Select **Administration** in the main menu of the Control Center.
2. Select **Authentication** in the control menu.
3. In the opened window, select **Microsoft Active Directory** section.
4. Set the **Use Microsoft Active Directory authentication** flag.
5. Click **Save**.
6. Restart the Server to apply changes.

For Active Directory authentication, only enabling of using this authentication method is configured in Control Center.

You must edit Active Directory administrators' settings manually at the Active Directory server.

To edit Active Directory administrators



The following operation must be carried out from a computer with Active Directory Service snap-in.

1. To enable editing of administrator parameters, do the following:
 - a) Modify the Active Directory scheme with the `drweb-11.00.1-<build>-esuite-modify-ad-schema-<OS_version>.exe` utility (it is included into Dr.Web Server distribution kit).
Modification of Active Directory scheme may take some time. Depending on the domain configuration, it may take up to 5 minutes and more to synchronize and apply the modified scheme.



If the Active Directory scheme has been modified earlier via this utility for the 6 version of the Server, it is no need to perform modification repeatedly via the utility from the 11.0.2 version of the Server.

- b) Register Active Directory Schema snap-in, execute the `regsvr32 schmmgmt.dll` command with the administrative privileges, then run `mmc` and add the **Active Directory Schema** snap-in.



- c) Using the Active Directory Schema snap-in, add the auxiliary **DrWebEnterpriseUser** class to the **User** and (if necessary) **Group** classes.



If the scheme modification and application process has not finished, the **DrWebEnterpriseUser** class may be not found. In this case, wait for a few minutes and retry to add the class as described in **c)** step.

- d) With the administrative privileges run the `drweb-11.00.1-<build>-esuite-aduac-<OS_version>.msi` file (is included in the Enterprise Security Suite 11.0.2 distribution kit) and wait until the installation finishes.
2. Visual editing of attributes is available from the **Active Directory Users and Computers** control panel → **Users** section → in the **Administrator Properties** window for editing settings of selected user → on the **Dr.Web Authentication** tab.
 3. The following parameter is available for editing (**yes**, **no** or **not set** values can be set for the attribute):
 - **User is administrator** indicates that the user is full-rights administrator.



Algorithms of operating principles and attributes handling during authentication are described in the **Appendices** document, in the [Appendix C1](#) section.

5.1.6. LDAP Authentication



This section is available for configuration via the Control Center only at update of the Server from the previous version. After disabling this authentication type, its section will be excluded from the Control Center settings.

At the first Server installation, these section is not available.

To enable LDAP authentication

1. Select **Administration** in the main menu of the Control Center.
2. Select **Authentication** in the control menu.
3. In the opened window, select **LDAP authentication** section.
4. Set the **Use LDAP authentication** flag.
5. Click **Save**.
6. Restart the Server to apply changes.

You can configure authentication using LDAP protocol at any LDAP server. Also you can use this mechanism to configure the Server under UNIX system-based OS for authentication in Active Directory on a domain controller.



Settings of LDAP authentication are stored in the `auth-ldap.conf` configuration file.

General xml attributes are described in the **Appendices** document, in the [Appendix C2](#) section.

Unlike to Active Directory, this mechanism can be configured to any LDAP scheme. By default Server attributes are used as they were defined for Active Directory.

LDAP authentication process can be presented as the following:

1. LDAP server address is specified via the Control Center or xml configuration file.
2. For the specified user name, the following actions are performed:
 - Translation of name to the DN (Distinguished Name) using DOS-like masks (with * symbol), if rules are specified.
 - Translation of name to the DN using regular expressions, if rules are specified.
 - Custom script for translation of name to the DN is used, if it is specified in settings.
 - If matches in translation rules are not found, specified name is used as it is.



Format of user names specifying is not predefined and not fixed—it can be any as it is accepted in the company, i.e. forced modification of LDAP scheme is not demanded. Translation according given scheme is performed using rules of translation of names to LDAP DN.

3. After translation, like for the Active Directory, attempt of the user registration at the specified LDAP server using determined DN and specified password is performed.
4. After this, like for the Active Directory, LDAP object attributes are read for the determined DN. Attributes and their possible values can be redefined in the configuration file.
5. If undefined values of administrator attributes are found, and inheriting is specified (in the configuration file), the search of needed attributes in the user groups is the same as in the Active Directory.

5.2. Administrators and Administrative groups






To open administrative accounts control section, select **Administration** in the main menu of the Control Center and then in the opened window select the **Administrators** item of the control menu.



The **Administrators** section is available for all Control Center administrators. Full hierarchical tree of administrators is available only for **Administrators** group members who have the **View properties and configuration of administrative groups** permission. The rest of administrators will only see their respective groups with subgroups and accounts.



On the toolbar of the **Administrators** section, the following options are available:

-  [Create account](#)
-  [Create group](#)
-  [Remove selected objects](#)
-  [Change password](#)
-  [Propagate administrator permissions](#)

5.2.1. Hierarchy of Administrators

Hierarchical view of administrators is a tree which represents a structure of administrative groups and administrators accounts. Administrative groups and their members (administrators accounts) both can be nodes of such tree. Each administrator can be a member of only one group. Nesting level of groups in a tree is not limited.

Predefined groups

After installing Dr.Web Server two groups are automatically created:

- **Administrators.** The group initially contains only **admin** user with a full set of privileges. The **admin** user is automatically created during Dr.Web Server installation (see below).
- **Newbies.** The group is initially empty. Administrators with external type of authentication, such as LDAP, Active Directory or RADIUS, will be automatically moved to this group. Administrators of the **Newbies** group have read-only access by default.

Predefined administrators

After installing Dr.Web Server the following administrative account is automatically created:

Parameter	Value
Account name	admin
Password	Password is set during Dr.Web Server installation (step 9 of installation procedure).
Privileges	Full set of privileges.
Account editing	Administrator privileges cannot be edited. Administrative account cannot be deleted.

Hierarchical Lists Displaying

- In the hierarchical list of anti-virus network: administrator sees only those user groups, which are granted in the **View groups of stations properties** permission. All system groups are



also displayed in the anti-virus network tree, but only stations from the specified user groups list are available inside.

- In the hierarchical list of administrators: administrator from the **Newbies** group sees only a tree, the root node of which is a group of this administrator, i.e. sees administrators from the own group and its subgroups. Administrator from the **Administrators** group sees all administrators not depending on their groups.

5.2.2. Administrators Permissions

All administrators activity in the Control Center is limited by the set of permissions, which can be defined either for specific account or for a group of administrators.

Administrative permissions system includes the following opportunities of permissions management:

- **Granting permissions**

Granting permissions performed during creation of administrative account or administrative group. When administrator or administrative account is created, it inherits permissions from the parent group it is added to. Changing permissions is not allowed during creation.

- **Inheriting permissions**

By default permissions of administrators and administrative groups are inherited from a parent group, but inheritance can be disabled.

- If inheritance is disabled, administrator uses independence set of personal permissions with is set directly for the account.
- Inheriting account or group permissions does not reassign them with parent permissions but calculates new set of permissions from permissions of all parent groups in the branch of hierarchy. The resulting set of permissions for an object depends on own permissions and parent groups permissions can be found in the [Permissions Merge](#) section.

- **Changing permissions**

Changing permissions is not allowed for administrators accounts or administrative groups during creation. Permissions can be changed only for already created accounts and groups and can be done in the properties section of an account or a group. You can only reduce permissions at editing own settings. You cannot edit permissions for the **admin** predefined administrator.

The procedure is described in the [Editing Permissions](#) section.



Editing Permissions

To edit permissions of an administrator or a group of administrators

1. Select the **Administration** item in the main menu of the Control Center and in the opened windows, select the **Administrators** item in the control menu.
2. Select the account you want to edit from the list of administrators. The properties section will be opened for editing.
3. In the **Permissions** subsection, you can edit the list of actions that are allowed for the selected administrator or administrative group.
4. To manage the permissions inheritance from the parent group for the selected object, use the switch:

 **Inheritance enabled**

 **Inheritance disabled**

5. The general settings are set in the permissions table:
 - a) In the first column, permission names are given. A column name depends on the specific section that unifies permissions by types.



Brief description of administrative permissions and Control Center sections depended on a certain permissions, is given in the **Appendices** document, in the [Appendix C4. Depended Permissions Sections](#).

- b) The **Permissions** column contains the settings for corresponding permissions from the first column.


Managing objects	Settings list in the Permissions column	How to setup the permission
Permission is set for all objects		
Permission does not implicate dividing on groups by managing objects.	One of the following permission types may be given: <ul style="list-style-type: none"> • Personal—personal settings are assigned for this object. • Inherited—settings are inherited from the parent group. 	Set/clear the Grant flag in the corresponding permission line.
Permission is set for the list of objects (stations, administrators or groups)		
<ul style="list-style-type: none"> • <i>All granted</i>—permission is granted for all managing objects. 	If settings are merged, the following permission types are given at the same time:	Click the objects list (even it is All). Either the anti-virus network tree or administrator groups tree or tariffs tree opens depending on the editing permission. Select



Managing objects	Settings list in the Permissions column	How to setup the permission
<ul style="list-style-type: none"> • <i>All forbidden</i>—permission is forbidden for all managing objects. • <i>Granted for some objects</i>. At this, the list of objects to grant the permission must be set. For all other objects, the permission is considered forbidden. • <i>Forbidden for some objects</i>. At this, the list of objects to forbid the permission must be set. For all other objects, the permission is considered granted. 	<ul style="list-style-type: none"> • Personal—personal settings specified for this object. • Result—the result of merging of an object personal permission and a parent group permission. <p>If settings are inherited, only the permission type Inherited is given.</p>	<p>necessary objects in the tree. Use CTRL and SHIFT to select several objects. If necessary, set the For all permissions of the section, to apply these settings for all permissions given in the same section as the edited permission.</p> <p>Click the button:</p> <ul style="list-style-type: none"> • Grant to allow the permission for selected objects. • Forbid to forbid the permission for selected objects.



For the same permission assigned on the list of objects, cannot be set the lists of forbidden and allowed objects at the same time. These concepts are mutually exclusive.

- c) The **Inheritance** column reflects the state of the permission relatively a parent group:
- **Inherited from a group**—the inheritance from the specified parent group is enabled, personal permissions are not set.
 - **Personal settings**—the inheritance from the specified parent group is disabled, personal permissions are set.
 - **Merged with the group**—the inheritance from the specified parent group is enabled, personal permissions are set. Result permission of an object is calculated by merging of parents group permissions and personal permissions (see the [Merging Permissions](#)). In this case, personal permissions of an object can be removed. To do this, click  in the **Inheritance** column. After personal permissions been removed, the **Inheritance from a group** will be set.

Merging Permissions

Calculation of result permissions of an object (administrator or administrative group) when inheritance is enabled, depends on paren groups permissions and permissions of an object itself. The table below contains the calculation principal of an object permission result:

Parent group permission	Examining child permission	Result permission
All granted	Granted for some objects	Granted for objects of a child
Granted for some objects	Granted for some objects	The list of allowed objects are merged



Parent group permission	Examining child permission	Result permission
Granted for some objects	All granted	All granted
A parent and a child have forbidding permissions and one of them forbids all		All forbidden
Forbidden for some objects	Forbidden for some objects	The list of forbidden objects are merged
All forbidden	All granted	All granted
Forbidden for some objects	All granted	Forbidden of objects of a parent
Forbidden for some objects	Granted for some objects	Allowed objects are subtracted from forbidden objects. If the forbidden objects list is not empty, in the result, the left objects are forbidden. Otherwise, in the result, all objects of a child are allowed
Granted for some objects	All forbidden	All forbidden
All granted	Forbidden for some objects	Forbidden of objects of a child
Granted for some objects	Forbidden for some objects	Forbidden objects are subtracted from the allowed objects. If the allowed objects list is empty, in the result, all is forbidden. Otherwise, in the result all left objects are allowed.

5.3. Management of Administrative Accounts and Administrative Groups

5.3.1. Creating and Deleting Administrative Accounts and Groups



Administrative login must be unique.

Administrators are not allowed to connect via external authentication systems if an administrator with the same login already exists at the Server.


Adding Administrators



To create administrative account, administrator must have **Create administrators, administrative groups** permission.



To add a new administrative account

1. Select the **Administration** item in the main menu of the Control Center and in the opened windows, select the **Administrators** item in the control menu.
2. Click the  **Create account** icon in the toolbar. A window with creating account settings will be opened.
3. In the **General** section, specify the following parameters:
 - In the **Login** field specify administrator account login for Dr.Web Security Control Center access. It is allowed to use lower case characters (a-z), upper case characters (A-Z), digits (0-9), symbols "_" and ".".
 - In the **Authentication type** list, select one on the following variants:
 - **Internal**—authentication of such administrator in the Control Center is based on the credentials in the DB of Dr.Web Server.
 - **External**—authentication of such administrator in the Control Center is performed via LDAP, Active Directory, RADIUS or PAM external systems.



For more details see [Authentication of Administrators](#).

- In the **Password** and **Confirm Password** fields set the password for accessing the Server and Dr.Web Security Control Center.



It is not allowed to use national characters in administrator password.



Password fields are active only for administrators with internal authentication.

Values of these fields specified in the Control Center for administrators with external authentication, are irrelevant.

- In the **First name**, **Middle name** and **Last name** fields you can specify administrator's personal data.
- In the **Interface language** drop-down list, select the language which will be used by the adding administrator (web browser language or English is specified by default).
- In the **Date format** drop-down list, select the date format which will be used by this administrator during editing settings that contain dates. The following formats are available:
 - European: DD-MM-YYYY HH:MM:SS
 - American: MM/DD/YYYY HH:MM:SS
- In the **Description** field, you can set optional description of the account.



Values of fields, marked with the * sign, must be obligatory specified.

4. In the **Groups** subsection, you can specify parental administrative group. The list contains groups to which an administrator can be assigned. The flag is set next to the group to which created administrator will be assigned. Created administrators are placed in the parent group of current administrator by default. To change specified group, set the flag next to the required group.

Each administrator may be a member of one group only.

Administrator inherits permissions from the parental group (see [Administrators Permissions](#)).


5. After you set all necessary parameters, click **Save** to create a new administrative account.

Adding Administrative Groups



To create administrative groups, administrator must have **Create administrators, administrative groups** permission.

To add a new administrative group

1. Select the **Administration** item in the main menu of Dr.Web Security Control Center and in the opened windows, select the **Administrators** item in the control menu.
2. Click the  **Create group** icon in the toolbar. A window with creating group settings will be opened.
3. In the **General** section, specify the following parameters:
 - In the **Group field**, specify the name of administrative group. It is allowed to use lower case characters (a-z), upper case characters (A-Z), digits (0-9), symbols "_" and ".".
 - In the **Description** field, you can set optional description of the group.
4. In the **Groups** subsection, you can specify parental administrative group. The list contains groups which can be assigned as a parental group. The flag is set next to the group into which created administrative group will be included. Created groups are placed in the parent group of current administrator by default. To change specified group, set the flag next to the required group.

Only one parent group can be assigned.

Administrative group inherits permissions from the parental group (see [Administrators Permissions](#)).

5. After you set all necessary parameters, click **Save** to create a new administrative group.



Deleting Administrators and Administrative Groups



To delete administrative accounts and administrative groups, administrator must have **Create administrators, administrative groups** and **Edit properties and configuration of administrative groups** permissions correspondingly.

To delete administrator account

1. Select the **Administration** item in the main menu of Dr.Web Security Control Center and then the **Administrators** item in the control menu.
2. In the administrators hierarchical list, select administrative account or administrative group you want to delete.
3. Click the **✗ Remove selected objects** icon in the toolbar.

5.3.2. Editing Administrative Accounts and Groups



To edit accounts of administrators and administrative groups, you need to have the **Edit administrative accounts** and **Edit properties and configuration of administrative groups** permissions.

To edit own administrative account, you need to have the **Edit own settings** permission.

Fields marked with the * sign must be specified.

Editing Administrators

To edit an administrative account

1. Select the account you want to edit from the list of administrators. The properties section will be opened for editing.
2. The **Main** subsection contains properties that were set during [account creation](#). Also, please note:
 - a) To change the password for the administrative account, click the **🔑 Change password** icon on the toolbar.



An administrator with corresponding permissions can change passwords of all other administrators.



Login for administrative account cannot contain national characters.



- b) The following properties of the administrator account are read-only:
- Account creation date and its properties last change date,
 - **Status**—displays network address of the last connection under the current account.
3. In the **Groups** subsection, you can change an administrative group. The list contains groups to which an administrator can be assigned. The flag is set next to the current parent group of administrator. To change assigned group, set the flag next to the required group.
- It is mandatory to assign a parent group to the administrator. Each administrator can be included only to the one group at a time. Permissions of administrator are inherited from the parent group.
- See also the [Editing membership](#) subsection.
4. In the **Permissions** subsection, you can edit the list of actions that are allowed for the selected administrator.
- Details on editing permissions are described in the [Editing permissions](#) subsection.
5. Click **Save** to apply changes.

Editing Administrative Groups

To edit an administrative group

1. Select the group you want to edit from the list of the administrators. Click the group name to open its properties section for editing.
 2. The **Main** subsection contains properties that were set during [group creation](#).
 3. In the **Groups** subsection you can change the parent administrative group. The list contains groups which can be assigned as a parental group. The flag is set next to the current parent group. To change assigned group, set the flag next to the required group.
- It is mandatory to assign a parent group to the administrative group. The group inherits permissions from its parent group.
- See also the [Editing membership](#) subsection.
4. In the **Permissions** subsection, you can edit the list of actions that are allowed for the selected administrative group.
- Details on editing permissions are described in the [Editing permissions](#) subsection.
5. Click **Save** to apply changes.

Editing Membership

There are several ways to assign a parent group for an administrator or an administrative group


1. Change administrator settings or group settings as described [above](#).



2. Drag-and-drop administrator or administrative group from the hierarchical tree to the group you want to assign as a parent group.

Propagating Administrative Permissions

To propagate permissions of an administrator or group on another administrator or group

1. In the list of administrators, select one object permissions of which you want to propagate. It can be either administrator or administrative group.
2. On the toolbar, click  **Propagate administrator permissions**.
3. In the opened window, select objects to assign permissions. Please note the following features:
 - You can select one or several objects to assign permissions. It can be either administrators or administrative groups.
 - Permissions are saved for selected objects as a personal. Inheritance with a parent group became broken.
 - You cannot assign permissions to default objects (the **Administrators**, **Newbies** groups, the **admin** administrator).
 - You can propagate permissions only on objects allowed in the **Edit administrators accounts** and **Edit properties and configuration of administrative groups** permissions.
 - If the propagation causes assignment of permissions that exceed the own permissions of administrator who perform the operation, the error about insufficient permissions to perform the operation is returned.
4. Click **Propagate**.



Chapter 6: Integrated Workstations Management

For the integrated management of stations and their settings, the following tools are provided:

- **Groups.**
Station can be included into unlimited number of groups. Obligatory into predefined groups according to a station state and optionally into user groups. But only one of these groups is primary.
- **Policies.**
Only one policy or none of policies can be assigned to a station.

Station Settings Types

- **Inherited settings.**


When creating a new station, its settings are always inherited from a policy or a primary group.. Detailed information is given in the [Inheriting Stations Configuration](#) section.

- **Personal settings.**

During a station operation, inheritance can be broken and personal settings are set.

To set the personal settings for a station, edit corresponding settings section.

If the personal settings are specified for a station, then settings of assigned policy or personal group settings and their changing will not have any affect on station settings.

You can restore the inheritance from a policy or a primary group. To do this, click the  **Remove personal settings** button on the toolbar of the Control Center, in the corresponding settings section or in a station properties section.



In each settings section of workstation configuration elements, the information that settings of this section are set personally or inherited from a corresponding object is displayed.

A part of the settings sections can be set personally and a part be inherited from a policy or a primary group if the policy is not specified.

You can set different configurations for different [groups](#) and [stations](#), by editing corresponding settings.

6.1. Inheriting Stations Configuration

When creating a new station or a group, their settings are always inherited:

- A new group inherits settings from its parent group into which it is directly included. If it has no parent group (created group is a root group in hierarchical tree), its settings are inherited from the **Everyone** group.



- A new station inherits settings from a policy that had been assigned during the station creating. If a policy has not been assigned, station settings are inherited from one of the groups to which the station is included. That group is called a *primary group*.

During further operation, inheritance can be broken and personal settings are set for the station.

Priority of applying settings of a station:

1. If a station has personal settings, the personal settings will be used. At this, a policy can be assigned to a station. If personal settings of specific section are set, the inheritance for this section is broken.
2. If a station has no personal settings, applied policy settings are used.
3. If a station has no personal settings and no policy applied, a station uses settings of its primary group.

Personal settings are set	Policy is assigned	Used settings
+	+	Personal settings
+	-	Personal settings
-	+	Policy settings
-	-	Primary group settings



None of policies can be assigned to a station but a stations always has a primary group.

Inheritance of Station Settings from Policies

If a policy is assigned to a station, the inheritance of station settings from policies settings is set.

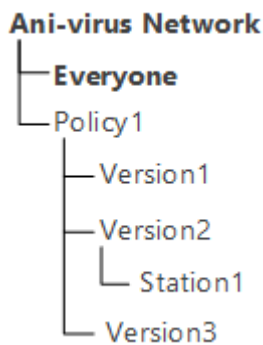
If the settings of the policy are modified, these changes are inherited by all stations for which this policy is assigned, unless the personal settings have been set to stations. When creating a station, you can specify what policy will be assigned to a station. A policy can be replaced in any time during operation. If no policy is assigned, settings will be inherited from a primary group.

Policies have no hierarchical structure of inheritance. When policy is created, its settings are copied as a personal settings from the specified object (the **Default policy** by default). Only one policy version is the current and its settings are the settings of the policy itself. Only the current version can be assigned to stations.



Example

The structure of hierarchical list is the following:



For the `Station1` station the `Policy1` policy is assigned. The `Version2` policy version is the current for the `Policy1` policy. Settings of the `Version2` version are the same as the `Policy1` policy settings which are personal.

Inheritance of Station Settings from Groups

If the policy is not set for a station, the settings of a station get inherited from the settings of a primary or group.

If the settings of a primary group are modified, these changes are inherited by all stations included into the group, unless the personal settings have been set to stations. When creating a station, you can specify what group will be set as primary. By default the primary group is **Everyone**. A primary group can be replaced in any time during operation.



If **Everyone** is not a primary group, and a different primary group that is a root group in hierarchical tree, has no personal settings, the settings of the **Everyone** group are inherited by a new station.

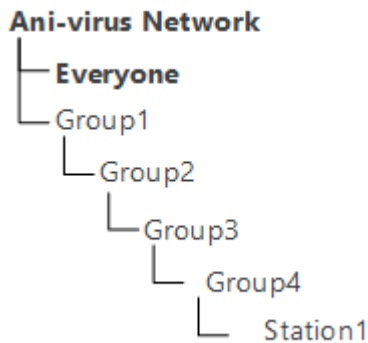
It is possible to create nested groups.

In nested groups, If a station has no personal settings, the inheritance of the configuration elements is performed according to the structure of nested groups. The search is performed upwards through the hierarchical tree, starting from the station primary group, its parent group and so on till the root element of the tree. If no personal settings are found, then configuration elements of the **Everyone** group are inherited.



Example

The structure of hierarchical list is the following:



The Group4 is the primary group for the Station1. To determine which settings to inherit for the Station1, the search is carried out in the following order: Station1 → Group4 → Group3 → Group2 → Group1 → Everyone.



By default the network structure is displayed in such a way as to show a station in all the groups it is included into. If you want stations to be displayed in the network catalog in their primary groups only, on the toolbar of the Control Center in **Settings of tree view**, clear the **All groups membership** flag.

6.2. Groups

Grouping is designed to make the administration of anti-virus workstations easier.

Grouping of stations may be used for the following purposes:

- Group operations over all stations, included to these groups.
As for separate group so and for several selected groups, you can launch, view and stop scan tasks on stations, included to this group. In the same way, you can view statistics (including infections, viruses, start/stop, scan and installation errors and etc) and summary statistic for all workstations of the group or several groups.
- Settings the single parameters for stations via the group, to which these stations are included (see p. [Chapter 6: Integrated Workstations Management](#)).
- Order (structure) the list of workstations.

It is possible to create nested groups.



6.2.1. System and User Groups

System Groups

Dr.Web Enterprise Security Suite has an initial set of pre-installed system groups. These groups are created during the installation of Dr.Web Server and may not be deleted. Still the administrator may disable their display, if necessary.

Each system group except **Everyone** contains a set of feature-packed subgroups.



After the Server has been installed, until no station connected, the list of system groups displays the **Everyone** group only. To display all system groups, use the **Show hidden groups** option in the **Settings of tree view** section of the [toolbar](#).

Everyone group

Group contains all stations known to Dr.Web Server. The **Everyone** group has default settings.

Configured

Group contains stations which have personal settings specified.

Neighbors

The **Neighbors** group contains all Dr.Web Servers connected to this Server and designed to manage connections between Servers in a multi-server anti-virus network (for more details, see [Peculiarities of a Network with Several Dr.Web Servers](#)).

Configuring of new interserver connections is described in [Setting Connections between Several Dr.Web Servers](#).

The **Neighbors** group contains subgroups displaying the state of neighbor Servers connected to this Server:

- **All neighbors** group contains all neighbor Servers connected to this Server.
- **Children** group contains subordinate Servers.
- **Offline** group contains currently offline Servers.
- **Online** group contains currently online Servers.
- **Parents** group contains main Servers.
- **Peers** group contains peer Servers.



Operating system

This category of groups represents the operating systems under which the stations are working at the moment. These groups are not virtual, may have station settings and be primary groups.

- **Android** family groups. This family includes a set of groups, that correspond to specific version of Android OS for mobile devices.
- **macOS** family groups. This family includes a set of groups, that correspond to specific version of macOS operating system.
- **UNIX** family groups. This family includes a set of groups, that correspond to OS of UNIX system-based systems, for example, Linux, FreeBSD, etc.
- **Windows** family groups. This family includes a set of groups, that correspond to specific version of Windows operating system.

Policies

Group contains policies for configuring stations.



The **Policies** group is displayed in the anti-virus tree only if using policies is allowed in the Server configuration.

Proxies

Group contains Dr.Web Proxy servers for connecting the Agents and neighbor Servers.

Status

The **Status** group contains subgroups reflect the current status of the station, that is if it is connected to the Server or not at the moment. These groups are completely virtual, may not have any settings or be primary groups.

- **Deinstalled** group. Once Dr.Web Agent software has been deinstalled from a station, the station is transferred to the **Deinstalled** group.
- **Deleted** group contains stations, which were deleted by an administrator from the Server. Such stations can be restored (see p. [Removing and Restoring Stations](#)).
- **New** group contains new stations, which have been created by administrator via Dr.Web Security Control Center, but the Agent is not installed yet.
- **Newbies** group contains all stations not registered at the Server at the moment. When the registration is approved, stations will be removed from this group automatically (see the [New Stations Approval Policy](#) section for more details).
- **Offline** group contains all workstations not connected at the moment.



- **Online** group contains all workstations connected at the moment (reacting to Server requests).
- **Update Errors** group contains all workstations that have been failed to update.

Transport

The following subgroups elicit the protocol of workstations connection to the Server. These groups are completely virtual, may not have any settings or be primary groups.

- **TCP/IP** group contains workstations connected at the moment through the TCP/IP protocol.
- **TCP/IP Version 6** group contains workstations connected at the moment through the TCP/IP version 6 protocol.

Ungrouped

Group contains stations, which are not included in any of user groups.

User Groups

These groups are assigned by the anti-virus network administrator for own needs. The administrator may create own groups and include workstations in them. The contents and names of such groups are not restricted by Dr.Web Enterprise Security Suite in any manner.

In the table [6-1](#), all possible groups and group types are given for your reference, along with the specific parameters supported (+) or not supported (–) by the groups.

The following parameters are considered:

- **Automatic membership.** The parameter reflects whether stations may be automatically included in the group (automatic membership support) and group contents automatically adjusted during Server operation.
- **Membership administration.** The parameter reflects whether the administrator can manage group membership: add stations to or remove from the group.
- **Primary group.** The parameter reflects whether the group can be primary for a station.
- **Possibility to have own settings.** The parameter reflects whether the group can have own settings of anti-virus components (to be propagated to its stations).

Table 6-1. Groups and supported parameters

Group/group type	Parameter			
	Automatic membership	Membership administration	Primary group	Possibility to have own settings
Everyone	+	–	+	+



Group/group type	Parameter			
	Automatic membership	Membership administration	Primary group	Possibility to have own settings
Configured	+	-	-	-
Operating system	+	-	+	+
Status	+	-	-	-
Transport	+	-	-	-
Ungrouped	+	-	-	-
User groups	-	+	+	+



Under *group administrator* account, the user group which he manages will be the root of the hierarchical tree, even if it has the parent group. At this, all nested groups of managing group are available.

6.2.2. Group Management

6.2.2.1. Creating and Deleting Groups

Creating Groups

To create a new group



1. Select the **Anti-virus network** item in the main menu of the Control Center.
2. Select **+ Add a network object** on the toolbar and **+ Create group** in the submenu.
A window for creating a group will be opened.
3. The **Identifier** field is filled automatically. You can edit it during creation, if necessary. The identifier should not contain spaces. In the sequel, a group identifier cannot be changed.
4. Specify a group name in the **Name** field.
5. For nested groups, in the **Parent group** field, select from the drop-down list a parental group to inherit configuration from it if personal settings are not specified. For a root group (without a parent), leave this field blank to add the group to the root of the hierarchical tree. In this case settings are inherited from the **Everyone** group.
6. Specify optional comment in the **Description** field.
7. Click **Save**.



The groups you create are initially empty. Procedure of including workstations to groups is described in the [Including Stations into Groups](#) section.

Deleting Groups

To delete existing group

1. Select the user group in the hierarchical list of the Control Center.
2. Click  **General** →  **Remove selected objects** on the toolbar.



You cannot delete pre-installed groups.

6.2.2.2. Editing Groups

To edit group properties

1. Select the **Anti-virus network** item in the main menu of the Control Center, then select the group in the hierarchical list of the opened window.
2. Open the group properties section by one of the following ways:
 - a) Click the name of the group in the hierarchical list of anti-virus network. A panel with properties of the group will be automatically opened in the right part of Dr.Web Security Control Center.
 - b) Click **Properties** in the [control menu](#). A window with the group properties will be opened.
3. Window with the group settings contains the **General** and **Configuration** sections. These settings are described below.



If you open group properties in the right part of the Control Center (see the step **2.a**), the **Stations information** section with general information about stations, included to this group, will be also available.

4. Click **Save** to save all changes.

General

In the **General** section, the following information is presented:

- **ID**—group unique identifier. Is read-only.
- **Name**—group name. You can change the group name, if necessary. For pre-installed groups, the **Name** field is read-only.



- **Parent group**—parent group in which this group is included and from which group configuration is inherited, if the personal settings are not specified. If a parent group is not specified, settings are inherited from the **Everyone** group.
- **Description**—optional field with group description.

Stations Information

In the **Stations information** section, the following information is presented:

- **Stations**—total number of stations which are included into this group.
- **Primary group for**—number of stations for which this group is primary.
- **Stations online**—number of stations in this group which are currently online.

Organization

If at the group creation, you have defined the group as a representative of the organization or the company, the **Organization** section becomes available during the group editing. In this section, you can edit requisites of the organization which is represented by this group. The set of requisites may differ depending on a country in which the organization locates.






You can define a group as an organization representative only at the group creating. You also cannot cancel this characteristic after the group has been created.

Configuration







For more details on inheriting settings by stations from primary groups, see the [Chapter 6: Integrated Workstations Management](#) section.

In the **Configuration** section, the following groups parameters are presented:

Icon	Settings	Description section
	Permissions for workstations, which inherit this setting from a group if it is primary. Setting permissions of groups is similar to setting permissions of separate workstations.	Permissions of Station Users
	Centralized task schedule for workstations, which inherit this setting from a group if it is primary. Setting schedule of group is similar to setting centralized schedule of separate workstations.	Scheduled Tasks of a Station
	License key file for workstations, which inherit this setting from a group if it is primary.	License Keys



Icon	Settings	Description section
	Restrictions for anti-virus software updating for workstations, which inherit this setting from a group if it is primary.	Update Restrictions for Workstations
	Installing components list for workstations, which inherit this setting from a group if it is a primary. Editing the components list of group is similar to setting the components list of separate stations.	Installing Components of the Anti-Virus Package
	Configuring automatic placing the stations into the group. Available for user groups only.	Configuring Automatic Group Membership
	Settings of the anti-virus components. Setting the anti-virus package components of group is similar to setting the anti-virus package components of separate workstations.	Management of Anti-virus Components

Groups with personal settings in the **Configuration** section, also contain the number of nested groups with broken inheritance and own personal settings, if such are present. Click this option to open the window displaying the list of groups with their names and identifiers given.

6.2.3. Including Stations into Groups

Setting a Primary Group

There are several ways how to set a new primary group for a workstation or a group of workstations.

To set primary group for station

1. In the main menu, select **Anti-virus network**, then click the name of a workstation in the hierarchical list.
2. The station properties panel opens. Also, you can open the stations properties section by selecting **Properties** in the [control menu](#). In the opened window, go the **Groups** section.
3. If you want to reassign the other primary group, click an icon of necessary group in the **Membership** list. The **1** sign displays on the icon.
4. Click **Save**.

To set primary group for several stations

1. In the main menu, select **Anti-virus network**. In the hierarchical list of the opened window, click the name of workstations (you can select groups of workstations either, in such case, the action spreads on all stations in the group) for which you want to set a primary group. To select several workstations and groups, press and hold CTRL or SHIFT during mouse selection.



2. On the toolbar, click **General** → **Set a primary group for stations**. This opens the window listing the groups which can be set as primary for the selected workstations.
3. Click the name of a group to set it as primary.

You can also make a group primary for all workstations included into it. To do this, select the necessary group in the hierarchical list, and click **General** → **Set this group as primary** on the toolbar.

Including into User Groups

Dr.Web Enterprise Security Suite provides the following ways how to place stations into user groups:

1. [Place stations into groups manually](#).
2. [Use automatic group membership](#).

6.2.3.1. Including Stations into Groups Manually

There are several ways how to add a workstation to a user group manually:

1. [Change the station settings](#).
2. [Drag-and-drop a station in the hierarchical list](#).

To edit the list of groups containing the station via the station settings

1. In the main menu, select **Anti-virus network**, then click the name of a workstation in the hierarchical list.
2. The station properties panel opens. Also, you can open the stations properties section by selecting **Properties** in the [control menu](#).
3. In the **Station Properties** pane, select the **Groups** section.

The **Membership** list displays the groups which include the workstation and to which you can include it.

4. To add the workstation into a group, set the flag for this group in the **Membership** list.
5. To remove a workstation from the group, clear the flag for this group in the **Membership** list.



You cannot remove stations from pre-installed groups.

6. To save changed settings, click **Save**.

In the **Properties** section, you can also set a group as a primary one for the station (for more details, read p. [Inheriting Stations Configuration from Groups. Primary Groups](#)).



To edit the list of groups containing the station via the hierarchical list

1. In the main menu, select **Anti-virus network** and unfold the hierarchical list of groups and stations.
2. To add a station to the user group, press CTRL and drag-and-drop a station to the corresponding group.
3. To move a station from one user group to another, drag-and-drop this station from the user group, from which station will be removed, to the user group, to which station will be added.



When dragging a station from pre-installed group in both 2 and 3 steps, station is added in the user group and is not removed from pre-installed group.

6.2.3.2. Configuring Automatic Group Membership

Dr.Web Enterprise Security Suite allows to configure the rules of automatic including stations into user groups.

To specify the rules of automatic including stations into a group

1. Select the **Anti-virus Network** item in the main menu of the Control Center.
2. In the hierarchical list of anti-virus network, select the user group for which you want to specify the membership rules.
3. Open the membership rules editing section by one of the following ways:
 - In the group properties pane on the right part of the window, in the **Configuration** section, click **Group membership rules**.
 - In the [control menu](#), in the **General** section, select the **Group membership rules** item.
 - In the [control menu](#), in the **General** section, select the **Properties** item, open the **Configuration** tab and click **Group membership rules**.
4. In the opened window, specify the conditions under which stations will be included into this group:
 - a) If the group membership rules have not been specified before, click **Add the rule**.
 - b) Set the **Set group as primary** flag to assign the group for which the rule is creating, as a primary automatically for all stations that will be moved into this group according this rule.
 - c) For each block of rules, specify the following settings:
 - Select one of the options that sets the mode of rules combination inside this block: **Matches all conditions**, **Matches any of conditions**, **Does not match any of conditions**.



- In the conditions drop-down lists, select: one of the station parameters that will be checked for compliance with the conditions; the mode of correspondence with this condition and specify the condition string if the station parameter assumes it.



To set the **LDAP DN from Active Directory** parameter

1. Enable the **Synchronization with Active Directory** task in the Server schedule (**Administrating** → **Dr.Web Server Task Scheduler**).
2. In the membership rules, set the necessary DN as a condition string for the **LDAP DN from Active Directory** parameter, for example:
`OU=OrgUnit,DC=Department,DC=domain,DC=com`

You may use regular expressions only for the **matches regular expression** option. For all other options, the exact match for the entered string is searched.

Regular expressions briefly described in the **Appendices** document, in the [Appendix J. Regular Expressions Used in Dr.Web Enterprise Security Suite](#) section.




- To add one more condition in this block of rules, click from the right of condition string.
- d) To add a new block of rules, click from the right of the block. At this, specify the mode of integration of this block of conditions with other blocks:
- **AND**—conditions of blocks must be carried simultaneously.
 - **OR**—conditions at least one of the blocks must be carried out.
5. To save and apply the specified rules, click one of the following buttons:
- **Apply now**—save the specified membership rules and apply these rules immediately to all stations registered on this Server. If a lot of stations are registered on the Server, execution of this action may take some time. Rules of stations regrouping are applied to all already registered stations immediately after the action is set and will be applied further to all stations, including the firstly registered on the Server, at the moment of their connection.
 - **Apply on stations connect**—save the specified membership rules and apply these rules to stations in the moment of their connection to the Server. Rules of stations regrouping are applied to all already registered stations at the moment of their next connection to the Server and will be applied to all stations firstly registered on the Server at the moment of their first connection.
6. When automatic membership rules are specified for a user group, next to the icon of this group in the hierarchical list, the icon displays, if the **Show membership rules icon** flag is set in the **Settings of tree view** list on the toolbar.



If the station was automatically included into the user group according to the membership rules, when removing the station from this groups manually makes no sense, because the station will be automatically returned to this group at the next connection to the Server.



To remove the rules of automatic including stations into a group

1. Select the **Anti-virus Network** item in the main menu of the Control Center.
2. In the hierarchical list of anti-virus network, select a user group for which you want to remove the membership rules.
3. Perform one of the following actions:
 - On the toolbar, click  **Remove membership rules**.
 - In the group properties pane on the right part of the window, in the **Configuration** section, click  **Remove membership rules**.
 - In the [control menu](#), in the **General** section, select the **Properties** item, open the **Configuration** tab and click  **Remove membership rules**.
4. After group membership rules are removed, all stations that have been included into this group automatically will be removed from this group. If for any of automatically included stations, this group was set by administrator as primary, after removing stations from the group, the **Everyone** group will be set as primary for these stations.

6.2.4. Comparison of Stations and Groups

You can compare stations and groups by general parameters.

To compare several objects of the anti-virus network

1. In the main menu, select **Anti-virus network**, then select the objects you want to compare in the hierarchical list. Use CTRL and SHIFT for this. The following variants are possible:
 - selection of several stations—to compare selected stations;
 - selection of several groups—to compare selected groups and all nested groups;
 - selection of several stations and groups—to compare all stations: selected directly in the hierarchical list and included in all groups and their nested groups.
2. In the [control menu](#), click **Comparison**.
3. The comparison table for selected objects will be opened.
 - Comparative parameters for groups:
 - **Stations**—total number of stations which are included into this group.
 - **Stations online**—number of on-line stations.
 - **Primary group for**—number of stations for which this group is parental.
 - **Personal configuration**—list of components with personal settings, not inherited from the parental group.
 - Comparative parameters for stations:
 - **Creation date** of this station.
 - **Primary group** for this station.








- **Personal configuration**—list of components with personal settings, not inherited from the primary group.
- **Installed components**—list of anti-virus components installed at this station.

6.2.5. Propagation of Settings to Other Groups/Stations

Configuration settings of anti-virus programs, schedules and user permissions and other settings of a group or a workstation can be copied (propagated) to other group or several groups and workstations.

To propagate settings

1. Click **Propagate these settings to another object** in the one of the following locations:

-  in the editor of anti-virus component configuration,
-  in the schedule editor,
-  in the update restrictions window,
-  in the installing components window,
-  in the window for stations user permissions setup.

A window of the anti-virus network hierarchical list will be opened.

2. Select necessary groups and stations to which you want to propagate the settings.
3. To enable changes in the configuration of these groups, click **Save**.

6.3. Policies

Policy is a set of all existing station settings: permissions, task schedule, license keys, update restrictions, the list of installed components, configuration of anti-virus components.



Policy can be assigned to stations only.


To allow using policies to configure stations

1. Select the **Administration** item in the main menu of the Control Center; in the opened window, select the **Dr.Web Server configuration** item of the control menu.
2. On the **General** tab:
 - a) Set the **Use policies** flag.
 - b) In the **Policy versions number** field, specify the maximum number of versions that can be created for each policy. If this value is exceeded during the creation of a new policy version, the oldest policy version will be deleted.
3. Click **Save** and restart the Server.



4. After you allow the use of policies, the **Default policy** predefined policy is created. You cannot delete this policy, but you can edit it and assign it to stations.



The **Default policy** predefined policy is located in the **Policies** system group that is hidden by default. To display this group in the anti-virus network hierarchical tree, set the  **Settings of tree view** → **Show hidden groups** option on the toolbar.




To manage policies and their settings, administrator must have the **View policies properties and configuration** and **Edit policies properties and configuration permissions**.

If the permissions are not assigned, policies are displayed in the anti-virus network tree and in the License manager but viewing their content and managing them are not provided.

6.3.1. Policy Management

Creating Policy

To create a new policy

1. Select the **Anti-virus network** item in the main menu of the Control Center.
2. Select **+ Add a network object** on the toolbar and  **Create policy** in the submenu. A window for creating a policy will be opened.
3. The **Identifier** field is filled automatically. You can edit it during creation, if necessary. The identifier should not contain spaces. In the sequel, a policy identifier cannot be changed.
4. Specify a policy name in the **Name** field.
5. When creating a policy, its settings are copied from the **Default policy** by default. To change the object from which the settings will be copied, click the **Select another object** link. In the opened window, select the object from the given list. It can be a group, a station, other policy or a policy version. You can select only one object. Click **Save**. The selected object will be displayed in the policy creation window.
6. Click **Save** to create policy with the specified settings.
7. When creating a policy, a policy version that corresponds to the date of a policy adding is created automatically.

Policy Versions

Policy can have several versions but not more than specified in the settings of the Server configuration. Policy version name corresponds to the time of its creation.



To create a new policy version

1. Select the **Anti-virus network** item in the main menu of the Control Center.
2. You can access the policy configuration via the hierarchical list of the anti-virus network. Edit the configuration of the policy for which you want to create a new version. You can do it manually or using the import/propagation of the configuration from other object of the anti-virus network (station, group, policy).
3. When saving the changes, a new policy version will be created automatically on a base of specified settings of the policy. Created version will be assigned as a current.



Only one version of a policy is the current and can be assigned to stations.

Configuration of a policy version is read-only.

To change the current version of a policy



1. Select the **Anti-virus network** item in the main menu of the Control Center.
2. In the hierarchical list, select a policy current version of which you want to change.
3. On the opened properties pane of a policy, in the **General** section, select the necessary version in the **Current version** drop-down list.
4. Click **Save**.

Removing Policy



You can remove policies either whole or by versions.

To remove policy or policy version

1. Select the **Anti-virus network** item in the main menu of the Control Center.
2. Select a policy or a policy version in the hierarchical list.
3. Click  **General** →  **Remove selected objects** on the toolbar.



When removing a policy, please note the following features:

- When removing the last version of a policy, the policy is also removed.
- If you remove a current policy version, the latest version (with the last date) become a current.
- To all stations to which the removed policy version was assigned, the current version of this policy will be assigned.



6.3.2. Assigning Policy to Stations



Only one policy can be assigned to a station.

Only the policy to which the [license key is specified](#), can be assigned to stations.

To assign or change a station policy

1. Select the **Anti-virus network** item in the main menu of the Control Center.
2. In the hierarchical list, select a station to which you want to assign or change policy.
3. On the opened properties pane of a station, in the **Groups** section, in the **Policy** list, set the flag next to the policy you want to assign.

If a policy was already assigned earlier, its flag will be automatically cleared because only one policy can be assigned to a station.

Also, you can clear all the flags from all policies. In this case, the settings of a station will get their previous state that was before policy assigning.

4. Click **Save**.



Chapter 7: Administration of Workstations

Anti-virus networks operated by Dr.Web Enterprise Security Suite provide for centralized configuring of anti-virus packages on workstations and allows:

- to set the configuration parameters of anti-virus programs,
- to schedule tasks on workstations,
- launch scanning the computer independently of schedule settings,
- to update workstations, also after an updating error, in this case the error state will be reset.

The administrator of the anti-virus network can grant a user with the permissions to change the configuration of the workstation and launch tasks, as well as restrict or prohibit such actions.

The configuration of workstations can be modified even when they are temporarily disconnected from the Server. These changes will be accepted by the workstations as soon as they are reconnected to the Server.

7.1. Management of Workstation Accounts

7.1.1. New Stations Approval Policy



Procedure of stations adding via the Control Center is described in the **Installation manual**, p. [Creation of a New Station Account](#).

Possibility of managing authorization of stations at Dr.Web Server depends on the following parameters:

1. If during the Agent installation, the **Manual authorization on server** flag is cleared, mode of stations access to the Server is defined according to settings specified at the Server (used by default), see [below](#).
2. If during the Agent installation, the **Manual authorization on server** flag is set and **Identifier** and **Password** parameters are specified, when connecting to the Server, station will be authorized automatically regardless of Server settings (is used by default when installing the Agent via the `drweb_ess_<OS>_<station>.exe` installation package—see **Installation manual**, p. [Installation Files](#)).



Setting the type of the Agent authorization during its installation is described in the **User Manual**.

To change the access mode of stations to Dr.Web Server

1. Open the Server configuration: select the **Administration** item in the main menu, then click **Dr.Web Server configuration** in the control menu.



2. On the **General** tab, in the **Newbies registration** drop-down list select the necessary option:
 - **Approve access manually** (the mode is specified by default unless changed at the Servers installation),
 - **Allow access automatically,**
 - **Always deny access.**

Manual Access Approving

In the **Approve access manually** mode, new stations are placed to the **Newbies** subgroup of the **Status** group until administrator submits them.

To manage the access of unapproved stations


1. Select the **Anti-virus Network** item in the main menu of Dr.Web Security Control Center. In the anti-virus network tree, select stations in the **Status** → **Newbies** group.




The **Status** → **Newbies** group is available in the anti-virus tree only if the following conditions are met:

1. In the **Administration** → **Dr.Web Server configuration** → **General** section, the **Newbies registration** option is set to the **Approve access manually** value.
2. The **Approve newbies [permission](#)** is allowed for the administrator.

2. To specify an access to the Server, in the  **Unapproved stations** section of the toolbar, set the action to apply for selected stations:

 **Approve selected stations and set a primary group**—approve access for selected stations and set the primary group from the offered list.

 **Cancel action specified to execute on connect**—cancel an action under unapproved station which was specified for executing when station will connect to the Server.

 **Reject selected stations**—deny access to the Server for selected stations.

Access Denying

In the **Always deny access** mode, the Server denies access for requests from new stations. The administrator should manually create an account for new stations and set access password for them.

Automatic Access Approving

In the **Allow access automatically** mode, all stations that request an access to the Server will be approved automatically without requesting the administrator. The group which is set in the **Primary group** drop down list of the **Dr.Web Server configuration** section, on **General** tab, is set as a primary.



7.1.2. Removing and Restoring Stations

Removing Stations

To remove a workstation account

1. Select the **Anti-virus network** item in the main menu.
2. In the hierarchical list of the opened window, click the name of one or several stations you want to delete.
3. On the toolbar, click **General** → **Remove selected objects**.
4. You will be prompt to remove the station. Click **OK**.

After a station is removed from the hierarchical list, it is added to the deleted stations table. You can restore the removed station via Dr.Web Security Control Center.

Restoring Stations

To restore a workstation account

1. Select the **Anti-virus network** item in the main menu, in the opened window in the hierarchical list select deleted station or several stations you want to restore.



All deleted stations are located in the **Deleted** subgroup of the **Status** group.

2. On the toolbar, select **General** → **Restore deleted stations**.
3. The section for station restoring will be opened. You can specify the following station parameters, which will be set during restoring:
 - **Primary group**—select the primary group, in which the station will be added. By default the primary group which was set before station deletion is selected.



If you restore several stations simultaneously, the **Former primary group** is selected by default. It means that for each selected station its own primary group, in which station was resides before deletion, will be specified. If the definite group is selected, for all restoring stations the same specified group will be set.

- In the **Membership** section, you can change the list of groups in which the station will be included. By default, the list of groups in which the station has been included before deletion is set. To include the station in a user groups, set the flags for this groups.
4. To restore the station with specified parameters, click **Restore**.



7.1.3. Merging Stations

As a result of operations with the database or reinstallation of the software on anti-virus workstations, several stations with the same name may appear on the anti-virus network list (only one of them will be correlated with the respective workstation).

To remove repeated workstation names

1. Select all repeated names of workstation. Use the CTRL to do this.
2. In the toolbar, select **General** → **Merge stations**.
3. In the column, select the station which will be the main. All other stations will be deleted and their data will be prescribed to the selected station.
4. In the column, select the station settings of which will be set for the main station.
5. Click **Save**.

7.2. General Workstation Settings

7.2.1. Station Properties

To view and edit the properties of a workstation

1. Select the **Anti-virus network** item in the main menu of the Control Center, then select the station in the hierarchical list of the opened window.
2. Open the station properties section by one of the following ways:
 - a) Click the name of the station in the hierarchical list of the anti-virus network. A panel with properties of the station will be automatically opened in the right part of the Control Center.
 - b) Click **Properties** in the [control menu](#). A window with the station properties will be opened.
3. Station properties pane contains the following groups of settings: **General, Configuration, Groups, Security, Location**. These settings are described below.
4. To save changes in the settings, click **Save**.

Removing Personal Settings

To remove personal settings of a workstation via Dr.Web Security Control Center

1. Select the **Anti-virus network** item in the main menu of the Control Center, then select a station in the hierarchical list of the opened window and click **General** → **Remove personal settings** on the toolbar. A list of settings for this station will be opened. Personal settings will be marked with flags.



2. For the personal settings you want to remove, leave the flags set. For the settings you want to leave personal, clear the flags. Click **Delete**. For the settings marked by the flags, the inheritance from the primary group will be restored.

7.2.1.1. General

In the **General** section, the read-only fields are listed:

- **Station identifier**—station unique identifier. It is specified at creation of a station account and cannot be changed further.
- **Name**—station name. It is specified at creation of a station account and cannot be changed manually further. After the connection of a station, can be automatically replaced with the computer name.
- **Creation date**—the date of creation the station on the Server.
- **Security identifier**—the SID (security identifier) of Windows OS user account. The field is set automatically after the connection of a station under Windows OS to the Server.
- **LDAP DN**—distinguished name of a station under Windows OS. Relevant for stations included into ADS/LDAP domain. The field is set automatically after the connection of a station to the Server.
- **MAC address**—MAC address of the station. The field is set automatically after the connection of a station to the Server.
- **Date of last connection**—the date of last connection of this station to the Server.

Also you can specify the following fields:

- In the **Password** field, specify a password to authorise the station at the Server (retype this password in the **Confirm Password** field). If you change the password, you must repeat this action in the Agent connection settings at the station to permit Agent connection.
- In the **Description** field, add comments.



Values of fields, marked with the * sign, must be obligatory specified.







Also in this section the following links reside:

- In the **Installation file** item—the link for downloading Agent installer for this station.
After creation of a new station, before the operating system of a station is set, in the section of distribution kit downloading, the links are presented separately for all OS that are supported by Dr.Web Enterprise Security Suite.
- In the **Configuration file** item—the link for downloading the file with settings of connection to Dr.Web Server for stations under Android, macOS and Linux operating systems.




7.2.1.2. Configuration

In the **Configuration** section, you can change station configuration that includes the following:

Icon	Settings	Description section
	Permissions for the workstation users	Permissions of Station Users
	Centralized schedule to run tasks on workstation	Scheduled Tasks of a Station
	License keys file for workstation	License Keys
	Restrictions on propagation of anti-virus software updates	Update Restrictions for Workstations
	Installing components list	Installing Components of the Anti-Virus Package
	Settings of anti-virus components for the station.	Management of Anti-virus Components

Dr.Web Security Control Center also provides you with option for deleting personal settings of a workstation. These settings are located on the right of the corresponding options for components configuration options. When you delete personal settings of a workstation, it inherits settings from the primary group.



When you change settings of SplDer Gate and/or Office Control, please consider that settings of these components are interconnected, so if personal settings of one of them are removed via  **Remove personal settings**, it also removes settings of second component (settings inheritance from the parent group is set).

7.2.1.3. Groups

In the **Groups** section, you can set the list of groups into which the workstation is included. The **Membership** list displays the groups which include the workstation and to which you can include it.

To manage the membership of a workstation

1. To add a station to the user group, set the flag for this group in the **Membership** list.
2. To remove a station from the user group, clear the flag for this group in the **Membership** list.



You cannot remove stations from pre-installed groups.



3. If you want to reassign the other primary group, click the icon of necessary group in the **Membership** list. The **1** sign displays on the icon.

7.2.1.4. Security



In the **Security** section, restrictions for network addresses from which Agents installed on the station will be able to access the Server are set.

To allow all connections, clear the **Use this ACL** flag. To make the list of allowed or denied addresses, set the flag.

To allow any TCP address, include it into the **TCP: Allowed** or **TCPv6: Allowed** list.

To deny any TCP address, include it into the **TCP: Denied** or **TCPv6: Denied** list.

To edit addresses in the list

1. Specify an address in the corresponding field in the following format: *<IP address>/[<network prefix>]*.
2. To add a new field, click  in the corresponding section.
3. To delete a field, click  next to the deleting address.
4. Click **Save** to apply settings.

Examples of prefix usage:

1. Prefix 24 stands for a network with a network mask: 255.255.255.0
Containing 254 addresses.
Host addresses look like: 195.136.12.*
2. Prefix 8 stands for a network with a network mask: 255.0.0.0
Containing up to 16387064 addresses (256*256*256).
Host addresses look like: 125.*.*.*

Besides, you can delete addresses from the list and edit the addresses included into the list.

Addresses that are not included into any of the lists are allowed or denied depending on whether the **Denial priority** flag is set. If the flag is set, the **Denied** list has a higher priority than the **Allowed** list. Addresses not included in any of the lists or included into both of them are denied. Allowed only addresses that are included in the **Allowed** list and not included in the **Denied** list.


7.2.1.5. Proxy server

In the **Proxy server** section, you can configure the settings of Dr.Web Proxy server installed on this station.



Detailed information on the Proxy server installation and connection to Dr.Web Server is given in the **Installation Manual**, p. [Installing Proxy Server](#).

If the Proxy server is installed on the station:

1. The **Identifier** field contains the identified of the Proxy server account created in the Control Center. Identifier cannot be changed after the account has been created.
2. In the **Name** field, you can change the name of the Proxy server account created in the Control Center.
3. In the **Password** and **Confirm Password**, you can change the password of the Proxy server account created in the Control Center. The password is used to connect The Proxy server to the Server. If the password has been changed in the Control Center, please make sure that the password in the connection settings at the Proxy server matches with the changed password in the Control Center. If the passwords differ, the Proxy server will not be able to connect to the Server for remote configuring via the Control Center.
4. The **Membership** section defines the group into which the Proxy server is included. To change the group, set the flag next to the necessary group in the given list.
The Proxy server can be included into one group only.
You can select the pre-installed **Proxies** group and its subgroups only.
5. You can uninstall the Proxy server connected with the Agent on the edited station. To do this, click  **Delete Proxy server**.
After you click **Save**, the Proxy server will be deinstalled from the station. Proxy server account—deleted from the Server.

If the Proxy server is not installed on the station:

1. If you want to install the Proxy server on the selected station, set the **Create linked Proxy Server** flag and specify the parameters of creating Proxy server. The parameters are the same as when creating a Proxy server.
2. After you click **Save**, the Proxy account will be created in the Control Center. After the settings transmitted to the station, the Proxy server will be installed on this station in the background mode. The Agent will be connecting to the Server through the installed Proxy server only. The Proxy server usage will be transparent to a user.

7.2.1.6. Location

In the **Location** section, you can specify additional information about the physical location of the workstation.

Also on this tab you can view the station location on a geographical map.



To view the station location on a map

1. In the **Latitude** and **Longitude** fields, specify the station geographical coordinates in the Decimal Degrees format.
2. Click **Save** to save specified data.
3. On the **Location** tab, the OpenStreetMap preview will be shown containing a mark according to the specified coordinates.
If the preview cannot be loaded, the **Show on map** text displays.
4. To view the full size map, click the preview or the **Show on map** text.



For stations under Android OS, you can configure automatic location detection.

Detailed information on usage and configuring this feature you can find in the **Applications** document, in the [Automatic Location of Stations under Android OS](#) section.

7.2.2. Protection Components

Components



To view the list of anti-virus package components installed on a workstation and start or stop components operation

1. Select the **Anti-virus network** item in the Control Center main menu, then click the name of a station or a group in the hierarchical list of the opened window.
2. In the opened [control menu](#) in the **General** section, select the **Protection components** item.
3. This opens a window with information on components installed on protected stations.



Compound of installed components list depends on:

- Components enabled in the license key file.
- Workstation OS.
- Settings specified by administrator of anti-virus network at the Server. Administrator is able to change the list of anti-virus package components either before Agent (see [Anti-Virus Package Composition](#)) installation or at any time after its installation.

4. If necessary, you can change the state of components operation directly from the Control Center. For this, set the flags for those components operation status of which you want to change and click corresponding button on the toolbar:
 -  – stop the selected component operation on stations.
 -  – start the selected components on stations.



When interrupting the components operation, running scans will be terminated, Scanner stopped and running monitors paused.

Also you can stop the components operation depending on their launch type as it is described in [Terminating Running Components by Type](#).

5. If necessary, you can export data on components operation state into a file. For this, click the one of the following buttons on the toolbar:



Save data in CSV file,



Save data in HTML file,



Save data in XML file,



Save data in PDF file.

Virus Databases

To view the list of virus databases installed on a workstation

1. Select the **Anti-virus network** item in Dr.Web Security Control Center main menu, then click the name of a workstation in the hierarchical list of the opened window.
2. In the opened [control menu](#) in the **Statistics** section, select the **Virus databases** item.
3. This opens a window with information on installed virus databases: the name of the file containing a particular database; virus database version; the database creation date; the total number of virus records in the database.



If the **Virus databases** item is hidden, to view the item, select **Administration** in the main menu, and then select **Dr.Web Server configuration** in the control menu of the window. On the **Statistics** tab, set **Station statuses** and **Virus database statuses** flags, then restart the Server.

The **Virus databases** item is available only if a single station is selected.

7.2.3. Hardware and Software on Stations under Windows® OS

Dr.Web Enterprise Security Suite allows to accumulate and view information on hardware and software installed on protected stations under Windows OS.



To collect information on hardware and software of the stations

1. Enable statistics collecting on the Server:
 - a) Select the **Administration** item in the main menu of the Control Center.
 - b) Select the **Dr.Web Server Configuration** item in the control menu.



- c) In the Server settings, open the **Statistics** tab and set the **Hardware and software** flag if it is cleared.
- d) To apply the changes, click **Save** and restart the Server.
2. Allow collecting statistics on stations:
 - a) Select the **Anti-virus Network** item in the main menu of the Control Center.
 - b) In the hierarchical list of anti-virus network, select a station or a group of stations for which you want to allow statistics collecting. When selecting a group of stations, please note the settings inheriting: if the stations of selected group have personal settings, when changing the group settings will not change the station settings.
 - c) In the control menu, in the **Configuration** → **Windows** section, select **Dr.Web Agent**.
 - d) In the Agent settings, on the **General** tab, set the **Collect information about stations** flag if it is cleared. If necessary, edit the **Period of collecting information about stations (min.)** parameter value.
 - e) To apply the changes, click **Save**. Settings will be transmitted to the stations.

To view hardware and software on one or several stations

1. Select the **Anti-virus Network** item in the main menu of the Control Center.
2. In the hierarchical list of anti-virus network, select a station or a group of stations.
3. In the control menu, in the **General** section, select the **Hardware and software** item.
4. The table contains contains the following tabs with information about the hardware and software of the selected stations:
 - **Hardware**—the list of hardware mounted on the stations.
 - **Software**—the list of program applications installed on the stations.
 - **Windows updates**—the list of Windows OS updates packages installed on the stations.
5. The **Station** column on each tab, contains the name of a station for which the information id given.
6. To edit the data view in the table
 - Using the  icon, select the columns to display in the table.
 - Using the  icon, specify the arbitrary string to search by all sections of the table.
7. If necessary, you can export data on hardware and software on station into a file. For this, click the one of the following buttons on the toolbar:



Save data in CSV file,



Save data in HTML file,



Save data in XML file,



Save data in PDF file.



7.3. Management of Workstation Configuration

7.3.1. Permissions of Station Users



To edit users permissions via Dr.Web Security Control Center for administrating the anti-virus package

1. In the main menu, select **Anti-virus network**, then click the name of a workstation in the hierarchical list of the opened window. In the opened [control menu](#), select **Permissions**. Permissions configuration window opens.
2. You can edit permissions on tabs that correspond to the workstation operating system. To change (allow or deny) any of permissions, set or clear the flag for this permission.
3. To edit permissions for stations under Windows, macOS, Linux and Android operating systems, use the following tabs:
 - **Components**—change permissions for components management. By default, a user is authorized to launch each component, but prohibited to edit components configuration or stop the operation of components.
 - **General**—to change permissions for Dr.Web Agent and its functions management:

Table 7-1. Setting stations permissions on the General tab

Permissions section flag	Flag actions	Result at the station if the flag is cleared
Stations under Windows OS		
Change the run mode	Set the flag to allow users at the station to change the Agent run mode.	In the Agent settings, in the Main → Server section, the following options are not available: <ul style="list-style-type: none">• Accept updates from the server,• Accept jobs from the server,• Accumulate events.
Change Dr.Web Agent configuration	Set the flag to allow users at the station to change Dr.Web Agent settings.	In the Agent settings, in the Main section, the settings of the following options are not available: <ul style="list-style-type: none">• Notifications: all settings are not available.• Server: the Server connection settings, the Synchronize system time with the server time flag and the Use Mobile mode when there is no connection with the server option are not available.



Permissions section flag	Flag actions	Result at the station if the flag is cleared
		<ul style="list-style-type: none">• Self-Protection: the Block changing of system date and time, Block user activity emulation options are not available.• Advanced: in the Log section settings, the Dr.Web Update, Dr.Web Services, Create memory dumps at scan errors options are not available.
Disable self-protection	Set the flag to allow users at the station to disable self-protection.	In the Agent settings, in the Main → Self-Protection the Enable self-protection option and the Enable hardware virtualization option are not available.
Uninstall Dr.Web Agent	Set the flag to allow users at the station to uninstall Dr.Web Agent.	Disables uninstalling of the Agent at the station either via the installer or via standard Windows OS services. In this case, Agent can be uninstalled only via the  General →  Uninstall Dr.Web Agent option on the toolbar of Dr.Web Security Control Center.
Stations under macOS		
Run in mobile mode	Set the flag to allow users at the station to switch to mobile mode and use Dr.Web Global Update System for updating, if there is no connection with Dr.Web Server.	The Updates section in the application main window is blocked.
Stations under Linux system-based OS		
Run in mobile mode	Set the flag to allow users at the station to switch to mobile mode and use Dr.Web Global Update System for updating, if there is no connection with Dr.Web Server.	For the console mode of the application: the <code>drweb-ctl update</code> command for updating the virus databases from the GUS is not available.
Stations under Android OS		
Run in mobile mode	Set the flag to allow users of mobile devices to switch to mobile mode and use Dr.Web Global Update System for updating, if there is no connection with Dr.Web Server.	The Updates section on the application main screen is blocked.



After disabling an option that changes Agent settings, the value which has been set at the last time before disabling, will be used.

Actions for the corresponding menu options are described at the **Dr.Web® for Windows. User manual** documentation.

4. To use the same settings for another object, click **Propagate these settings to another object**.
5. To export settings to a file, click **Export settings from this section to the file**.
6. To import settings from a file, click **Import settings to this section from the file**.
7. To save permissions changes, click **Save**.



If you have edited a workstation, when it was not connected to the Server, the new settings will be accepted, once the Agent has reconnected to the Server.

7.3.2. Scheduled Tasks of a Station

Dr.Web Enterprise Security Suite provides the *centralized task schedule* which is set by the anti-virus network administrator and complies with all the rules of configuration inheritance.

Task schedule—a list of actions performed automatically at a preset time on workstations. Schedules are mostly used to scan stations for viruses at a time most convenient for users, without having to launch the Scanner manually. Besides Dr.Web Agent allows to perform certain other types of tasks as described below.

To edit centralized schedule of regular tasks execution for certain stations and groups, use Dr.Web Security Control Center.



Users at station are not allowed to view and edit scheduled tasks of centralized schedule.

Results of tasks execution according to the centralized schedule are not stored into statistic data of the Agent but sent to the Server and stored in the Server statistic data.

To edit centralized schedule, perform the following actions:

1. Select the **Anti-virus network** item in the main menu of the Control Center, in the hierarchical list of the opened window, select a group or workstation. In the opened [control menu](#), select **Task Scheduler**. The list with the tasks of the station will be opened.



By default for stations operated under Windows OS, schedule contains the **Daily scan** task—daily station scan (disabled).



The majority of tools in this section are unavailable as long as the station or the group you selected keeps the inheritance of settings from a parent group. The following toolbar elements let you change the inheritance settings related to the task schedule:

Set the inheritance of settings from the parent group—remove personal task schedule settings and set inheritance of settings in this section from a parent group.

Copy settings from the parent group and set them as personal—copy task schedule settings from a parent group and assign them to selected stations. That will break the inheritance, and all further changes in the task schedule will be considered personal.

2. To manage schedule, use the corresponding elements from the toolbar:

a) General elements on the toolbar are used to create new tasks and generally manage schedule section.

Create task—add a new task. This action is described in details below, in the [Task Editor](#) section.

Propagate these settings to another object—copy scheduled tasks into other objects—stations and groups. For details, see [Propagation of Settings to Other Groups/Stations](#).

Export settings from this section to the file—export schedule to the file of special format.

Import settings to this section from the file—import schedule from the file of special format.







Import of the task list for Dr.Web Server into the Task Schedule on workstations and vice versa is not allowed.

b) To manage existing tasks, set the flags next to the necessary tasks or the common flag in the table header to select all task from the list. As long as the group or the station you selected does not keep the inheritance of task schedule settings from a parent group, the following toolbar elements will be available to manage selected tasks:

Option		Action
Status	Enable execution	Activate execution of selected tasks according to their schedule, if they were disabled.
	Disable execution	Disable execution of selected tasks. Tasks remain on the list but will not be executed.
The same action you can perform from the task editor on the General tab by setting the Enable execution flag.		
Severity	Make critical	Perform extra launch of the task at next Dr.Web Agent launch, if scheduled execution of this task has been omitted.



Option	Action
Make not critical	Execute the task only at scheduled time regardless of whether a task launch has been omitted or not.
 The same action you can perform from the task editor on the General tab by setting the Critical task flag.	
 Duplicate settings	Duplicate tasks that are selected in the list of current schedule. When you run the Duplicate settings option, new tasks are created with settings similarly to the selected tasks.
 Schedule repeatedly	For tasks which executed once: execute task one more time according to the specified time settings (changing execution multiplicity of the task is described below, in the Task Editor section).
 Remove these settings	Remove selected task from the schedule.
Execute task	Execute the tasks selected in the list immediately. At this, a task will be launched even if it is disabled for execution on a schedule.


3. To change task parameters, select it in the tasks list. The **Task editor** window described [below](#) opens.
4. After editing the schedule, click **Save** to accept changes.



If, when edited, the schedule is empty (without any tasks), Dr.Web Security Control Center will offer you to use either the schedule inherited from groups, or the empty schedule. Use empty schedule to override the schedule inherited from the groups.

Task Editor

In the **Task Editor** you can specify settings to:

1. Create a new task.
For this click  **Create task** on the toolbar.
2. Edit existing task.
For this click the name of one of the tasks in the tasks list.

The window for editing a task opens. Settings for editing of existing task are similar to the settings of creating a new task.



Values of fields, marked with the * sign, must be obligatory specified.



To edit task settings

1. On the **General** tab you can set up the following parameters:

- In the **Name** field, specify the name of the task displayed in the schedule list.
- Set the **Enable execution** flag, to enable the task execution. If the flag is cleared, the task remains on the list but will not be executed.



The same action you can perform from the main window of the schedule via the **Status** option on the toolbar.

- Set the **Critical task** flag to perform extra launch of the task at next Dr.Web Agent launch, if scheduled execution of this task has been omitted (Dr.Web Agent is switched off at the due time). If at launch, the task was omitted several times, it will be executed only once.



The same action you can perform from the main window of the schedule via the **Severity** option on the toolbar.



If several scan tasks must be implemented, only one task will be executed—the first one in the queue.

For example, if **Daily scan** is enabled and critical scan via the Agent Scanner is omitted, only **Daily scan** will be executed and omitted critical task will not be done.

- If the **Run the task asynchronously** flag is cleared, the task will be placed to the general queue of Scheduler tasks that are executed sequentially. Set the flag to execute this task in parallel out of order.
2. On the **Action** tab, in the **Action** drop-down list, select the type of the task and specify task parameters which are needed to perform the task:

Task type	Parameters and description
Write to log file	String —the text of the message to be added to the log file.
Run program	Specify the following settings: <ul style="list-style-type: none"> • The Path field—full name (with the path) of the executable file to be launched. • The Arguments field— line parameters for the program to be run. • Set the Wait for the completion of the program flag to wait for the completion of the program which has been launched by this task. At this, the Agent logging the start of the program, the returned code and the time of the program end. If the Wait for the completion of the program flag is cleared, the task become completed right after the launch of the program and the Agent logging only the start of the program.



Task type	Parameters and description
Dr.Web Agent Scanner. Complete scan	Parameters of scanning setup are described in the Configuring Scanner Settings .
Dr.Web Agent Scanner. Custom scan	
Dr.Web Agent Scanner. Express scan	



Remote launch of the Scanner is available only on stations under Windows OS, UNIX system-based OS and macOS.

3. On the **Time** tab:


- In the **Period** drop-down list set the launch mode of the task and setup the time according to the specified periodicity:

Launch type	Description
Daily	Specify the hour and the minute for the task to be launched at the time specified.
Every N minutes	The N value should be specified to set the time interval for the execution of the task. At N equal 60 or more, the task will be run every N minutes. At N less than 60, the task will be run every minute of the hour multiple of N .
Hourly	Specify a number from 0 to 59 to set the minute of every hour the task will be run.
Monthly	Specify the day of the month, the hour and the minute for the task to be launched at the time specified.
N minutes after initial task	In the Initial task drop-down list, select the task relatively to which the time of current task execution is set. In the Minute field, specify or select from the offered list the number of minutes that should pass after the execution of initial task to start execution of edited task.
Startup	The task will be launched at Agent start up. No additional parameters required to run the task.
Weekly	Select a day of the week, specify the hour and the minute, for the task to be launched at the time specified.

- Set the **Disable after the first execution** flag to execute the task only once at specified time. If the flag is cleared, the task will be executed multiple times according to the



specified periodicity.

To repeat the launch of task already ones executed, use the  **Schedule repeatedly** on the toolbar of the schedule section.

- Set the **Run the task by UTC** flag to launch the task relatively the universal time (UTC+0 time zone). If the flag is cleared, the task will be launched by the local time on station.
4. When all parameters for the task are specified, click **Save** to accept changes of edited parameters, if you editing existing task, or to create a new task with specified parameters if you created a new task.

7.3.3. Installing Components of the Anti-Virus Package



It is not recommended to install SplDer Gate, SplDer Mail and Dr.Web Firewall components on servers that implement significant network functions (domain controllers, license distribution servers and etc.) to avoid probable conflicts between network services and internal components of Dr.Web anti-virus.

To change the installing components list of the anti-virus package

1. Select the **Anti-virus network** item in the main menu, then select a station or a group and select the **Installing Components** item in the opened [control menu](#).
2. Select an option for necessary components in the drop-down list:
 - **Must be installed**—means that a component must be present on the workstation. When a new workstation is created, the component is installed with the anti-virus package. If the **Must be installed** option is specified for an existing workstation, the component will be added to the available anti-virus package.
 - **May be installed**—means that the component can potentially be installed. The user decides whether the component is required.
 - **Cannot be installed**—means that installing the component is not allowed. When a new workstation is created, the component will not be installed with the anti-virus package. If the **Cannot be installed** option is specified for an existing workstation, the component will be removed from the anti-virus package.

Table 7-2 shows whether the component will be installed on the workstation (+) according to the parameters specified by the user and the settings defined by the Server administrator.

Table 7-2.


User parameters	Specified on the Server		
	Must	May	Cannot
Install	+	+	
Do not install	+		




3. Click **Save** to save the settings and the set of anti-virus package components on the workstation.

7.3.4. Connection Parameters

On the **Connection Parameters** tab, you can specify parameters determining interaction with the Server:


- In the **Certificate** field specify the SSL certificate of Dr.Web Server (`drwcsd-certificate.pem`) which is stored on the station. To select the certificate file, click . Several certificates can be stored on a station at the same time, e.g., during moving from one Server to another. Note that certificates must be unique, i.e. you cannot specify two similar certificates.

To add one more certificate, click  and select the certificate file.

To remove existing certificate from the station, click  next to certificate to remove.



Certificate must be obligatory specified.

- In the **Server** field, you can specify the address of Dr.Web Server. You may leave this field blank. Then the Agent will use the address of Dr.Web Server that is set on the user's local computer (the address of the Server from which the installation has been performed). Either one Server address or several different Servers addresses can be set. To add one more Server address, click  and specify an address in the added field. Format of Server network addresses is described in the **Appendices** document, in the [Appendix E. The Specification of Network Addresses](#) section.

Server address example:

tcp/10.4.0.18:2193

tcp/10.4.0.19

10.4.0.20



If the **Server** parameter value is set incorrectly/invalid, the Agents will disconnect from the Server and will not be able to reconnect. In this case you will have to set the Server address on the stations directly.

- In the **Search retries number** field, set the parameter determining the number of attempts to find Dr.Web Server via the connection using the [Mulicasting](#) mode.
- In the **Search timeout (sec.)** field, set the interval between attempts to find Dr.Web Server in seconds via the connection using the [Mulicasting](#) mode.



- The **Compression mode** and **Encryption mode** fields determine the compression and encryption settings of network traffic correspondingly (also see p. [Traffic Encryption and Compression](#)).
- In the **Network listening parameters** field, specify the UDP port for Dr.Web Security Control Center to search for working Dr.Web Agents in a network. To disable ports listening, enter **NONE**.


This parameter should be specified in the network addresses format described in the **Appendixes** document, in the [Appendix E. The Specification of Network Addresses](#) section. By default, the **udp:2193** is used, which means "all interfaces, port 2193".

7.3.5. License Keys

You can view and edit the list of license keys of a station or a group by the following ways:

1. Via the [License Manager](#).
2. Via configuration of a licensing object (a station or a group) in the anti-virus network.

To edit the list of license keys via the configuration of licensing object

1. Select the **Anti-virus network** item in the main menu of the Control Center.
2. Open the [Station properties](#) or [Group properties](#) section for the object, license keys of which you want to edit.
3. In the configuration section, click the  **Edit** icon or the **License keys** link.
4. The **License keys** opened window contains the list of object license keys, their current state (inherited or personally specified), and also the list of all keys that are available on this Server. Also, if necessary, you can open the License Manager directly.
5. Actions on the keys list depend on the state of the current license keys of an object:


Action	Current keys are inherited	Current keys are personally specified	No key specified
Add license key	Inheritance will be broken. A new key is added to the list of assigned keys and the key list become personal.	A new key will be added to the list of assigned keys.	Keys will be added to the list of license keys of an object as personal.
Remove license key	Action is not available.	A key will be removed from the list of object keys.	Action is not available.
Set inheritance	Action is not available.	Current keys will be removed from the list of object keys, the inheritance of keys will be set from a primary/parent group.	Action is not available.
Broke inheritance	Inheritance will be broken. The list of keys remains the	Action is not available.	Action is not available.




Action	Current keys are inherited	Current keys are personally specified	No key specified
	same but becomes personal.		

Current keys are inherited

To add a license key


1. In the **License keys** window, in the **All keys** list, select one or several license keys that you want to add.
2. Click .
3. If the lists of installed components on stations and in the added keys are different, you will be warned and will be asked to edit the result components list.
4. After you specify all necessary changes, click **Save**.
5. Inheritance will be broken. A new key is added to the list of assigned keys and the key list become personal.

To break the inheritance without changing the list of license keys

1. In the **License keys** window, click  **Copy settings from the primary group and set them as personal**.
2. Inheritance will be broken. The list of keys will be copied from a primary/parent group and specified for the object as personal.
3. Click **Save**.

Current keys are personally specified

To add a license key

1. In the **License keys** window, in the **All keys** list, select one or several license keys that you want to add.
2. Click .
3. If the lists of installed components on stations and in the added keys are different, you will be warned and will be asked to edit the result components list.
4. After you specify all necessary changes, click **Save**.
5. A new key will be added to the list of assigned keys.

To remove a license key



1. In the **License keys** window, in the **Object keys** list, click  next to those license keys that you want to remove.



If all keys are removed, the inheritance of the license keys will be set from a primary/parent group (see also [Set the inheritance](#)).

2. Click **Save**.
3. If the lists of installed components on stations and in the remained keys are different, you will be warned and asked to edit the result components list.

To set the inheritance


1. You can set the inheritance by one of the following ways:
 - Open the [Station properties](#) or [Group properties](#) section for the object, inheritance for which you want to set. In the configuration section, click  **Remove key**.
 - In the **License keys** window, in the **Object keys** list, click  next to all assigned license keys. Click **Save**.
2. Current keys will be removed from the list of object keys, the inheritance of keys will be set from a primary/parent group.
3. If the lists of installed components on stations and in the inherited keys are different, you will be warned and will be asked to edit the result components list.

No key specified



This may happen if none of the license keys has been added to the Server or license keys have been added to the Server but have not been propagated to any of the objects including the **Everyone** group.

To add a license key

1. In the **License keys** window, in the **All keys** list, select one or several license keys that you want to add.
2. Click .
3. Click **Save**.
4. Keys will be added to the list of license keys of an object as personal.

7.4. Management of Anti-virus Components



Detailed description of anti-virus components settings which are configured via the Control Center, is given in the **Administrator Manual** on managing stations for corresponding operating system.



7.4.1. Components

Depending on the operating system of the station, the following anti-virus components are provided:

Stations under Windows® OS

Dr.Web Scanner, Dr.Web Agent Scanner

Scans a computer on user demand and according to the schedule. Also the remote launch of anti-virus scan of stations from the Control Center including rootkits check is supported.

SpIDer Guard

The constant file system protection in the real-time mode. Checks all launched processes and also created files on hard drives and opened files on removable media.

SpIDer Mail

Checks all incoming and outgoing mail messages when using the mail clients.

The spam filter is also available (if the license permits this function).

SpIDer Gate

Checks all calls to web sites via the HTTP protocol. Neutralizes malicious software in HTTP traffic (for example, in uploaded and downloaded files) and blocks the access to suspicious or incorrect resources.

Office Control

Controls access to network and local resources, in particular, limits access to web sites. Allows to control the integrity of important files from the accidental change or virus infecting and limit the access to unwanted information for employees.

Firewall

Protects computers from external unauthorized access and prevents leak of vital data via Internet. Monitors connection attempts and data transfer via the Internet and blocks suspicious connections both on network and application levels.

Quarantine

Isolates malware and suspicious objects in the specific folder.

Self-protection

Protects files and folders of Dr.Web Enterprise Security Suite from unauthorized or accidental removal and modification by user or malicious software. If self-protection is enabled, access to files and folders of Dr.Web Enterprise Security Suite is granted to Dr.Web processes only.



Preventive protection (settings are provided into Dr.Web Agent settings)

Prevents of potential security threats. Controls the access to the operating system critical objects, controls drivers loading, programs autorun and system services operation and also monitors running processes and blocks them in case of detection of viral activity.

Stations under UNIX® system-based OS

Dr.Web Scanning Engine

Scanning engine. Provides the anti-virus scanning service (contents of files and disk boot records and other data received from other components of Dr.Web for UNIX). It queues files that are waiting to be scanned. Cures the files that can be cured.

Dr.Web File Checker

The component which scans file system objects and manages quarantined files. It receives scanning tasks from other Dr.Web for UNIX components. Checks file system directories according to a received task, transmits files for scanning to the scanning engine. It also removes infected files, moves them to quarantine, restores them from quarantine, and manages quarantine directories. The component creates and updates cache that stores information on scanned files to lessen the frequency of repeated file scanning.

Used by components that scan file system objects, such as SpIDer Guard (for Linux, SMB, NSS).

Dr.Web ICAPD

ICAP server analyzing requests and traffic which goes via HTTP proxy servers. It also prevents transmitting infected files and access to the network hosts belonging to the Internet resources categories and to black lists, created by the system administrator.

SpIDer Guard for Linux (only within distribution kits for GNU/Linux system-based OS)

The Linux file system monitor. It operates in a resident mode and monitors file operations (creation, opening, closing, and running of a file) in the GNU/Linux file systems. It sends to the files check component tasks to scan new and modified files or executable files upon a program startup.

SpIDer Guard for SMB

Monitor of Samba shared file system directories. It operates as a resident mode and monitors file operations (creation, opening, closing, and read or write operations) in directories used by SMB file server Samba. It sends to the files check component contents of new and modified files for the check.

SpIDer Guard for NSS (only within distribution kits for GNU/Linux system-based OS)

NSS volumes monitor (Novell Storage Services). It operates as a resident mode and monitors file operations (creation, opening, closing and write operations) on NSS



volumes mounted in the specified file system point. It sends to the files check component contents of new and modified files for the check.

SpIDer Gate (only within distribution kits for GNU/Linux system-based OS)

The component for monitoring network traffic and URLs. It is designed to check data downloaded from the network to the local host and transmitted from it to the external network for threats. The components also prevents connections with the network hosts, included not only to the unwanted categories of web resources, but also to black lists created by the system administrator.

Dr.Web MailD

The component for scanning of emails. Analyzes the messages of email protocols, sorts out emails and prepares them for scanning for threats. It can operate in two modes:

1. A filter for mail servers(Sendmail, Postfix, etc.) connected via the interface Militer, Spamd or Rspamd.
2. A transparent proxy of mail protocols (SMTP, POP3, IMAP). In this mode, it uses SpIDer Gate.



Other components for stations under UNIX system-based OS, are additional and serve for internal configuration of anti-virus software operation.

Stations under macOS®

Dr.Web Scanner, Dr.Web Agent Scanner

Scans a computer on user demand and according to the schedule. Also the remote launch of anti-virus scan of stations from the Control Center is supported.

SpIDer Guard

The constant file system protection in the real-time mode. Checks all launched processes and also created files on hard drives and opened files on removable media.

SpIDer Gate

Checks all calls to web sites via the HTTP protocol. Neutralizes malicious software in HTTP traffic (for example, in uploaded and downloaded files) and blocks the access to suspicious or incorrect resources.

Quarantine

Isolates malware and suspicious objects in the specific folder.



Mobile devices under Android OS

Dr.Web Scanner, Dr.Web Agent Scanner

Scans a mobile device on user demand and according to the schedule. Also the remote launch of anti-virus scan of stations from the Control Center is supported.

SpIDer Guard

The constant file system protection in the real-time mode. The check of all files as they are saved in the memory of the device.

Calls and SMS Filter

Filtering the incoming phone calls and SMS allows to block the undesired messages and calls, such as advertisements or messages and calls from unknown numbers.

Anti-theft

Detect the device location or lock its functions in case it has been lost or stolen.

Cloud Checker

URL filter allows to protect user of the mobile device from unsolicited Internet sites.

Firewall (settings are available on a mobile device only)

Protects the mobile device from external unauthorized access and prevents leak of vital data via Internet. Monitors connection attempts and data transfer via the Internet and blocks suspicious connections both on network and application levels.

Security Auditor (settings are available on a mobile device only)

Diagnostic and analysis of the security of mobile device and resolving the detected problems and vulnerabilities.

Application filter

Blocks the launch on mobile device those applications that are not included into the list of allowed by administrator.

7.5. Anti-Virus Scanning of Stations



Users can scan their workstations themselves using Dr.Web Scanner.

The Scanner can be launched and operate successfully even in case of Agent malfunction or running the system in the safe mode.

Via the Control Center you can:

- View the list of all anti-virus components running at present.



- Terminate running anti-virus components of a certain type.
- Initiate anti-virus scanning and specify its parameters.

7.5.1. Terminating Running Components by Type



When you use this option, running scans will be terminated, Scanner stopped and running monitors paused.

Attention! You cannot launch SpIDer Guard, SpIDer Mail and SpIDer Gate monitors via Dr.Web Security Control Center.

To interrupt all running components of a certain type


1. Select **Anti-virus network** in the main menu of the Control Center, then in the hierarchical list of the opened window select necessary group or separate workstations.
2. In the toolbar of anti-virus network, click **Components management**. In the drop-down list select **Interrupt running components**.
3. In the opened panel, set the flags against components types which you want to interrupt immediately:
 - **Interrupt Dr.Web Agent Scanner launched by Task Scheduler**—to stop active scan by Dr.Web Agent Scanner which was launched manually by administrator via the Control Center.
 - **Interrupt Dr.Web Agent Scanner launched by administrator**—to stop active scan by Dr.Web Agent Scanner which was launched according to centralized schedule.
 - **Interrupt Dr.Web Scanner launched by user**—to stop active scan by Dr.Web Scanner which was launched by a user at the station.
 - **Interrupt SpIDer Guard, SpIDer Mail, SpIDer Gate, Office Control, Firewall, Self-protection and Preventive protection**—to pause corresponding components.To select all types of interrupting components, set the flag against the header of the **Interrupt running components** panel.
4. Click **Interrupt**.

7.5.2. Launching Scan on Station


To launch a scan task


1. In the main menu of Dr.Web Security Control Center, select **Anti-virus network**.
2. Click the name of a station or group in the hierarchical list of the opened window.
3. In the toolbar, click **Scan**. In the opened list at the toolbar, select one of the following scan modes:



 **Dr.Web Agent Scanner. Express scan.** In this mode the following objects will be scanned:

- main memory (RAM),
- boot sectors of all disks,
- autorun objects,
- root directory of the boot sector,
- root directory of Windows OS installation disk,
- system directory of Windows OS,
- My documents folder,
- temporary directory of the system,
- temporary directory of the user.

 **Dr.Web Agent Scanner. Complete scan.** In this mode complete scan of hard disks and removable disks (including the boot sectors) is performed.

 **Dr.Web Agent Scanner. Custom scan.** In this mode you may select any files and folders to scan. and Specify extended parameters of the check.

4. After you select scan type, the Scanner settings window will be opened. Change scanning parameters if necessary (see the [Configuring Scanner Settings](#) section).
5. Click **Scan** to launch the scan process on selected workstations.



Station scanning via Dr.Web Agent Scanner that is launched remotely, is performed in the background mode without displaying any notifications for station user.

7.5.3. Configuring Scanner Settings

Via the Control Center, you can specify the following anti-virus check parameters:

- Dr.Web Scanner settings. This Scanner is launched by users on stations and cannot be remotely launched from the Control Center. But administrator is can centralized change its settings which will be transmitted and saved on stations.
- Dr.Web Agent Scanner settings. This Scanner is remotely launched from the Control Center and performs station check similarly to Dr.Web Scanner. Dr.Web Agent Scanner settings are presented as extended settings of Dr.Web Scanner and specified during the launch of stations anti-virus check.

Dr.Web Scanner Parameters Setup

1. In the main menu of Dr.Web Security Control Center, select **Anti-virus network**.
2. Click the name of a station or group in the hierarchical list of the opened window.
3. In the opened [control menu](#) in the **Configuration** section, select in the necessary operating system subsection the **Scanner** item. The Scanner settings window opens.






4. Specify necessary scan parameters. Description of Dr.Web Scanner parameters is given in the **User Manual** for corresponding operating system.
5. Click **Save**. Settings will be saved in the Control Center and transmitted to the corresponding stations.

Dr.Web Agent Scanner Parameters Setup

Dr.Web Agent Scanner parameters are specified during the launch of stations anti-virus check as described in the [Launching Scan on Station](#) section.

The list of Scanner settings sections which are available (+) or not available (–) depends on the mode of station scan launch and presented in the table below.

Table 7-3. The list of Scanner settings sections depending on the scan launch

Scan launch mode	Settings sections			
	General	Actions	Limitations	Exclusions
 Dr.Web Agent Scanner. Custom scan	+	+	+	+
 Dr.Web Agent Scanner. Express scan	–	+	+	–
 Dr.Web Agent Scanner. Complete scan	–	+	+	–

Depending on the operating system of the stations on which the remote scan is launched, only those part of Scanner settings is available, which is supported by station system.

7.5.3.1. General



Settings that are not supported in check of stations under UNIX system-based and macOS are included into square brackets [].

Settings that are not supported in check of stations under Android OS are included into brackets ().

In the **General** section, you can configure the following settings of anti-virus check:



- Set the **Use heuristic analysis** flag so Scanner will check for unknown viruses via the heuristic analyzer. In this mode the Scanner may give false positives though.
- The **Scan boot sectors** flag so Scanner will check boot sectors of the drives. Both boot sectors of logical drives and main boot sectors of physical drives are scanned.
- The **[Scan programs that run on startup]** flag to scan files that automatically launched at operating system startup.
- Set the **Follow symbolic links** flag to follow symbolic links during scan.



- See the **[(Scan loading programs and modules)]** flag to scan processes that are run in the RAM.
- Set the **[(Scan for rootkits)]** flag to enable scanning for malware that hides its presence in the system.
- Set the **[(Interrupt scanning when switching to battery mode)]** flag to interrupt scanning when switching computer of a user to battery mode.
- The **[(Scan priority)]** drop-down list defines priority of the check process relatively computing resources of operating system.
- Set the **[(Load level of computer resources)]** flag to limit the use of computer resources when scanning, set the flag and select from the drop-down list the maximum allowed load of resources by Scanner. In absence of other tasks, computer resources are used in maximum.



The **Load level of computer resources** option has no effect on the actual resources load when launching the scan on a single-processor system with one core.

- In the **[(Number of cores to use)]** field, specify the maximum number of processor cores used by the scanner. Integers from 0 to 32 are allowed. The 0 value instructs to use all available cores.
If you are configuring a group of stations, please note that this parameter has an absolute value, not a percentage from the total number of available cores. Because of this, the same value may lead to different relative load of stations with different number of processor cores.
- The **(Actions after scan)** drop-down list instructs to perform specified action automatically when the check is completed:
 - **do nothing**—no actions perform on user computer after the check is completed.
 - **[shutdown station]**—shutdown the user computer after the check is complete. Before shutdown the computer, the Scanner applies specified actions to detected threats.
 - **[reboot station]**—restart the user computer after the check is complete. Before restart the computer, the Scanner applies specified actions to detected threats.
 - **[suspend station].**
 - **hibernate station.**
- Set the **[(Disable network while scanning)]** flag to disable network and Internet connections during scanning process.
- Set the **Scan fixed volumes** flag to scan fixed hard drives (hard disk drives, etc.).
- Set the **Scan removable media** flag to scan all removable data storages such as floppy or CD/DVD disks, flash drives etc.
- In the **Paths selected for scan** field, specify the list of checked paths (how to specify paths is described below).
 - To add a new string to the list, click  and specify required path to the opened string.
 - To remove an item from the list, click  next to the corresponding string.



If you set the **Paths selected for scan** flag, only specified paths will be scanned. If the flag is cleared, all disks will be checked.



7.5.3.2. Exclusions

In the **Exclusions** section, you can specify the list of files and folders to exclude from the anti-virus check.

To edit lists of files and paths excluded from scan

1. In the **Excluded paths and files** line, specify a path to corresponding file or folder.
2. To add a new line, click , and specify a path in the new line.
3. To remove a path from the list, click  next to the corresponding line.

The list of paths excluded from the scan can contain the following elements:

1. Direct path in the explicit form to the excluded object. And:
 - A character \ or / excludes the entire disc with the Windows OS installation folder,
 - A character \ at the end of a path excludes the folder from checking,
 - A path without a character \ at the end—all subfolders of the selected folder are excluded from checking,

For example: C:\Windows—skip scanning files of the C:\Windows folder and all its subfolders.

2. Masks of objects, excluded from the scan. The ? and the * symbols can be used to specify masks.

For example: C:\Windows**.dll—skip scanning all files with the dll extension at all subfolders of the C:\Windows folder.

3. Regular expression. Paths can be specified through regular expressions. Any file whose full name (with the path) corresponds to a regular expression is excluded from checking.



Before starting Dr.Web Scanner for Windows familiarize yourself with recommendations on virus scanning for computers operated by Windows Server 2003 OS, Windows 2000, or Windows XP OS. The information can be found at <http://support.microsoft.com/kb/822158/en>. The article is meant to help you increase system performance.

The syntax of regular expressions used for excluding paths from scanning is as follows:

```
qr{expression}flags
```

As a flag mostly the character `i` is used. It instructs "to ignore letter case difference".



Examples of specifying excluded paths through regular expressions

Regular expression	Meaning
<code>qr{\\pagefile\\.sys\$}i</code>	skip scanning Windows NT swap files
<code>qr{\\notepad\\.exe\$}i</code>	skip scanning notepad.exe files
<code>qr{^C:}i</code>	skip scanning disk C
<code>qr{^\\.:\\WINNT\\}i</code>	skip scanning WINNT catalogs on all disks
<code>qr{(^C:) (^\\.:\\WINNT\\)}i</code>	skip scanning disk C and WINNT catalogs on all disks
<code>qr{^C:\\dir1\\dir2\\file\\.ext\$}i</code>	skip scanning the c:\dir1\dir2\file.ext file
<code>qr{^C:\\dir1\\dir2\\(.+\\)?file\\.ext\$}i</code>	skip scanning file.ext, if it is located in the c:\dir1\dir2 catalog and its subcatalogs
<code>qr{^C:\\dir1\\dir2\\}i</code>	skip scanning c:\dir1\dir2 and its subcatalogs
<code>qr{dir\\[^\\]+}i</code>	skip scanning the dir subcatalog located in any catalog, but scan its subcatalogs
<code>qr{dir\\}i</code>	skip scanning the dir subcatalog located in any catalog and its subcatalogs

Regular expressions briefly described in the **Appendices** document, in the [Appendix J. Regular Expressions Used in Dr.Web Enterprise Security Suite](#) section.

In the **Scan contents of the following files** subsection, you can disable the check of compound objects. For this, clear the following flags:

- The **Archives** flag instructs the Scanner to search for viruses in files within archives.
- The **Email files** flag instructs to scan mailboxes.
- The **Installation packages** flag instructs the Scanner to search for viruses in packages for program installation.

7.5.3.3. Actions



Settings that are not supported in check of stations under UNIX system-based and macOS are included into square brackets **[]**.

On the **Actions** tab, you can configure reactions of Scanner on detection of infected or suspicious files, malware and infected archives.



Dr.Web Agent Scanner automatically applies actions that are specified for detected virus threats.

The following actions for detected threats are provided:

- **Cure**—restore the original state of an object before infection. If the object is incurable, or the attempt of curing fails, the action set for incurable viruses is applied.
Available for known viruses only except Trojan programs that are deleted on detection, and infected files within complex objects (archives, mail boxes or file containers).
- **Delete**—delete infected object.
- **Move to quarantine**—move the object to the special Quarantine at the station.
- **Report**—send a notification to the Control Center about the detection of a virus (see the [Setting Alerts](#) section on how to configure alerts).
- **Ignore**—skip the object without performing any action and do not send notification in the scan statistic.

Table 7-4. Reactions of Scanner to various virus events

Object	Action				
	Cure	Delete	Move to quarantine	Report	Ignore
Infected	+/*	+	+		
Suspicious		+	+/*		+
Incurable		+	+/*		
Installation packages		+	+/*		
Archives		+	+/*		
Email files			+/*		+
Boot sectors	+/*			+	
Adware		+	+/*		+
Dialers		+	+/*		+
Jokes		+	+/*		+
Riskware		+	+/*		+
Hacktools		+	+/*		+



Conventions

+	action is enabled for this type of objects
+/*	action is set as default for this type of object

To set actions on detected threats, use the following options:

- The **Infected files** drop-down list specifies the Scanner reaction to the detection of a file infected with a known virus.
- The **Suspicious files** drop-down list specifies the Scanner reaction to the detection of a file presumably infected with a virus (upon a reaction of the heuristic analyzer).



If scanning includes the OS installation folder, it is recommended to select the **Report** action for suspicious files.

- The **Incurable files** drop-down list specifies the Scanner reaction to the detection of a file infected with a known incurable virus and in case if attempt to cure a file is failed.
- The **Infected installation packages** drop-down list specifies the Scanner reaction to the detection of an infected or suspicious file in a programs installation packages.
- The **Infected archives** drop-down list specifies the Scanner reaction to the detection of an infected or suspicious file in a file archive.
- The **Infected email files** drop-down list specifies the Scanner reaction to the detection of an infected or suspicious file in email format.



If viruses or suspicious program code is detected within complex objects (archives, email attachments or file containers), an actions selected for this type of a complex object is performed to a whole object, not just to the infected part. By default informing the user on the threat is performed.

- The **Infected boot sectors** drop-down list specifies the Scanner reaction to the detection of an viruses or suspicious program code in the boot sectors area.
- In the following drop-down list, set the Scanner reaction to the detection of corresponding type of unsolicited software:
 - **Adware;**
 - **Dialers;**
 - **Jokes;**
 - **Riskware;**
 - **Hacktools.**



If you select **Ignore**, no action is performed: no notifications are sent to the Control Center as compared to when you select **Report** on virus detection.



Set the **[Restart computer automatically]** flag to reboot user's computer automatically after the scan is completed, if during the check infected objects detected and the cure process requires reboot of operating system. If the flag is cleared, reboot of a user's computer is not performed. Statistics of a station scan received by the Control Center, contains notification on the need of station reboot to complete the cure process. Information on a state that requiring reboot is displayed in the [State](#) table. Administrator is able to reboot a station from the Control Center if it is needed (see the [Anti-Virus Network](#) section).

Set the **Show scan progress** flag to display a progress bar and the status bar of the stations scan process in the Control Center.

7.5.3.4. Limitations



Settings that are not supported in check of stations under UNIX system-based and macOS are included into square brackets [].

In the **Limitations** section, the following settings are available:

- **Maximum scanning time (ms)**—maximal scanning time of one object in milliseconds. When the specified time expires, the scan of this object is interrupted.
- **Maximum archive nesting level**—maximal number of nested archives. If the maximum nesting level for archived files exceeds specified value, the scan performs until specified nesting level only.
- **[Maximum archive size (KB)]**—maximal size of scanned archive in kilobytes. If the archive size exceed the limit, neither unpacks, nor scans performed.
- **Maximum compression ratio**—maximal archives compression rate. If the Scanner defines what compression rate of the archive exceed specified limit, neither unpacks, nor scans performed.
- **[Maximum size of extracted files (KB)]**—maximal file size at unpacking. If the Scanner defines what the size of files after extracting the archive will exceed specified limit, neither unpacks, nor scans performed.
- **[Compression check threshold (KB)]**—minimal size of file inside archive beginning from which compression ratio check is performed.

7.6. Viewing Workstation Statistics

Via the control menu of the **Anti-virus network** section, you can view the following information:

- [Statistics](#)—to view data on anti-virus components functioning at the stations, stations and anti-virus components status, to view and save the reports, that contains all statistic data or selective statistic tables.
- [Charts](#)—to view charts with information on infections, detected at the stations.



- [Quarantine](#)—remote access to the Quarantine contents at the station.

7.6.1. Statistics



Also, you can configure automatic creating of a statistic report that includes a set of statistic tables you need. This report in the selected format, can be either saved on the Server or sent on an email.

For this, configure the **Create statistic report** task in the Server [schedule](#).

To view tables

1. Select the **Anti-virus network** item in the main menu of the Control Center and in the opened window, click the name of the station or group in the hierarchical list.
2. In the opened [control menu](#), select a necessary item in the **Statistics** section.

The **Statistics** section of the menu contains the following items:

- **Threats**—view information on virus events (list of infected objects, viruses, anti-virus actions, etc.).
- **Preventive protection events**—view information on events detected on stations by the Preventive protection component.
- [Summary data](#)—view and save the reports, that contains all statistic data or selective statistic tables. This menu item will not be displayed if all other menu items are hidden in the **Statistic** section.
- **Errors**—view a list of scanning errors on a selected workstation for a certain period.
- [Scan statistics](#)—view statistics on the operation of anti-virus facilities on a workstation.
- **Start/Stop**—view a list of components which operated on a workstation.
- **Threat statistics**—view information on viruses detected on a workstation which are grouped by type.
- [Status](#)—view data on an unusual state of workstations, which might need your attention.
- **Tasks**—view the list of tasks set for a workstation during a certain period.
- **Products**—view information on products installed on selected stations. In this case, products refers to the Server [repository](#) products.
- **Virus databases**—view details on installed virus databases including information on the file containing a particular database, virus database version, the total number of virus records in the database, the database creation date. This menu item is available only if stations selected.
- **Modules**—view detailed information on all Dr.Web modules including module description—its function name, the executable file for the separate product, the full module version etc. This menu item is available only if a single station is selected.
- **Agent installations**—view a list of Agent installations on a workstation or group of workstations.



- **Agent deinstallations**—view the list of workstations with deinstalled Dr.Web anti-virus software.



To show hidden items of the **Statistics** section, select **Administration** in the main menu, then in the opened window select **Dr.Web Server configuration** in the control menu. On the **Statistics** tab, set corresponding flags (see below), then click **Save** and restart the Server.

Table 7-5. Correspondence between items of Statistics section and flags of Statistics section in the Server configuration

Statistics section items	Flags from the Statistic section in the Server configuration
Threats	Detected security threats
Errors	Scan errors
Scan statistics	Scan statistics
Start/Stop	Start/Stop of components
Threat statistics	Detected security threats
Status	Station statuses
Tasks	Station tasks execution log
Virus Bases	Stations statuses Virus database statuses Station tasks execution log
Modules	List of the station modules
Agent installations	Agent installations

The windows with the statistics for different components and the total statistics of workstations have the same interface, and the actions to set the information to be provided are similar.


Below several examples for viewing the statistics via Dr.Web Security Control Center are given.




7.6.1.1. Summary Data

To view summary data



1. In the hierarchical list select a station or a group.
2. Select the **Summary data** item from the **Statistics** section of the [control menu](#).



- The window with report table data will be opened. To include specific data in the report, click  on the toolbar and select necessary types in the drop-down list: **Scan statistics, Threats, Tasks, Start/Stop, Errors**. Statistics from this report sections are similar to statistics from the corresponding items of the **Table** section. To view the report with selected tables, click **Refresh**.
- If the report contains the table with detected threads, the following options become available on the toolbar:

Option	Description
 Exclude files from scan	<p>Allows to add selected objects into the list of exclusions from the scan by protection components:</p> <ol style="list-style-type: none">In the Threats table, set the flag next to the one of several detected objects.Click .In the opened window, specify the following options:<ul style="list-style-type: none">Exclude from the scan and set personal settings of SpIDer Guard—add selected objects into the list of exclusions from the scan by SpIDer Guard component. At this, if the network nodes whose exclusions list will be changed are inheriting SpIDer Guard settings from their primary groups, then inheriting will be broken and personal settings will be set.Exclude from the scan and set personal settings of Dr.Web Scanner—add selected objects into the list of exclusions from the scan by Dr.Web Scanner component. At this, if the network nodes whose exclusions list will be changed are inheriting Dr.Web Scanner settings from their primary groups, then inheriting will be broken and personal settings will be set.In the Exclude for the following objects list, select the network nodes to add the selected object into exclusions list: either only for station on which the object was detected or for stations and user groups selected in the list.Click Exclude.
 Scan	Rescan selected objects. Select the scan mode in the drop-down list.

- To view the data for certain time period, specify the certain time period relatively today in the drop-down list, or select the arbitrary date range on the toolbar. To select the arbitrary date range, enter required dates or click the calendar icons next to the date fields. To load data, click **Refresh**.
- To save the report for printing or future processing, click one of the following buttons:

-  **Save data in CSV file,**
-  **Save data in HTML file,**
-  **Save data in XML file,**
-  **Save data in PDF file.**







7.6.1.2. Scan Statistics

To view the statistics on operation of anti-virus programs on a workstation

1. In the hierarchical list select a station or a group.



If you want to view records for several stations or groups, select these objects keeping the SHIFT or CTRL key pressed.

2. In the [control menu](#) select the **Scan Statistics** item from the **Statistics** section.
3. The Statistics window will be opened. The statistics for last 24 hours are displayed by default.
4. To view the data for certain time period, specify the certain time period relatively today in the drop-down list, or select the arbitrary date range on the toolbar. To select the arbitrary date range, enter required dates or click the calendar icons next to the date fields. To load data, click **Refresh**. The tables with statistics will be loaded.
5. To view the detailed statistics of anti-virus components, click the station name in the table. If groups were selected, click the group name in the summary statistics table, then click the station name in the displayed table. A windows (or a section of current window) with detailed statistics will be opened.
6. You can open the settings window of the anti-virus component from the statistic table of station or group components. To do this, click the name of the component in the statistic table.
7. To sort the data in columns of a table, click the certain point (decrease or increase) in the header of the table.
8. To save the table for printing or future processing, click one of the following buttons:
 -  **Save data in CSV file,**
 -  **Save data in HTML file,**
 -  **Save data in XML file,**
 -  **Save data in PDF file.**
9. To view the statistics as a charts, click **Charts** in the [control menu](#). A statistics charts window will be opened (see detailed description [below](#)).


7.6.1.3. Status

To view data on workstations status

1. In the hierarchical list select a station or a group.
2. In the [control menu](#) select **Status** item from the **Statistics** section.
3. To view the data for certain time period, specify the time diapason relatively today in the drop-down list on the toolbar. To select the arbitrary date range, enter required dates



manually or click the date fields to display the calendar. To load data, click **Refresh**. The exact time for receiving the events corresponding to the selected range is given in the **Time** column.

4. Status information are displayed according to the filter settings. Click  on the table header, to change the following filter parameters:
 - In the **Search** field, enter the arbitrary string to search by all sections of the table.
 - In the **Severity** drop-down list, set the flags for necessary levels of messages severity: the list of messages on status will contain only messages with selected severity. All flags are set by default.
 - In the **Source** list, set the flags for those sources of messages appearance that will be displayed in the list:
 - **Agent**—display events from Dr.Web Agents connected to this Server.
 - **Server**—display events from this Dr.Web Server.
 - In the **Stations** list, set the flags for stations status types, messages on which will be displayed in the list:
 - **Online**—display events for stations which are connected to this Server and currently online.
 - **Offline**—display events for stations which are connected to this Server and currently offline.
 - **Deinstalled**—display the last event for stations with deinstalled Dr.Web anti-virus software.

To manage filter settings, use the following buttons on the filter pane:

- **Default**—set the default values to all filter settings.
 - **Refresh**—apply selected filter settings.
5. You can format the way the data are presented just like in the statistics window above.



To view operation results and statistics for several workstations, select those workstations in the network hierarchical list.

6. To save the report for printing or future processing, click one of the following buttons:



Save data in CSV file,



Save data in HTML file,



Save data in XML file,



Save data in PDF file.



7.6.2. Charts

Infection Charts

To view general charts with information on detected infections

1. Select **Anti-virus network** in the main menu of the Control Center, then in the opened window in the hierarchical list click the station or group name. In the opened [control menu](#) in the **General** section, select **Charts**.
2. Window with the following charts will be opened:
 - **Viral activity**—chart displays the total number of malware detected per each time slot at all selected stations and groups. The chart is displayed if specified time period exceeds 24 hours.
 - **Most common threats**—displays the list containing ten threats that are met in the most of files. The chat displays numerical data on objects which correspond to the specific threat.
 - **Threat classes**—displays the list of threats corresponding to the malware specification. The pie chart displays percentage between all of detected threats.
 - **Most infected stations**—displays the list of stations on which security threats detected. Chart displays the total number of threats for each stations.
 - **Actions performed**—displays the list of actions performed to detected malware. The pie chart displays percentage between all of performed actions.
3. To view data for a certain time slot, specify it in the drop-down list on the toolbar: view the certain day or month. Or you can select the arbitrary date range. To do this, enter required time and date or click the calendar icons to set the time period. To view the data, click **Refresh**.
4. To exclude an item from displaying on a chart (except the **Viral activity** chart), click the name of this item in the legend under the chart.

Total Statistics Charts

Graphical data is displayed in the **Charts** entry of the **General** section and in some entries of the **Statistics** section. In the table below, charts and sections of the control menu, in which these charts are displayed, are listed.

Table 7-6. Correspondence between charts and sections of the control menu

Charts	Sections
Viral activity	Charts
Most common threats	Charts



Charts	Sections
	Threats Threat statistics
Threat Classes	Charts Threat statistics
Most infected stations	Charts
Actions performed	Charts Threats
Count of errors by stations	Errors
Count of errors by components	Errors
Threats by components	Start/Stop
Errors by components	Start/Stop

- **Count of errors by stations**—displays the list of stations on which errors in anti-virus components operation detected. Graph displays the total number of errors for each station.
- **Count of errors by components**—displays the list of anti-virus components in which operation errors detected. The pie chart displays percentage between errors of all components.
- **Threats by components**—displays the list of anti-virus components which detected the threats. Chart displays the total number of threats detected by each component.
- **Errors by components**—displays the list of anti-virus components in which operation errors detected. Chart displays the total number of errors for each component.

7.6.3. Quarantine

Quarantine Content

Files can be added to the Quarantine by one of anti-virus components, e.g. Scanner.

User can rescan files in Quarantine via the Control Center or via the Quarantine Manager at the station.

To view and manage Quarantine via the Control Center

1. Select the **Anti-virus network** item in the main menu, then click the name of the station or group in the hierarchical list. Select the **Quarantine** item in the **General** section of the [control menu](#).



2. A new window with table that contains Quarantine current state opens.

If you select one workstation, a table in the window displays objects in Quarantine at this station.

If you select more than one stations or one or more groups, the windows displays a set of tables with quarantined objects for each station.





Statistic on rescan of quarantined object that is given in the **Information** column, considers only rescans launched via the Control Center.







If more than one threat has been moved to quarantine, click the number of moved objects in the **Information** column to view the list of threats in the popup window.

If a quarantined object has the **not infected** status, it means that after moving to Quarantine of an object that has been detected as a threat, rescan has been performed and the object marked as safe.


Restoring objects from the Quarantine can be done only manually.

3. To filter files by time when they were quarantined, specify the certain time period relatively today in the drop-down list, or select the arbitrary date range on the toolbar. To select the arbitrary date range, enter required dates or click the calendar icons next to the date fields. To load data, click **Refresh**.
4. To change the table view, click the  icon in the table header:
 - Specify rows display settings (most relevant for long strings).
 - Select the columns to display in the table.
5. To filter Quarantine files, click  in the table header and specify the following filtering parameters:
 - **Search**—specify the arbitrary string to search by all sections of the table. The table will contain only rows that correspond to the search results.
 - **Moved by component**—select Dr.Web protection component which moved the files to Quarantine.
 - **Threat**—select the name on detected threat according to the Doctor Web company classification.
 - **Original name**—enter the original name of the object before moving to Quarantine.
 - **File size, B**—using the slider, specify sizes range of detected objects in bytes.Click **Apply** to display Quarantine files according to the specified parameters of the filter. Click **Default** to reset all filtering parameters into default values.
6. To manage files in Quarantine, set the flag for the corresponding file, group of files or for all files in the Quarantine (at the table header). On the toolbar, select one of the following actions:



Option	Description
 Restore files →  Restore files	Restore the original location of the files on a computer, i.e. restore the files to the folders where they had resided before were moved to the Quarantine.
 Restore files →  Restore files by parameters	In the opened window, specify the following settings: <ul style="list-style-type: none">• If the one object is selected:<ul style="list-style-type: none">▫ Restore file as—restore selected file from the Quarantine and place it to specified path with specified name. In the Restore file to the following path field, specify the full path at station by which the selected file will be restored. File name is obligatory. By default, the original location and file name is set (before moving). If necessary, you can change this parameter.▫ Restore files by threat type—restore from the Quarantine all files that have been classified with the same threat type as the selected file. The threat type is given in the Restore files containing the following threat field.▫ Restore files by path—restore from the Quarantine all files moved from the specific folder. In the Restore all files moved to the quarantine from the following folder field, specify the path to the folder at station. All files that have been moved to the quarantine from this folder will be restored. By default, the path to the folder where the selected file were resided is set. If necessary, you can change this parameter.• If several objects are selected:<ul style="list-style-type: none">▫ Restore files—restore the original location of the files on a computer, i.e. restore the files to the folders where they had resided before were moved to the Quarantine.▫ Restore files by threat type—restore from the Quarantine all files that have been classified with the same threat type as the selected files.• In the Restore on the following objects list, select network nodes to restore the selected object from the Quarantine: either only for station on which the object was detected or for user groups selected in the list.• Add exceptions as personal settings of SpIDer Guard—add selected objects into the list of exclusions from the scan by SpIDer Guard component. At this, if the network nodes whose exclusions list will be changed are inheriting SpIDer Guard settings from their primary groups, when inheriting will be broken and personal settings will be set.• Add exceptions as personal settings of Dr.Web Scanner—add selected objects into the list of exclusions from the scan by Dr.Web Scanner component. At this, if the network nodes whose exclusions list will be changed are inheriting Dr.Web Scanner settings from their primary groups, when inheriting will be broken and personal settings will be set.
 Remove files	Delete selected files from the Quarantine and from the system.
 Scan files	Rescan selected in Quarantine files.



Option	Description
 Export	Copy and save selected in Quarantine files. After moving suspicious files to the local Quarantine on user's computer, you can copy these files via the Control Center and save them via the web browser, e.g. to send files to Doctor Web virus laboratory.



Use the restore option only if you are sure that objects are harmless.

7. Export data about the Quarantine state to a file in one of the following formats:



Save data in CSV file,



Save data in HTML file,



Save data in XML file,



Save data in PDF file.

7.7. Mailing of Installation Files

After a new stations account is created in the Control Center, the personal installation package for Dr.Web Agent installation is generated. Installation package contains the Anti-virus installer and the set of parameters for connecting to the Server and for authorization of the station at the Server (description of installation package and the process of Agent installation via this package is given in the **Installation Manual**, in the [Local Installation of Dr.Web Agent](#) section).

After the installation package is created, for the convenience of their distribution, you can send specific installation packages to the user's email.

To send installation packages, the email content is formed by the following way:

1. Attachments are forbidden in the settings (the **Send the link only** flag is set, see below): only links for downloading the packages are sent in the email.
2. Operating system of the station is known (attachments are allowed):
 - a) Windows OS: the letter attachment contains Dr.Web Agent for Windows installation package.
 - b) Linux OS, macOS, Android OS: the letter attachment contains Dr.Web Agent installation package for the corresponding operating system and the configuration file with the settings for connecting to Dr.Web Server.
3. Operating system of the station is unknown—the new station account, Agent in not yet installed (attachments are allowed):
 - a) If the Server does not contain the packages for stations under Linux OS, macOS, Android OS (in particular, the [extra distribution kit](#) of the Server is not installed): the letter attachment contains Dr.Web Agent for Windows installation package and the



configuration file with the settings for connecting to Dr.Web Server for stations under Linux OS, macOS, Android OS.

- b) If the Server contains at least one package except packages for stations under Windows OS: the letter attachment contains Dr.Web Agent for Windows installation package, the configuration file with the settings for connecting to Dr.Web Server for stations under Linux OS, macOS, Android OS and the link to download installation packages for stations under Linux OS, macOS, Android OS.

To email installation package

1. Select the **Anti-virus network** item in the main menu of the Control Center and in the opened window, select the following objects in the hierarchical list:
 - select the station to email the installation package generated for this station.
 - select the group of stations to email all installation packages generated for stations of this group.

Use CTRL or SHIFT to select several objects at a time.

2. On the toolbar, click **General** → **Mail installation files**.
3. In the **Mailing of installation files** opened section, specify the following parameters:
 - In the **General** section:
 - Set the **Pack in zip archive** flag to pack installation packages into a zip archive. Archiving can be useful if the user's email system contains filters that block sending of executable files in emails attachment.
 - Set the **Send the link only** flag to email only the link to download the package. At this, the installation package file is not attached to the email. This option may be useful if a client mail server removes attachments from emails automatically.
 - In the **Recipient email addresses** section, specify the email address to send installation package to. If several stations or groups were selected, specify email addresses to send installation packages of each station separately next to this station name.



Parameters of email sending are configured in the **Administration** menu, in the **Dr.Web Server Configuration** section, on the **Network** tab, on the [Email](#) internal tab.

4. Click **Send**.

7.8. Sending Notifications to Stations

The system administrator may send the users informational messages including:

- message text;
- hyperlinks to Internet resources;
- company logo (or any other graphic presentation);
- exact date of message receipt in the title of the window.



These messages are displayed on user's computer as popup windows (see [figure 7-1](#)).

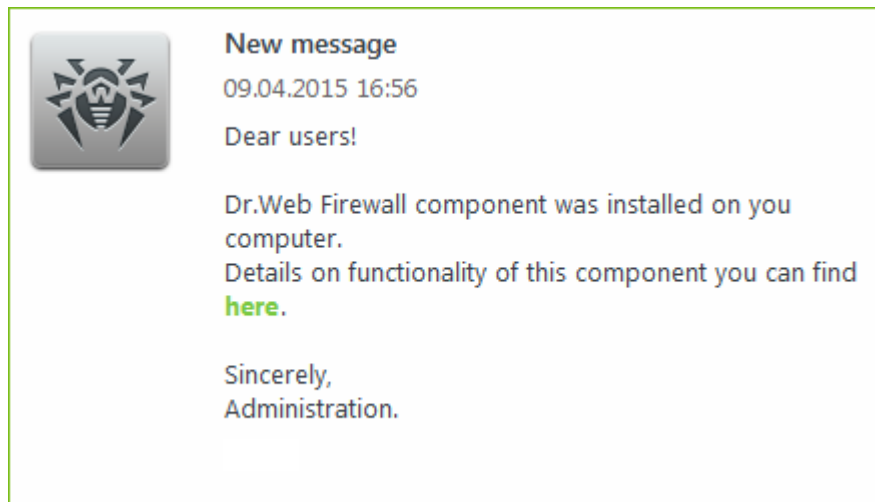


Figure 7-1. Message window on a station under Windows OS

To send a message to a user

1. Select the **Anti-virus network** item in the main menu of the Control Center.
2. In the opened window, select a station or a group in the hierarchical list and click **General** → **Send message** on the toolbar.
3. Specify the following fields in the opened window:
 - In the **Message title** field, you can specify the title of the message, e.g. the company name. This text will be displayed in the message window title on the right of the logo. If you leave this field blank, information on the message will be displayed in the title of the message window.
 - **Message text**—an obligatory field containing the message itself.
 - Set the **Show logotype in the message** flag, to display a graphical object in the message window title. Specify the following logotype parameters:
 - On the right of the **Logotype file** field, click to load the logotype file from the local resource, and select the necessary object in the opened file system browser.
 - In the **URL** field, you can specify the link to an Internet resource to open on the logo and message title click.

If the logotype is not set or the logotype size exceeds the allowable limits (see [Logo File Format](#), p. 3), Dr.Web Agent logotype will be displayed in its place in the message window.

- Set the **Show link in the message** flag, to include a hyperlinks to web resources into the message.

To insert a link:

- a) In the **Text** field, specify the link name—the text displayed in the link place in the message.
- b) In the **URL** field, specify a link to an Internet resource.



- c) In the **Message text** field, add the `{link}` marker in all places where you want the link to appear. In the resulting message, the link with the specified parameters will be shown instead of the marker. You may use unlimited number of the `{link}` markers in a text, all of them will have the same parameters from the **URL** and **Text** fields. If one or several `{link}` markers are used, the link will be inserted instead of markers only.
 - d) If the `{link}` marker is not specified in the **Message text** field, the link will be inserted once in the end of the message on a separate line.
- Set the **Send to online stations only** flag to send the message to online stations only. If the flag is set, sending to offline stations is not performed. If the flag is cleared, sending to offline stations is postponed till their connection.
 - Set the **Show send status** flag, to show notification with the message send status.

4. Click **Send**.

Logo File Format

A file with graphic image (logotype) inserted into a message should require the following:

1. File graphic format: BMP, JPG, PNG, GIF, SVG.
2. Logo file size may not exceed 512 KB.
3. Overall image size is 72x72 pixels. Images of other size will be scaled to the default size before send.
4. Bit depth is any (8—24 bit).



If you want to use transparent background logotype in the message, use the PNG or GIF file formats.

Before sending a user message (especially to multiple users), it is recommended to send it first to any computer with the Agent installed to check the adequacy of the result.

Message Send Example

To send the message displayed in [figure 7-1](#), the following parameters were set for the link:

Message text:

```
Dear users!  
  
Dr.Web Firewall component was installed on you computer.  
Details on functionality of this component you can find {link}.  
  
Sincerely,  
Administration.
```




URL: `http://drweb.com/`

Text: here



Chapter 8: Configuring Dr.Web Server

This chapter contains a description of the following features for managing operation parameters of the anti-virus network and Dr.Web Server:

- [License Management](#)—licensing parameters;
- [Logging](#)—view the operation log of the Server, view detailed statistic data on the Server operation;
- [Setting Dr.Web Server Configuration](#)—configure Server operation parameters;
- [Setting Dr.Web Server Schedule](#)—configure scheduled tasks to maintain the Server;
- [Setting the Web Server Configuration](#)—configure web server operation parameters;
- [User Hooks](#)—enable and configure user hooks;
- [Setting Notifications](#)—configure the system of administrator notifications about anti-virus network events with different methods of notification delivering;
- [Administration of Dr.Web Server Repository](#)—configure repository to update all anti-virus network components from the GUS and further propagation of updates on stations;
- [Database Management](#)—direct maintenance of the Server database;
- [Peculiarities of a Network with Several Dr.Web Servers](#)—configure multiserver anti-virus network and the neighbor connections.

8.1. License Management

8.1.1. License Manager



Detailed information on principles and features of Dr.Web Enterprise Security Suite licensing is given in the [Chapter 2: Licensing](#) section.

License Manager Interface







Dr.Web Security Control Center contains the License Manager component. This component is used to manage licensing of anti-virus network objects.

To open the License manager, select **Administration** item in the main menu of Dr.Web Security Control Center. In the opened window select the **License manager** item in the [control menu](#).

Hierarchical List of Keys

The main pane of the License manager contains the keys tree—the hierarchical list nodes of which are license keys of stations, groups and policies for which license keys are assigned.

**Toolbar contains the following control elements:**

Option	Description	Dependence on objects in the keys tree
 Add license key	Add a new license key record.	Option is always available. Functional features depend on whether the object is selected in the key tree or not (see Add a new license key).
 Remove selected objects	Remove the connection between the key and the licensing object.	Option is available if a licensing object (station, group or policy) or a license key is selected in the tree.
 Propagate the key to groups and stations	Replace or add selected key to a licensing object.	Option is available if a license key is selected in the tree.
 Export key	Save the local copy of the license key file.	
 Check for updates and replace license keys	Check for updates that are placed on GUS, for all keys. If updates are available, download the keys and perform the replacement (see Automatic Licenses Update).	Option is always available. The action is for all license keys in the tree.
 Propagate the key to neighbor Servers	Donate licenses from the selected key to neighbor Servers.	Option is available if a license key is selected in the tree.

 **Settings of tree view** allows to change hierarchical tree view:

- The **Show the number of licenses** flag enables/disables displaying in the keys tree the total number of licenses provided by the license key files.
- To change the tree structure, use the following options:
 - The **Keys** option prescribes to display all license keys of anti-virus network as a root nodes of the hierarchical tree. At this, all groups, stations and policies for which these keys are assigned, are presented as child elements of license keys. This tree view is a general view and allows to manage licensing objects and license keys.
 - The **Groups** option prescribes to display those groups, to which the keys are personally assigned as a root nodes of the hierarchical tree. At this, stations and policies included in these groups and license keys that are assigned to these groups are presented as child elements of groups. This tree view is intended for visualization convenience of information on licensing and does not allow to manage objects of the tree.
- To change the tree appearance, use the following options:
 - **Show clients identifiers**—enables/disables showing of stations unique identifiers.



- **Show clients names**—enables/disables showing of stations names.
- **Show clients addresses**—enables/disables showing of stations IP-addresses.
- **Show descriptions**—enables/disables showing of stations and groups of stations descriptions.

Licenses Handling

Via the License Manager, you can perform the following actions under license keys:

1. [View Information About a License.](#)
2. [Add a New License Key.](#)
3. [Update the License Key.](#)
4. [Replace the License Key.](#)
5. [Extend the List of Object License Keys.](#)
6. [Remove the License Key and the Object from the Licensing List.](#)
7. [Donate a License to a neighbor Server.](#)
8. [Edit Licenses Donated to a Neighbor Server.](#)

View Information About a License

To view the summaries about a license key, in the main pane of the License manager, select the key record to view the detail information (click the key record name). In the opened pane you can view the following information:

- Provided and used number of licenses from this license key file.
- The owner of the license.
- The dealer, who sold the license.
- Identification and serial numbers of the license.
- License expiration date.
- Inclusion of the Anti-spam component.
- MD5 hash of the license key.
- Allowed lists of hash bulletins for notification about identity of detected threats. If the feature is not licensed, this parameter is absent.




Anti-virus protection level is not reduces if hash bulletins are not licensed. This license allows to notify the administrator that the detected threat is in the specialized bulletins of known hashes of threats.

- The list of anti-virus components which are allowed to use by this license.



Add a New License Key

To add a new license key

1. In the main pane of the License Manager, click **+** **Add license key** on the toolbar.
2. On the opened panel, click  and select the license key file.
3. Set the flag:
 - **Replace the license key of the Everyone group** if it is the first license key of the anti-virus network. The adding key will be assigned to the **Everyone** group automatically.
 - **Assign the license key to the Everyone group** if it is not the first license key of the anti-virus network. The current license key of the **Everyone** group will be replaced with the adding license key.



If several keys are assigned to the **Everyone** group, the first key in the list will be replaced.

If you want to replace specific license key of the **Everyone** group, use the [Update the License Key](#) procedure.

4. Click **Save**.
5. The license key will be added to the keys tree.


If you did not set the corresponding flag at step 3, then added license key will not be assigned neither to one of the objects. In this case, to specify licensing objects, perform the [Change the License Key](#) or [Extend the List of Object License Keys](#) procedures described below.

Update the License Key

When updating a license key, the new license key is assigned for the same licensing objects, for which the updated one was assigned.

Use the updating key procedure to replace expired key or to replace with a key containing other set of installing components. The keys tree structure remains.

To update a license key


1. In the main pane of the License Manager in the keys tree, select the key you want to update.
2. On the opened key properties panel, click  and select the license key file.
3. Click **Save**. A window with installed components settings described in [Settings for License Key Changing](#), opens.
4. Click **Save** to update the license key.



Replace the License Key

When changing a license key, all current license keys are deleted for the licensing object and a new key is added.

To replace the current license key

1. In the main pane of the License Manager in the keys tree, select the key you want to assign to the licensing object: group of stations, station or policy.
2. Click  **Propagate the key to groups and stations** on the toolbar. A window with hierarchical list of anti-virus network opens.
3. Select licensing object from the list. To select several objects, use CTRL and SHIFT.



To assign a key to a policy, you must select the policy itself or the current version of this policy (a key is assigned automatically to a policy when selecting its current version and vice versa).

A license key can be also assigned to any version of a policy which is not current. At this, a key is assigned only to this version, but not to the policy itself. Such key is not applied to stations until a current version of a policy will not be replaced with the one to which this key is assigned.


A license key must be assigned to policies and their versions directly.

4. Click **Replace license key**. A window with installed components settings described in [Settings for License Key Changing](#), opens.
5. Click **Save** to replace the license key.

Extend the List of Object License Keys

When adding a license key, the licensing object saves all current keys, and a new license key is added to the keys list.

To add a license key to the license keys list of an object

1. In the main pane of the License Manager in the keys tree, select the key you want to add to the objects keys list: group of stations, station or policy.
2. Click  **Propagate the key to groups and stations** on the toolbar. A window with hierarchical list of anti-virus network opens.
3. Select licensing object from the list. To select several objects, use CTRL and SHIFT.



To assign a key to a policy, you must select the policy itself or the current version of this policy (a key is assigned automatically to a policy when selecting its current version and vice versa).

A license key can be also assigned to any version of a policy which is not current. At this, a key is assigned only to this version, but not to the policy itself. Such key is not applied to stations until a current version of a policy will not be replaced with the one to which this key is assigned.

A license key must be assigned to policies and their versions directly.

4. Click **Add license key**. A window with installed components settings described in [Settings for Adding a License Key to the Keys List](#), opens.
5. Click **Save** to add the license key.

Remove the License Key and the Object from the Licensing List



You cannot remove the last license key record of the **Everyone** group.

For policies that are assigned to stations with no personal settings of a license key, a license key must be specified.

To remove the license key or the object from the licensing list


1. In the main pane of the License Manager in the keys tree, select the key you want to remove, or the object (station, group or policy), to which this key is assigned, and click **Remove selected objects** on the toolbar. At this:
 - If a group or station was selected, it will be removed from the list of objects on which its key is effects. Group or station for which a personal license key is removed, inherits a license key.
 - If a policy was selected, its current version is also removed from the list of objects on which a license key is assigned. If a current version of a policy was selected, the policy itself is removed as well. But when removing a policy version that is not current, a policy itself and its current version will not be removed.
 - If a license key was selected, this key record is removed from the anti-virus network. All groups and stations to which this license key was assigned, inherit a license key.
2. A window with installed components settings described in [Settings for License Key Changing](#), opens.
3. Click **Save** to remove selected object.



Donate a License to a Neighbor Server

When donating a part of vacant licenses to a neighbor Server from the license key of this Server, number of donated licenses will not be available for use on this Server till the end of propagation time of these licenses.

To donate licenses to a neighbor Server

1. In the main pane of the License Manager in the keys tree, select the key a vacant licenses from which you want to donate to neighbor Server.
2. Click  **Propagate the key to neighbor Servers** on the toolbar. A window with hierarchical tree of neighbor Servers opens.
3. Select from the list those Servers to which you want propagate licenses.
4. Specify the following parameters next to the each Server:
 - **Number of licenses**—number of vacant licenses, you want to donate from this key to a neighbor Server.
 - **License expiration date**—validity period of licenses donation. After specified time period, all licenses will be recall from the neighbor Server and got back to the list of vacant licenses in this license key.
5. Click one of the buttons:
 - **Add license key**—to add licenses to the list of presence licenses of neighbor Servers. A window with installed components settings described in [Settings for Adding a License Key to the Keys List](#), opens.
 - **Replace license key**—to remove current licenses of neighbor Servers and set only propagated licenses. A window with installed components settings described in [Settings for License Key Changing](#), opens.
6. Click **Save** to propagate licenses to neighbor Servers.

Edit Licenses Donated to a Neighbor Server

To edit licenses propagated to neighbor Server

1. In the main pane of the License Manager in the keys tree, select the neighbor Server, on which licenses were propagated.
2. On the opened properties panel, edit the following parameters:
 - **Number of licenses**—number of vacant licenses, which were donated from the key of this Server to the neighbor Server.
 - **License expiration date**—validity period of licenses donation. After specified time period, all licenses will be recall from the neighbor Server and got back to the list of vacant licenses in this license key.
3. Click **Save** to update information on propagated licenses.



Changing the List of Installed Components

Settings for License Key Changing

In this section you can find description of installing components setup for the following procedures:

- Update the License Key.
- Replace the License Key.
- Remove the License Key.
- Donate a License to a neighbor Server with replacing a key.

When performing these procedures, to setup installing components, do the following:

1. In the window with installed components settings, the following objects are listed:
 - Stations, groups and policies with their lists of installing components.
 - In the **Current key** column, you can find the list of object keys and settings of installing components that are currently actual for the object.
 - In the **Assigning key** column, you can find the key and settings of installing components that are specified in the key which you want to assign to the selected objects.
2. If necessary, set the **Show only different** flag to show in the list only those components settings of which in the current and assigned keys are differ.
3. To configure the list on installed components:
 - a) In the **Assigning key** column, you can configure the result list of installing components.
 - Installing components settings in the **Assigning key** column, are calculated basing on whether the component using in the current settings and in the new key is allowed (+) or not allowed (-), as follows:

Current settings	Assigning key settings	Result settings
+	+	+
-	+	+
+	-	-
-	-	-

- b) Set the flags for those objects (stations, groups and policies) for which settings inheritance will be terminated and installing components settings from the **Assigning key** column are set as a personal. For other objects (for which flags are not set), initial settings from the **Assigning key** column are inherited.



Settings for Adding a License Key to the Keys List

In this section you can find description of installing components setup for the following procedures:

- Extend the List of Object License Keys.
- Donate a License to a Neighbor Server with adding a key.

When performing these procedures, to setup installing components, do the following:

1. In the window with installed components settings, the following objects are listed:
 - Stations, groups and policies with their lists of installing components.
 - In the **Current key** column, you can find the list of object keys and settings of installing components that are currently actual for the object.
 - In the **Assigning key** column, you can find the key and settings of installing components that are specified in the key which you want to add to the selected objects.
2. If necessary, set the **Show only different** flag to show in the list only those components settings of which in the current and assigning keys are differ. Note that in the **Assigning key** section not the assigning key settings are listed, but the result settings of installing components.
3. To configure the list on installed components:
 - a) In the **Assigning key** column, you can configure the result list of installing components.
 - Installing components settings in the **Assigning key** column are calculated basing on whether the component using in the current settings and in the new key is allowed (+) or not allowed (-), as follows:

Current settings	Assigning key settings	Result settings
+	+	+
-	+	-
+	-	-
-	-	-

- You can change installing components settings (downgrade permission to install) only if settings calculated in the **Assigning key**, allow to use this component.
- b) Set the flags for those objects (stations, groups and policies) for which settings inheritance will be terminated and installing components settings from the **Assigning key** column are set as a personal. For other objects (for which flags are not set), initial settings from the **Assigning key** column are inherited.



8.1.2. License Usage Report

License usage report contains information on all licenses used both this Server and neighbor Servers, including licenses that were donated using interserver connection.



Reports are sent by neighbor Server according to the settings specified in **Dr.Web Server configuration** → **Licenses**.

To view the report, select **Administration** item in the main menu of Dr.Web Security Control Center. In the opened window select the **License usage report** item in the [control menu](#).

This section contains the following data:

- Report on all licenses managed by this Server. The report is given even if none of neighbor Servers are configured to be connected to this Server.
- Report on licenses managed by neighbor Servers reporting to this Server, including those that receive licenses from it using an interserver connection. At this, reports from all neighbor Servers in an interserver connections tree, are given.

Each report is displayed as a separate table and contains information only on licenses of one Server—the report creator.

The following information is given in the table header:

- **Dr.Web Server**—name of the Server—the report creator.
- **Total licenses received from neighbors**—total number of licenses that the Server received via interserver connection.

The report table contains the following data:

- **User**—the user of the license key, information on licenses of which is given in the report row.
- **Total licenses**—total number of licenses provided from this license key on this Server.
- **Available**—number of available, not used licenses in this key.
- **Total used**—total number of licenses that have been used (assigned to stations or neighbor Servers) at the time of the report creation.
- **Used by stations**—number of licenses that are used by stations connected to the Server—the report creator.
- **Pending**—number of licenses that the report creator expects to receive. Particularly, if the Server that used some licenses (either assigned to its stations, or donated via interserver connections), lost part of these licenses. For example, a license key was replaced with a key with fewer licenses or the number of licenses received from the parent Server was reduced.
- **Reserved**—number of licenses that were assigned to stations or donated via interserver connections, but a recipient has not yet received assigned licenses: stations or neighbor Servers have not yet connected to get licenses. These licenses are reserved from a license key and cannot be given to other stations or Servers.



- **Donated to neighbors**—number of licenses that the Server—report creator donated via the interserver connections to its neighbor Servers.
- **Received from neighbors**—number of licenses that the Server—report creator received via the interserver connections from its neighbor Servers.
- **Report date**—date of the report creation.

For licenses that are used by stations of the Server—report creator, the additional information is available. To view the information, click the number of licenses in the **Used by stations** column (the number of licenses must be not null). In the **Use of licenses by groups** opened table, the following information is provided:

- **Group name**—the name of the station group to which the licenses were propagated.
- **Propagated licenses**—total number of licenses propagated to the station group.
- **Active stations**—number of active stations in the groups. Active means stations that were online during the time period specified in the settings for the report generating on the Server—the license key owner.

8.2. Logging

8.2.1. Real Time Log

Real time log allows to view the list of events and changes related with the Server operation that are displayed at the moment of an event appearance.



Real time log displays information in the Control Center only and does not write events into a file. [Dr.Web Server log file](#) is kept separately with its own settings and does not depend on the real time log and its settings.

When you leave this section, all information displayed in the real time log, is deleted.



The log table contains the following data:

- **Time in log format**—event appearance time represented in Dr.Web Server log file. It can be used for searching the event in the Server log file.
- **Time**—event appearance time represented in human readable form.
- **Level**—log level according to which an event appeared.
- **PID**—process identifier within which an event occurred.
- **TID**—thread identifier within which an event occurred.
- **Thread**—thread name within which an event occurred.
- **Subsystem**—subsystem name within which an event occurred.
- **Message**—message text about an event occurred. Click a message in the table to open the window with the full message text. If the texts is an HTML code, set the **Format as HTML** flag









to display information properly. Please note, if the text contains JavaScript, it will be executed.


To edit the data view in the table

- Using the  icon:
 - Specify rows display settings (most relevant for long strings).
 - Select the columns to display in the table.
 - Using the  icon:
 - Specify the arbitrary string to search by all sections of the table. The table will contain only rows that correspond to the search results.
 - To display only specific levels, set the flags next to the necessary levels.
 - To display only specific subsystems, set the flags next to the necessary subsystems.
- To write messages to the log only with specific levels and from specific subsystems, specify the [log settings](#).

The toolbar contains the following options to manage the log:

-  **Set up data display**—open the [log settings](#) window.
-  **Clear the table**—delete all the data shown in the table. You cannot undo this operation.
-  **Stop data collection**—stop displaying information on events in the table. The button is active when the data is collecting. On click, changes to  **Start data collection**.
-  **Start data collection**—start displaying information on events in the table. The button is active when the data is not collecting. On click, changes to  **Stop data collection**.

Configuring Real Time Log

1. On the toolbar, click  **Set up data display**. The **Data display settings** window opens.
2. The **Maximum number of records** field sets the limitation on the number of records displayed in the log table. When the specified number is reached, old records are deleted when new ones are received.
3. The **Refresh rate, sec.** field defines the rate in seconds according to which new records will be displayed in the log.
4. The **Subsystem search** field allows to search by subsystem name given below. It can be used if you want to specify the log level of detail for specific subsystem in the case of a large number of subsystems in the list.
5. Subsystems table allows to configure the list of displayed data and their detail level:
 - a) Set the flags next to the subsystems whose messages will be displayed in the table.
 - b) For the selected subsystems, select the log level of detail.
 - c) To show all subsystems, set the flag in the table header.




- d) To set the same log level of detail for all subsystems, select the value in the drop-down list next to the **all** subsystem. At this, the table will display only messages for subsystems with the set flags.
6. Click **Apply** to start displaying data according to the specified settings.
7. Click **✕ Close** to close the window without saving changes in the log display settings.

8.2.2. Audit Log

Audit log allows to view the list of events and changes carried via the control subsystems of Dr.Web Enterprise Security Suite.

To view the audit log

1. Select the **Administrating** item in the main menu of the Control Center.
2. In the opened window, select the **Audit log** item of the control menu.
3. Window with the registered actions table opens. To configure viewing the log, specify on the toolbar the time period during which the actions have been performed. For this, you can select one of the proposed periods or specify arbitrary dates in the calendars which are opened on clicking the dates fields. Click **Refresh** to display the log for the selected dates.
4. To configure the table view, click the  icon in the right corner of the table header. In the drop-down list, you can configure the following options:
 - Enable or disable line wrapping for long messages.
 - Select the columns to display in the table (selected by the flag next to its name). To show/hide the column, click the line with its name.
 - Select the order of the columns in the table. To change the order, drag-and-drop corresponding column in the list to the needed place.
5. The log table contains the following data:
 - **Time**—date and time when the action has been performed.
 - **State**—the brief result of the action performing:
 - **OK**—operation successfully executed.
 - **failed**—an error occurred during the operation execution. Operation is not executed.
 - **initiated**—operation execution is initiated. The result of operation execution will be known just after its completion.
 - **no rights**—administrator that launched the operation execution has no permissions to execute this operation.
 - **delayed**—action execution is postponed until a certain period or performing of a certain event.
 - **not allowed**—execution of the requested action is prohibited. For example, deleting of system groups.



Lines that correspond to actions executed with an error (the **failed** value in the **Result** column), are marked with red.

- **Message / Error**—detailed description of the action or error occurred.
 - **Login**—login of the Server administrator. It is specified if the action was initiated directly by administrator or during connection to the Server according to the administrator credentials.
 - **Address**—IP address from which the action execution has been initiated. It is specified only in case of an external connection to the Server, particularly via the Control Center or via the Web API.
 - **Subsystem**—the name of the subsystem by which or via which the action has been initiated. The audit is logged for the following subsystems:
 - **Control Center**—the action was performed via Dr.Web Security Control Center, particularly by administrator.
 - **Web API**—the action was performed via the *Web API*, e.g., from an external software connected according to the administrator credentials (see also the **Appendices** document, p. [Appendix L. Integration of Web API and Dr.Web Enterprise Security Suite](#)).
 - **Server**—the action was performed by Dr.Web Server, e.g., according to its schedule.
 - **Utilities**—the action is initiated via the external utilities, particularly via Dr.Web Server remote diagnostics utility.
6. If necessary, you can export data for the specified period into a file. To do this, click on the the following buttons on the toolbar:



Save data in CSV file,



Save data in HTML file,



Save data in XML file,



Save data in PDF file.

8.2.3. Dr.Web Server Log

Dr.Web Server logs the events connected with its operation.



The Server log is used for debugging and helps to detect problems in case of an abnormal operation of the anti-virus network.

By default, the log file named `drwcsd.log` and resided:



- Under **UNIX** OS:
 - for Linux OS: `/var/opt/drwcs/log/drwcsd.log`;
 - for FreeBSD OS: `/var/drwcs/log/drwcsd.log`.



- Under **Windows** OS: in the `var` subfolder of the Server installation folder.

The file has the plain text format (see the **Appendices** document, the [Appendix K. Log Files Format](#) section).

To view the Server log via the Control Center

1. Select the **Administering** item in the main menu of the Control Center.
2. In the opened window, select the **Dr.Web Server log** item of the control menu.
3. Window with the list of the Server logs opens. According to the rotation mode settings, the following names format of Server log files is used: `<file_name> . <N> . log` or `<file_name> . <N> . log . gz`, where `<N>`—sequence number: 1, 2, etc. E.g, if the log file name is `drwcsd`, the list of log files is the following:
 - `drwcsd.log`—current log file,
 - `drwcsd.1.log`—previous log file,
 - `drwcsd.2.log` and so on—the greater the number, the older the version of the log.
4. To manage log files, set the flag next to the necessary file or several files. To select all log files, set the flag in the header of the table. On the toolbar, the following buttons become available:
 -  **Export selected log files**—save a local copy of the selected log files. It can be useful, e.g. to view the log file content from the remote computer.
 -  **Delete selected log files**—delete the selected log files without possibility to restore.

Logging Setup for UNIX

Dr.Web Servers under UNIX system-based OS supports availability of setting up the Server logging via the separate configuration file:

- for Linux OS: `/var/opt/drwcs/etc/local.conf`;
- for FreeBSD OS: `/var/drwcs/etc/local.conf`.

The `local.conf` file content:

```
# Log level.  
DRWCS_LEV=info  
  
# Log rotation.  
DRWCS_ROT=10,10m
```

Parameter values correspond the values of command line switches for launching the Server:

- `-verbosity=<details_level>`—log level of detail.
- `-rotate=<N><f>, <M><u>`—rotation mode of Server log.



Detailed switches description is given in the **Appendices** document, the [H4.8](#) section.




If the `local.conf` file is edited during Server operation, you must reboot the Server, so logging settings changes to take effect. Reboot must be performed by the means of operating system.

During Server update and removal, the `local.conf` file is backed up, what allows to manage log level of detail in packages update of the Server.

8.2.4. Repository Updates Log

Repository updates log allows to view the list of updates from GUS, that includes detailed information on updated products revisions.

To view the repository updates log

1. Select the **Administrating** item in the main menu of the Control Center.
2. In the opened window, select the **Log of repository updates** item of the control menu.
3. Window with the registered actions table opens. To configure viewing the log, specify on the toolbar the time period during which the actions have been performed. For this, you can select one of the proposed periods or specify arbitrary dates in the calendars which are opened on clicking the dates fields. Click **Refresh** to display the log for the selected dates.
4. To show only events of specific types in the table, click  on the toolbar. In the drop-down list, select the necessary options:
 - **Show all events**—log table displays all events listed below.
 - **Show successful update sessions**—log table displays update sessions during which GUS connection has been successfully established, a new revision has been found on GUS and successfully downloaded into the Server repository.
 - **Show unsuccessful update sessions**—log table displays update sessions during which GUS connection has been successfully established, a new revision has been found on GUS but downloading of this revision failed.
 - **Show unsuccessful connections with Dr.Web GUS**—log table displays during which GUS connection has not been established or has been terminated before getting the information on revisions on GUS.
5. The log table contains the following data:
 - **Start**—date and time when an update of the certain product has been started from the GUS.
 - **Finish**—date and time when an update of the certain product has been finished from the GUS.
 - **Product name**—name of the repository product that was downloaded or was requested to be downloaded.



- **Update result**—repository update result. Contains brief information on successful update completion or error reason.



The **Update result** cells that correspond to actions executed with an error, are marked with red.

- **Initial revision**—number of the revision (revisions are numbered according to the date of their creation) that was the last for this product before update process started.
 - **Revision from update**—number of the revision (revisions are numbered according to the date of their creation) that was downloaded during update process.
 - **Updated files**—brief information on the changed files. Is given in the following format: *<files number> - <actions on files>*.
 - **Initiator**—system that initiated the update process:
 - **Launched from the command line**—update was initiated by administrator via the corresponding console command.
 - **Launched by Task Scheduler**—update was launched according to the task in the [Dr.Web Server schedule](#).
 - **Interserver update**—update was received via the interserver connection from the main Server. This initiator presents only in case of [multiserver configuration of anti-virus network](#) with propagation of update via the interserver connections.
 - **Launched from the Control Center**—update was launched by administrator via Dr.Web Security Control Center, from the [Repository State](#) section.
 - **Repository import**—update was loaded by administrator in the [Repository Content](#) section of the Control Center.
 - **Administrator**—login of the Server administrator. It is specified if the action was initiated directly by administrator.
 - **Network address**—IP address from which the action execution has been initiated. It is specified only in case of an external connection to the Server, particularly via the Control Center or via the Web API.
 - **Repository folder**—folder name of the Server repository that was modified according to the update process.
6. To view the detailed information on a certain update, click the line of this update. This opens the window with table on product files changed during selected update. The following information is given for each file: **File name**, **File hash**, **Size** and **State**.
7. If necessary, you can export data for the specified period into a file. To do this, click on the the following buttons on the toolbar:



Save data in CSV file,



Save data in HTML file,



Save data in XML file,



Save data in PDF file.



8.2.5. Message Log


The message log displays all text messages that were sent by administrator to stations of the anti-virus network (see [Sending Notifications to Stations](#)).


The log of the sent messages contains the following information:

- **Sent date.**
- **Sender**—login name of the administrator authorized in the Control Center when the message was sent.
- **State**—the number of messages sent by administrator and the number of messages successfully delivered to stations. If the numbers of sent and delivered messages are the same, information on these messages is marked with gray.
- **Message**—the text of the sent message. Optionally contains the information about the rest settings that were specified during sending.

Mouse click on the specific message in the table opens the window with delivering details: the list of all receivers and the date of the message delivery in case of successful operation and **Not delivered** in case of fail.


To manage the message log, use the following toolbar options:

 **Resend selected messages**—option is available if one or several sent messages are selected in the log (see procedures below).

 **Save selected messages as a template**—create a template from the sent message to reuse it in the future. The option is available when only one message is selected in the log. You can manage the saved templates in the [Message Templates](#) section.

In the drop-down list, select the period during which the messages that you want to display have been sent. The same period you can select in the fields with dates that are specified in the drop-down calendar. To apply the selected period, click **Refresh**.


To resend a single message

1. Set the flag next to the message you want to send.
2. Click  **Resend selected messages**.
3. The **Sending a message** window opens. Specify the following settings:
 - a) In the **Anti-virus network** tree, the stations to which this message was sent are selected. You can remain the previous receivers or select arbitrary receivers from the given list—whether separate stations or groups of stations.
 - b) The message settings are the same as in the [Sending Notifications to Stations](#) section.
4. Click **Send**.

To resend multiple messages

1. Set the flag next to the messages you want to send.



2. Click  **Resend selected messages**.
3. The **Sending multiple messages** window opens. The **Messages list** section contains the list of all message you have select for resending. The names of the messages correspond to the dates of their previous sending to stations.
4. Click **Send all**, to send all messages from the list.
5. To edit a message from the list, select it in the **Messages list** section. In the **Message settings** section, specify the following parameters:
 - a) In the **Anti-virus network** tree, the stations to which this message was sent are selected. You can remain the previous receivers or select arbitrary receivers from the given list—whether separate stations or groups of stations.
 - b) The message settings are the same as in the [Sending Notifications to Stations](#) section.
 - c) To remove the selected message from the sending list, click **Remove**.

8.3. Setting Dr.Web Server Configuration



After each saving of changes in the **Dr.Web Server configuration** section, the backup copy of the previous version of the Server configuration file is saved automatically. Only 10 last copies are stored.

Files are placed in the same folder as the configuration file itself and named according to the following format:

```
drwcsd.conf_<creation_time>
```



You can use created backup copies particularly to restore the configuration file if the Control Center interface is not available.

To set the configuration parameters of Dr.Web Server

1. Select the **Administration** item in the main menu of the Control Center.
2. Select **Dr.Web Server configuration** in the control menu. A window with Server configuration will be opened.




Values of fields, marked with the * sign, must be obligatory specified.

3. On the toolbar, the following buttons to manage the section settings are available:
 -  **Restart Dr.Web Server**—restart the Server to apply changes that have been specified in this section. The button become enabled after you specified the changes in the section settings ans click **Save**.
 -  **Restore configuration from the backup**—drop-down list with the backup of all section settings, which you can restore after making changes. The button become enabled after you specified the changes in the section settings ans click **Save**.



 **Reset all parameters to initial values**—restore the values that all parameters in this section had before current editing (last saved values).

 **Reset all parameters to default values**—restore default values of all parameters in this section.

4. To apply the changes specified in the section settings, click **Save**, after this the Server must be rebooted. To do this, click  **Restart Dr.Web Server** on the toolbar of this section.

8.3.1. General

On the **General** tab, you can configure the following Server parameters:

- **Server name**—the name of the Server. If it is not specified, the name of the computer where Dr.Web Server software is installed is used.
- **Server language**—default language which is used by components and systems of Dr.Web Servers if failed to get language settings from the Server database. Particularly used by Dr.Web Security Control Center and administrator notification system if the database has been corrupted and the language settings cannot be obtained.
- **Number of parallel requests from clients**—the threads number processing data from the clients: Agents, Agent installers, neighbor Servers. This parameter affects Server performance. Change the default setting on advice of the technical support only.



Starting from version 10, the **Authorization queue** parameter cannot be edited via the Control Center.

On the new Server installation, this parameter takes the 50 default value. On the upgrade from the previous version saving configuration file, the authorization queue value is saved from the previous version configuration.

If you need to edit the authorization queue value, edit the following parameter value in the Server configuration file:

```
<!-- Maximun authorization queue length -->  
<maximum-authorization-queue size='50' />
```

- In the **Newbies registration mode** drop-down list, select the registration mode for new stations (see [New Stations Approval Policy](#)).
 - In the **Default primary group** drop-down list select the group which is set as a primary when access of stations to the Server is allowed automatically.
- Set the **Reset unauthorized to newbie** flag to reset parameters to access the Server for workstations which have not passed authorization check. This option can be helpful when you change Server settings (such as public key) or change the DB. In such cases workstations will not be able to connect to the Server and will need to get the new parameters to assess the Server.
- In the **Allowed difference between time of Server and Agent** field specify allowed difference between system time at Dr.Web Server and Dr.Web Agents in minutes. If the



difference is larger than specified value, it will be noted in the status of the station at Dr.Web Server. 3 minutes are allowed by default. The 0 value means that checking is disabled.

- Set the **Replace IP addresses** flag to replace IP address with DNS names in Dr.Web Server log file.
- Set the **Replace NetBIOS names** flag to display DNS names instead of NetBIOS names in the catalog of the anti-virus network (when host names cannot be detected, IP addresses are displayed).



Replace IP addresses and **Replace NetBIOS names** flags are cleared by default. If the DNS service is not set up properly, enabling these flags may considerably slow down the Server operation. When using any of these options, it is recommended to enable caching names on the DNS server.



If the **Replace NetBIOS names** flag is set and anti-virus network contains the Proxy server, when for all stations connected to the Server via the Proxy server, in Dr.Web Security Control Center, the name of computer on which the Proxy server is installed, will be shown instead of stations names.

- Set the **Synchronize stations descriptions** flag to synchronize stations descriptions with the description in Dr.Web Security Control Center (**Computer description** field at the **System properties** page). If the station description in Dr.Web Security Control Center is absent, the user description will be set to this field. If descriptions differ, the description in Dr.Web Security Control Center will be replaced by the user description.
- Set the **Synchronize geolocation** flag to enable synchronization of stations geolocation between Dr.Web Servers in multiserver anti-virus network. If the flag is set, you can configure the following parameter:
 - **Startup synchronization**—number of stations without geographical coordinates, information on which is requested when establishing a connection between Dr.Web Servers.
- Set the **Use policies** flag to allow using policies for configuring settings of protected stations (see [Policies](#)).
 - **Policy versions number**—maximum number of versions that can be created for each policy.
- In the **Number of backups for the Server versions** field, set the maximum number of stored backups created at update to a new revision of the Server via the Control Center (see [Updating Dr.Web Server and Restoring from the Backup](#)). The 0 value prescribes to store all backups.



8.3.2. Traffic

8.3.2.1. Updates

On the **Updates** tab, you can configure limits for the network traffic bandwidth for transmitting updates from Server to Agents.

For more details see [Update Traffic Limitations](#).

To set limits on the Agents update traffic

1. In the **Number of simultaneous update processes** field, you can specify maximum allowable number of updates distribution sessions running at the same time from this Server. When the limit is reached, the Agent requests are placed into the waiting queue. The waiting queue size is unlimited. Set the 0 value to disable limitations on the number of simultaneous processes.
2. Set the **Limit updates traffic** flag to limit the network traffic bandwidth for transmitting updates from Server to Agents.
If the flag is cleared, updates for Agents are transferred without limitation of network traffic bandwidth.
3. If the flag is set, specify in the **Maximal transmission speed (KB/s)** field the value of maximal speed for updates transmission. At this, updates will be transferred in ranges of specified bandwidth of summary network traffic for all Agents updates.
It is allowed to configure up to five limits on updates transmission speed. To add one more field for the speed limitation, click **+**. To remove the limitation, click **-** next to the limit you want to remove.
4. In the schedule table, you can set the updates restrictions mode separately for each 30 minutes of each day of the week.
To change the mode of limitations on data transmission, click the corresponding block of the table. Also, you can select several time blocks using drag-and-drop.
Cells color is changed in cycle according to the color scheme under the table, starting from the option when updates transmission is allowed without traffic limitations, and to the option when updates transmission is forbidden.
5. After editing is complete, click **Save** to accept changes.

8.3.2.2. Installations

On the **Installations** tab, you can configure limits for the network traffic bandwidth for transmitting data during Dr.Web Agent installation on stations.

For more details see [Workstation Traffic Limitations](#).



To set limits on the Agents installation traffic

1. In the **Number of simultaneous installation processes** field, you can specify maximum allowable number of the Agent installation sessions running at the same time from this Server. When the limit is reached, the Agent requests are placed into the waiting queue. The waiting queue size is unlimited. Set the 0 value to disable limitations on the number of simultaneous processes.
2. Set the **Restrict traffic on Agent installations** flag to limit the network traffic bandwidth for transmitting data from Server to stations during installations of Dr.Web Agents.
If the flag is cleared, data on the Agent installations are transferred without limitation of network traffic bandwidth.
3. If the flag is set, specify in the **Maximal transmission speed (KB/s)** field the value of maximal speed for data transmission. At this, data for the Agent installations will be transferred in ranges of specified bandwidth of summary network traffic for all Agents.
It is allowed to set up to five limits on data transmission speed from the Agent installations. To add one more field for the speed limitation, click **+**. To remove the limitation, click **-** next to the limit you want to remove.
4. In the schedule table, you can set the data transfer restrictions mode separately for each 30 minutes of each day of the week.

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Su																								
Mo																								
Tu																								
We																								
Th																								
Fr																								
Sa																								

To change the mode of limitations on data transmission, click the corresponding block of the table. Also, you can select several time blocks using drag-and-drop.

Cells color is changed in cycle according to the color scheme under the table, starting from the option when data transmission is allowed without traffic limitations, and to the option when data transmission is forbidden.

5. After editing is complete, click **Save** to accept changes.

8.3.2.3. Workstation Traffic Limitations

You can limit the network traffic bandwidth for transferring data between Server and Agents in Dr.Web Enterprise Security Suite anti-virus network. You can separately configure limitations for transferring updates and limitations for transferring data during Agent installations.

**The following options to limit the data traffic are available:**

1. Limit data transfer bandwidth for all workstations.

You can configure this option in the Server configuration section: select the **Administration** item in the main menu of the Control Center → the **Dr.Web Server configuration** item in the control menu → the **General** tab → the **Updates** or **Installations** internal tab → the **Restrict updates traffic** or **Restrict traffic on Agent installations** option correspondingly.

2. Limit update transfer bandwidth for certain stations or groups of stations personally.

You can configure this option in stations configuration section: select the **Anti-virus Network** item in the main menu of the Control Center → select the station or group of stations in the network hierarchical list → the **Update restrictions** item of the control menu → the **Restrict updates traffic** option.

Data traffic is limited as follows:

1. If limitation is enabled for the common rate of data transferring in the Server settings, the summary rate of transferring data from Server to all stations will not exceed the specified value. At that:
 - a) Not depending on the difference in bandwidth of channels between Server and stations, the transfer rate is equally distributed among all the stations.
 - b) If the bandwidth of a channel between Server and a station is less than the average rate for one station calculated according to the **a)** item, the data transferring traffic for this station is limited to the maximum bandwidth of this channel. The rest limit of the common rate, is equally distributed among the set of stations as described in the **a)** item.
2. If the personal limitation for data transferring rate is set for a certain station or group of stations, the rate of transferring data to this group or stations will not exceed the specified value. This limitation does not affect on other stations and data are transferred to them at the maximum rate.
3. If both common and personal limitations are set in the Server settings and in the settings of a certain station or group, when:
 - a) Rate of transferring data to the personally limited groups and stations will not exceed the value specified in their settings.
 - b) Rate of transferring data to the rest of stations is calculated as follows: the common limitation of data transferring rate, after subtraction of limitations in the **a)** item, is equally distributed among other workstations.
 - c) If the bandwidth of a channel between Server and a station, for which no personal limit is specified, is less than the average rate obtained in the **b)** item, the traffic for this station is limited to the maximum bandwidth of this channel. The rest rate similarly to the **b)** item is equally distributed among other stations, for which no personal limitations are specified.



8.3.3. Network

8.3.3.1. DNS

On the **DNS** tab, you can configure the following parameters of DNS server usage:

- **DNS queries timeout (sec.)**—timeout in seconds for resolving DNS direct/reverse queries. Set the 0 value to disable restriction on wait time until the end of the resolution.
- **Number of retried DNS queries**—maximum number of repeated DNS queries on fail while resolving the DNS query.
- Set the **Set the time to store DNS server responses** flag to specify time for storing responses from DNS server in the cache (TTL).
 - **For positive responses (min.)**—the storage time in the cache (TTL) of positive responses from the DNS server in minutes.
 - **For negative responses (min.)**—the storage time in the cache (TTL) of negative responses from the DNS server in minutes.
- **DNS servers**—List of DNS servers, which replaces default system list.
- **DNS domains**—List of DNS domains, which replaces default system list.

8.3.3.2. Proxy

On the **Proxy** tab, you can configure parameters of proxy server.

Set the **Use proxy server** flag to set up connections with Dr.Web Server via the proxy server. The following fields become available:

- **Proxy server**—IP address or DNS name of proxy server. If necessary, you can set the port in the address string in the following format: `<address>:<port>`. The 3128 port is used by default.
- To use authorization for access the proxy server according specified methods, set the **Use authorization** flag and specify the following parameters:
 - Specify the **Proxy server user** and **Password of proxy server user** fields.
 - Select one of authorization methods:

Option	Description
Any supported method	Use any authorization method supported by the proxy server. If the proxy server supports several authorization methods, the most secured is used.
Any safe supported method	Use any secured authorization method supported by the proxy server. In this mode, the Basic authorization method is not supported. If the proxy server supports several authorization methods, the most secured is used.



Option	Description
The following methods:	Basic authorization Use Basic authorization. It is not recommended to use this method because transfer of authorization accounting data is not encrypted.
	Digest authorization Use Digest authorization. Cryptographic authorization method.
	Digest authorization with IE support Use Digest authorization. Cryptographic authorization method. Enables support for Internet Explorer browser of version 6 and earlier.
	NTLM authorization Use NTLM authorization. Cryptographic authorization method. The NTLM protocol of Microsoft company is used for authorization.
	NTLM authorization via winbind Use NTLM authorization via an external winbind application. Cryptographic authorization method.
	GSS-Negotiate authorization Use GSS-Negotiate authorization. Cryptographic authorization method.

8.3.3.3. Transport

On the **Transports** tab, you can configure parameters of transport protocols used by the Server to connect with clients.

- In the **Encryption** drop-down list, select the policy of traffic encryption between Dr.Web Server and connected clients: Dr.Web Agents, neighbor Servers, Network Installers. For more details on this parameters, read p. [Traffic Encryption and Compression](#).
- In the **Compression** drop-down list, select the policy of traffic compression between Dr.Web Server and connected clients: Dr.Web Agents, neighbor Servers, Network Installers. For more details on this parameters, read p. [Traffic Encryption and Compression](#).
 - When you select **Yes** or **Possible** for traffic compression, the **Compression level** drop-down list become available. In this list you can select data compression level from 1 to 9, where the 1 is minimal level and 9 is maximal compression level.



See the [Traffic Encryption and Compression](#) section for more details.

- In the **Encryption key for TLS session tickets** field, specify the path to encryption key for TLS session tickets. Used to resume a TLS session based on session tickets which are encrypted using the specified key.



In the **TCP/IP** subsection, parameters of connection with the Server via TCP/IP are set:

- **Address** and **Port**—correspondingly the IP address and the port number of the network interface to which this transport protocol is bound. Server listens interface with specified parameters to communicate with Agents that installed on workstations.
- Set the **Discovery** flag to enable Server discovery service.
- Set the **Multicasting** flag to use the *Multicast over UDP* mode for detecting the Server.
- **Multicast group**—IP address of multicast group in which the Server is registered. It is used for communication of Agents and Network installers when searching active Dr.Web Servers in the network. If field is not specified, the `231.0.0.1` group is used by default.
- **Name**—the name of Dr.Web Server. If no name is specified, the name set on the **General** tab is used (see above, if no name is set on the tab, the computer name is used). If the other name specified for the protocol than the name from the **General** tab, the name from the protocol description is used. This name is used by detection service to find Server by Agents and etc.
- Under UNIX system-based OS only: in the **Path** field, specify the path to the connection socket, e.g., with the Agent.



See the [Setting the Network Connections](#) section for more details.

This parameters should be specified in the network addresses format described in the **Appendices** document, p. [Appendix E. The Specification of Network Addresses](#).

8.3.3.4. Email

On the **Email** tab, you can configure parameters of sending emails from the Control Center, e.g., as administrative [notifications](#) or when [mailing installation packages of the stations](#):

- **Sender email address**—email address which will be set as a sender of emails.
- **Server address**—SMTP server address which is used to send emails.
- **Port**—SMTP server port which is used to send emails.
- **User, Password**—if necessary, specify name and password of SMTP server user, if the SMTP server requires authorization.
- **SMTP server connection timeout**—timeout in seconds to establish a connection with SMTP server. The value is positive integer greater than or equal to 1.
- In the **Connection security** drop-down list, select the type of encrypted data exchange:
 - **STARTTLS**—switching to secured connection is performed by using the `STARTTLS` command. The 25 port is used by default for the connection.
 - **SSL/TLS**—establish a new secured TLS connection. The 465 port is used by default for the connection.
 - **No**—do not use encryption. Data exchange will be over an unprotected connection.



- Set the **Use CRAM-MD5 authentication** flag to use *CRAM-MD5* authentication on a mail server.
- Set the **Use DIGEST-MD5 authentication** flag to use *DIGEST-MD5* authentication on a mail server.
- Set the **Use LOGIN authentication** flag to use *LOGIN* authentication on a mail server.
- Set the **Use AUTH-NTLM authentication** flag to use *AUTH-NTLM* authentication on a mail server.
- Set the **Use the plain authentication** flag to use *plain text* authentication on a mail server.
- Set the **Validate the Server certificate** flag to enable validating the TLS certificate of a mail server. In the **Server certificate** field, specify the path to the root SSL certificate of Dr.Web Server.
- Set the **Debug mode** flag to get SMTP session detailed log.
- In the **Recipient email addresses** field, you can specify the email addresses to check the email sending. Click **Send test message** to send the test email (same as the Server [notification](#)) according to the settings specified in this section.

8.3.3.5. Cluster

On the **Cluster** tab, you can configure parameters of Dr.Web Servers cluster for data exchange in multiserver anti-virus network configuration.

To use the cluster, specify the following parameters:

- **Multicast group**—IP address of multicast group through which Servers will be exchange information.
- **Port**—port number of network interface to which transport protocol is bound to transmit the information into multicast group.
- **Time to live**—time to live of a datagram for data transfer within Dr.Web Servers cluster.
- **Interface**—IP address of network interface to which transport protocol is bound to transmit the information into multicast group.



Peculiarities of Dr.Web Server clustering are given in the [Dr.Web Servers Cluster](#) section.

8.3.3.6. Download

On the **Download** tab, you can configure Server parameters for generating Agent installation files for an anti-virus network stations. Further these parameters are used for connecting Agent installer to the Server:

- **Dr.Web Server address**—IP address or DNS name of Dr.Web Server.
If Server address is not specified, computer name returned by the operating system is used.
- **Port**—port number which is used for connecting Agent installer to the Server.



If the port number is not specified, the 2193 port is used (it is configured in the Control Center, at **Administration** → **Dr.Web Server configuration** → **Network** tab → the **Transport** tab).

The settings of the **Download** section are saved in the `download.conf` configuration file (see the **Appendices** document, p. [G3. Download.conf Configuration File](#)).

8.3.3.7. Multicast Updates

On the **Multicast updates** tab, you can configure updates transmission on workstations via the multicast protocol.

Set the **Enable multicast updates** flag to enable transmission of updates to stations via the multicast protocol.

General principles of multicast updates:

1. If multicast updates are enabled, when for all stations connected to this Server updating is performed in two stages:
 - a) Stations are listening the specified multicast groups into which the Server is included. When multicast updates are ready, stations download them via *multicast over UDP*.
 - b) After multicast updates are transmitted, the Server sends standard notification to stations about updates to get. All that failed to download via the multicast updates, stations download using a standard TCP update.
2. If multicast updates are disabled, updating of all stations is performed only in general mode—via the TCP protocol.

To setup multicast updates, use the following parameters:

- **UDP datagram size (bytes)**—size of UDP datagrams in bytes.
Allowed range is 512—8192. To avoid fragmentation, it is recommended to set a value less than MTU (Maximum Transmission Unit) of the network.
- **File transmission time (ms.)**—during specified time, single update file is transmitted, after that Server starts sending the next file.
All files which failed to transmit at the step of multicast protocol update, will be transmitted at standard update process over the TCP protocol.
- **Multicast updates duration (ms.)**—duration of update process via multicast protocol.
All files that failed to transmit during update stage via multicast protocol will be transmitted in process of standard update via TCP protocol.
- **Packages transmission interval (ms.)**—interval of packages transmission to a multicast group.
The low interval value may cause significant losses during package transfer and network overload. It is not recommended to change this parameter.



- **Interval between retransmission requests (ms.)**—with this interval Agents send requests for retransmission of lost packages.
Server accumulates these requests after that sends lost blocks.
- **“Silence” interval on the line (ms.)**—when a file transmission is over before allowed time has expired, if during specified “silence” interval no requests from Agents for retransmission of lost packages are received, Server considers that all Agent received updates files and starts sending the next file.
- **Retransmission requests accumulation interval (ms.)**—during specified interval, Server accumulates requests from Agents for retransmission of lost packages.
Agent request lost packages. Server accumulates these requests during specified time slot after that sends lost blocks.

To specify the list of multicast groups from which multicast updates is available, setup the following parameters in the **Multicast groups** section:

- **Multicast group**—IP address of multicast group in which stations receive multicast updates.
- **Port**—port number of Dr.Web Server network interface, to which transport multicast protocol is bound for updates transmission.



For multicast updates, you must specify any unused port, particularly, different from the port that is specified in the settings of transport protocol for Server operating.

- **Time to live**—Time to live of a datagram for data transfer during multicast updates.
- **Interface**—IP address of Dr.Web Server network interface, to which transport multicast protocol is bound for updates transmission.

Every line contains setup of one multicast group. To add one more multicast group, click .

When you configure several multicast groups, please note the following features:

- For different Dr.Web Servers, which will distribute multicast updates, must be different multicast groups specified.
- For different Dr.Web Servers, which will distribute multicast updates, must be different **Interface** and **Port** parameters specified.
- For using several multicast groups, sets of stations which are included into these groups must not overlap. Thus, each station of anti-virus network can be included only into one multicast group.

In the **Access control list** section, you can configure restrictions for network addresses of stations to which multicast updates can be sent:

- Stations that are allowed to receive multicast updates, listen specified multicast groups and receive updates using the standard scheme (see [procedure 1](#)).
- Stations that are denied to receive multicast updates, do not listen specified multicast groups for updates but download all updates via TCP (see [procedure 2](#)).

Configuration of the lists is the same as the configuration of the lists in the [Security](#) section.



8.3.4. Statistics

On the **Statistics** tab you can configure statistics information to write in the log file and to the Server data base.

To add corresponding type of information to the DB, set the following flags:

- **Quarantine state**—logs stations Quarantine state.
- **Hardware and software composition**—enables monitoring of hardware and software composition and storing the information in the database.
- **List of the station modules**—enables monitoring of the list of the station modules and storing the information in the database.
- **List of installed components**—enables monitoring of the list of the installed components (Scanner, monitors, etc) and storing the information in the database.
- **Sessions of stations users**—enables monitoring of user sessions and storing in the database the logins of users which are logged in the system with installed Agent.
- **Start/Stop of components**—enables monitoring of the information on the start and stop of the components (Scanner, monitors, etc) and storing the information in the database at stations.
- **Detected security threats**—enables monitoring of infections detecting and storing the information in the database.

If the **Detected security threats** flag is set, you can also configure additional parameters of statistic on infections.

- Set the **Track epidemic** flag to enable the mode of administrator notification on virus epidemic cases. If the flag is cleared, notifications on virus infection are performed in the standard mode. If the flag is set, you can configure the following parameters of virus epidemic tracking:
 - **Period (sec.)**—time period in seconds, during which specified number of messages on infections must be received, so that Dr.Web Server may send to the administrator a single notification on epidemic on all cases of infection.
 - **Messages number**—the number of messages on infections that must be received in specified time period, so that Dr.Web Server may send to the administrator a single notification on epidemic on all cases of infection.
 - **Number of the most common threats**—number of the most frequently occurring threats which must be included in the epidemic report.
- Set the **Group reports of Preventive protection** flag to send a single summary report on multiple events of Preventive protection. If the flag is cleared, the Preventive protection events are sent in separate notifications, not depending on their number. If the flag is set, you can configure the following parameters of summary reports:
 - **Period (sec.)**—time period in seconds, during which specified number of messages on the Preventive protection events must be received, so that Dr.Web Server may send to the administrator a single summary report on these events



- **Events number**—the number of the Preventive protection events that must be received in specified time period, so that Dr.Web Server may send to the administrator a single summary report on these events.
- **Number of the most active processes**—number of the most frequently occurring processes that have performed a suspicious action, which must be included in the Preventive protection report.
- Set the **Send statistics to Doctor Web company** flag, to activate sending statistics on detected stations security threats to the Doctor Web company. The following fields will become available:
 - **Interval**—an interval in minutes for sending statistics;
 - **Identifier**—an MD5 key (located in the Server configuration file);

Interval for sending statistics is the only obligatory field.

- **Scan errors**—enables monitoring of scan errors occurring and storing the information in the database.
- **Scan statistics**—enables monitoring of the statistics of scanning and storing the information in the database.
- **Agent installations**—logs the information about Agent installations at the stations.
- **Station tasks execution log**—log results of tasks execution on workstations and store the log in the DB.
- **Station statuses**—log status changes for workstations and store the log in the DB.
 - **Virus database statuses**—log changes in virus databases status and contents on workstations and store the logs in the DB.
- **Location data**—get information on stations location and store the information in the database.

To view statistics information

1. Select the **Anti-virus network** item of the main menu.
2. Select a station or a group in the hierarchical list.
3. Open the corresponding section of the control menu (see the table below).



Detailed information about statistic data is described in the [Viewing Workstation Statistics](#) section.

The table below describes correspondence between flags in the **Statistics** tab of the Server settings and items of the control menu on the **Anti-virus network** page.

If you clear flags on the **Statistics** tab, corresponding items of the control menu become hidden.

**Table 8-1. Correspondence between flags of Statistics data section and items of the control menu**

Server parameters	Menu options
Quarantine state	General → Quarantine Configuration → Windows → Dr.Web Agent → Quarantine remote control flag
Hardware and software composition	General → Hardware and software General → Comparison of hardware and software
List of the station modules	Statistics → Modules
List of installed components	General → Installed components
Sessions of stations users	General → Users sessions
Start/Stop of components	Statistics → Start/Stop
Detected security threats	Statistics → Threats Statistics → Threat statistics
Scan errors	Statistics → Errors
Scan statistics	Statistics → Scan statistics
Agent installations	Statistics → Agent installations
Station tasks execution log	Statistics → Tasks Statistics → Virus databases
Station statuses	Statistics → Status Statistics → Virus databases
Virus database statuses	Statistics → Virus databases

8.3.5. Security

On the **Security** tab, you can configure restrictions for network addresses from which Agents, network installers and other (“neighboring”) Dr.Web Servers will be able to access the Server.

To manage Server audit log, use the following flags:

- **Audit of administrator operations** allows to log operations of administrator with Dr.Web Security Control Center and writing the log into the DB.



- **Audit of server internal operations** allows to log Dr.Web Server internal operations and writing the log into the DB.
- **Audit of Web API operations** allows to log operations via XML API.



To view the audit log, select the **Administration** option in the main menu, then **Audit log** item in the control menu.



The **Security** tab contains additional tabs on which you can set the restrictions for the correspondent types of connections:

- **Agents**—the list of limitations on IP addresses from which Dr.Web Agents can connect to this Server.
- **Installations**—the list of limitations on IP addresses from which Dr.Web Agents installers can connect to this Server.
- **Neighbors**—the list of limitations on IP addresses from which neighbor Dr.Web Servers can connect to this Server.
- **Discovery service**—the list of limitations on IP addresses from which broadcast queries can be received by the [Server Detection Service](#).

To set access restrictions (separately for Agents, Installations, Neighbor Servers or Discovery service)

1. Set the **Use this ACL** flag to specify lists of allowed or denied addresses. If the flag is cleared, all connections are allowed.
2. To allow the access from a specific TCP address, include it into the **TCP: Allowed** or **TCPv6: Allowed** list.
3. To deny specific TCP address, include it into the **TCP: Denied** or **TCPv6: Denied** list.
4. The addresses not included into any of the lists are allowed or denied depending on whether the **Denial priority** flag is set. If the flag is set, the **Denied** list has a higher priority than the **Allowed** list. Addresses not included in any of the lists or included into both of them are denied. Allowed only addresses that are included in the **Allowed** list and not included in the **Denied** list.

To edit the address list

1. Specify network address in the corresponding field in the following format: *<IP address> / [<network prefix>]*.
2. To add a new field, click the  button in the corresponding section.
3. To delete a field, click  next to the deleting address.
4. Click **Save** to apply settings.



Lists for TCPv6 addresses will be available, if the IPv6 interface is installed on the computer.




Examples of prefix usage:

1. Prefix 24 stands for a network with a network mask: 255.255.255.0
Containing 254 addresses.
Host addresses look like: 195.136.12.*
2. Prefix 8 stands for a network with a network mask: 255.0.0.0
Containing up to 16387064 addresses (256*256*256).
Host addresses look like: 125.*.*.*

8.3.6. Cache

On the **Cache** tab, you can configure the following parameters of Server cache cleanup:

- **Cache flush period**—period of full cache flush.
- **Quarantined files**—cleanup interval of quarantined files.
- **Repository files**—cleanup interval of files in repository.
- **File cache**—cleanup interval of file cache.
- **Installation packages**—cleanup interval of personal and group installation packages.

Click  **Delete all installation packages now**, to delete all personal and group installation packages created before and resided in the `installers-cache` folder of the `var` folder. Please note: when accessing these packages for downloading, they will be created anew which may take some time.



When setting numerical values, please note the drop-down lists with unit of measure for intervals.

8.3.7. Database

On the **Database** tab, you can configure a DBMS required for Dr.Web Server operation.



You can get the structure of Dr.Web Server DB via the `init.sql` script, located in the `etc` subfolder of Dr.Web Server installation folder.

To specify parameters of operating with the Database

1. In the **Number of connections** field, specify the maximal number of connections of the Server with database. It is recommended to change default value only after consultation with the technical support.
2. Set the **Automatically purge the database after maintenance procedures** flag to automatically perform the delayed purging of the database after its initialization, upgrade and import. If the flag is cleared, automatic purge is not performed. In this case, it is



recommended to configure the **Purge database** task in the Server schedule or purge database manually in the [Database Management](#) section.

To perform the automatic purging, the hidden task is created in the Server schedule. The task is launched at nearest night after the named maintenance procedures, at 01:17 by local time of the Server. The task is executed only if the Server schedule does not contain another **Purge database** task within the next 24 hours relative to the named maintenance procedures.

3. On the **Database** tab of the **Dr.Web Server configuration** section, select the type of DB in the **Database** drop-down list:

- **MySQL**—external DB,
- **ODBC**—to use external DB via the ODBC connection,



If warnings or errors occur in Dr.Web Server interaction with Microsoft SQL Server DBMS via the ODBC, please make sure that you are using the latest available DBMS version for this edition.

How to determine updates level, you can find on the following page of Microsoft corporation: <https://support.microsoft.com/en-us/kb/321185>.

- **Oracle**—external DB for all platforms except FreeBSD,



If an Oracle external DBMS is used via the ODBC connection, it is necessary to install the latest version of the ODBC driver delivered with this DBMS. It is strongly recommended not to use the Oracle ODBC driver supplied by Microsoft.

- **PostgreSQL**—external DB,
- **SQLite3**—embedded DB (a component of Dr.Web Server).

4. Specify requirement settings for DB operation:

- For an embedded DB, if necessary, specify the full path to the database file into the **Path** field and specify the cache size and the data log mode.
- The parameters of an external DB are described in detail in the **Appendices** document in [Appendix B. The Description of the DBMS Settings. The Parameters of the DBMS Driver](#).

5. Click **Save** to apply specified settings.



Dr.Web Server distribution kit contains embedded clients for supported DBMS, so note:

- If you plan to use embedded DBMS clients which are supported within Dr.Web Server, then during installation (upgrade) of the Server, in the installer settings, select the **Custom** option of the installation and in the next window make sure that installation of corresponding embedded DBMS client is enabled in the **Database support** section.
- If you are going to use the Oracle DB as an external database via the ODBC connection, then during installation (upgrading) of the Server, in the installer settings, disable the installation of embedded client for Oracle DBMS (in the **Database support** → **Oracle database driver** section).



Otherwise, interaction with the Oracle DB via ODBC will fail because of the libraries conflict.

Server installer supports change mode of the product. To add or remove separate components e.g. databases management drivers, it is enough to run Server installer and select the **Change** option.

Using an embedded DBMS is selected by default. This mode considerably increases the load on the Server. It is recommended to use an external DBMS in large anti-virus networks. Changing the type of the DBMS is described in the **Appendices**, document, in the [Changing the Type of the DBMS for Dr.Web Enterprise Security Suite](#) section.



An embedded DB can be used, if at most 200-300 stations are connected to the Server. If the hardware configuration of the computer with Dr.Web Server and the load level of other executing tasks are permissible, up to 1000 stations can be connected.

Otherwise, you must use an external DB.

If you use an external DB and more than 10 000 stations are connected to the Server, it is recommended to perform the following minimal requirements:

- 3 GHz processor CPU,
- RAM at least 4 GB for Dr.Web Server and at least 8 GB for the DB server,
- UNIX system-based OS.



It is possible to perform transactions connected with clearing the database used by Dr.Web Server, in particular to delete records of events and data about the workstations which have not visited the Server for a certain period of time. To clear the database, open the [Server schedule](#) and add a corresponding task.

8.3.7.1. Database Restore

If the **SQLite3** embedded database get malformed, the corrupted database can be restored by regular means.

If the database get corrupted, the following actions performed:

1. If the database corrupted, the Server startup and operation is not performed:
 - a) During Server operation: if the corruption detected during regular interaction with embedded database, the Server automatically stopped.
 - b) During Server startup: if the **Verify image integrity** flag is set in the **SQLite3** database settings, automatic verifying of the database image integrity is performed. If corruption detected, the Server startup is not performed.
2. To be able to start the Server, the corrupted database must be repaired:



- a) If the **Restore corrupted image automatically** flag is set in the **SQLite3** database settings, the automatic restoring of the corrupted database image at Dr.Web Server startup is performed.
- b) If automatic restoring of the database image is disabled, you can use the `repairdb` switch to start the Server from the command line (see also the **Application** document, p. [H3.3. Database Commands](#)).

8.3.8. Modules

On the **Modules** tab, you can configure protocols for interaction of the Server with other Dr.Web Enterprise Security Suite components.

- Set the **Dr.Web Server FrontDoor extension** flag to use Dr.Web Server FrontDoor extension that allows connections of Server remote diagnostics utility (see also [Dr.Web Server Remote Access](#)).
- Set the **Dr.Web Agent protocol** flag to enable protocol that allows interaction of the Server with Dr.Web Agents.
- Set the **Microsoft NAP Health Validator protocol** to enable protocol that allows interaction of the Server with the Microsoft NAP Validator component of system health validating.
- Set the **Dr.Web Agent installer protocol** flag to enable protocol that allows interaction of the Server with Dr.Web Agent installers.
- Set the **Dr.Web Servers cluster protocol** flag to enable protocol for interaction between Servers in the cluster system.
- Set the **Dr.Web Server protocol** flag to enable protocol that allows interaction of Dr.Web Server with other Dr.Web Servers. The protocol is disabled by default. If you use multi-server network configuration (see [Peculiarities of a Network with Several Dr.Web Servers](#)), set the **Dr.Web Server protocol** flag to enable this protocol.
- Set the **Dr.Web Proxy server protocol** flag to enable protocol that allows interaction of Dr.Web Server with Dr.Web Proxy servers.
- Set the **Dr.Web Security Control Center extension** flag for managing the Server and anti-virus network via the Control Center.



If you clear the **Dr.Web Security Control Center extension** flag, when after reboot of Dr.Web Server, Dr.Web Security Control Center will be not available. You will be able to manage the Server and anti-virus network only via the remote diagnostics utility, if the **Dr.Web Server FrontDoor extension** flag is set.

- Set the **Yandex.Locator extension** flag to allow the use of Yandex.Locator extension to determine location of mobile devices connected to the Server.
 - In the **API key** field, enter your API key registered in corresponding service of Yandex company.



If you enable the Yandex.Locator extension but have not specify the API key, the extension will not be active.



Detailed information on usage and configuring the Yandex.Locator extension you can find in the **Applications** document, in the [Automatic Location of Stations under Android OS](#) section.

8.3.9. Location

On the **Location** tab, you can specify additional information about the physical location of the computer on which Dr.Web Server is installed.

Also on this tab you can view the Server location on a geographical map.

To view the Server location on a map

1. In the **Latitude** and **Longitude** fields, specify the Server geographical coordinates in the Decimal Degrees format.
2. Click **Save** to save specified data to the Server configuration file.
To view the map, you do not need to restart the Server. But to apply changed geographical coordinates, you must restart the Server.
3. On the **Location** tab, the OpenStreetMap preview will be shown containing a mark according to the specified coordinates.
If the preview cannot be loaded, the **Show on map** text displays.
4. To view the full size map, click the preview or the **Show on map** text.

8.3.10. Licenses

On the **Licenses** tab, you can configure settings of licenses propagation between Dr.Web Servers.

Options for the Server that donates licenses

- **Automatic renewal period of donated licenses**—time period for which licenses are donated from the key on this Server. After this period, the donated licenses are automatically renewed for the same period. Automatic renewal is performed before the expiration of the license propagation period specified in the License Manager at the step 5.
This mechanism provides returning of licenses to the parent Server if the child Server will be turned off and will not be able to return donated licenses.
- **License synchronization period**—interval for synchronizing information about donating licenses between Servers. Licenses synchronization allows to detect that the number of



licenses donated by the parent Server and received by the child Server are not equal. This mechanism allows to detect malfunctions and cases of forgery during licenses donation.

- **Period of report sending on license usage**—period of report sending by neighbor Servers on usage of donated licenses to the parent Server. The option is specified on the parent Server but is used by the child Server when sending the reports.
- **Period of active stations counting for the license report**—period for counting the number of active stations for sending the report on license usage. The option is specified on the parent Server but is used by the child Server when sending the reports.

Options for the Server that receives licenses

- On the **Licenses** tab, specify the **Interval for preliminary renewal of accepted licenses**—time interval before the expiration of the licenses automatic renewal period, received from a neighbor Server starting from which, this Server requests the preliminary automatic renewal of these licenses.

Using this option depends on the type of connection selected in the **Connection options** setting in the neighbor Servers configuration (see [Setting Connections between Several Dr.Web Servers](#)):

- For the periodic connection type: if the reconnection period specified in the neighbor settings is greater than **Automatic renewal period of donated licenses** specified on the Server that donated licenses, when automatic renewal of these licenses will be initiated earlier than the **Automatic renewal period of donated licenses** expires.
- For the permanent connection: this option is not used.



Detailed information on licenses propagation between Servers is described in the [Licenses Propagation via Interserver Connections](#) section.

8.3.11. Log

On the **Log** tab, you can configure the settings of Dr.Web Server operation log:

- In the **Server log verbosity level** drop-down list, select the detail level for Dr.Web Server operation log.
- **Maximum number of files**—maximal number of log files (including the current and the archived) that will be stored.
- **Server log rotation mode**—rotation mode of the Server operation log. Select one of the given values:
 - **rotation by size** defines the limitation on the size of each log file.
Maximum size of each file—maximal allowed size of each log file. When the current file reaches specified size, it becomes archived with corresponding change of a name, and a new log file is created.
 - **rotation by time** defines the time to write each log file.



Maximum time to write the file—maximal duration to write each log file. When the write time of the file reaches specified duration, it becomes archived with corresponding change of a name, and a new log file is created.

- Set the **Archive log files** flag to archive old log files at rotation.



To apply specified changes, the Server restart required.

The restart can be launch either via the Control Center or by using corresponding console command.



Detailed information on the Server log is given in the [Dr.Web Server Log](#) section.

8.4. Dr.Web Server Remote Access



For connection of the Server remote diagnostics utility, you must enable Dr.Web Server FrontDoor extension. To do this, in the **Dr.Web Server configuration** section, on the [Modules](#) tab, set the **Dr.Web Server FrontDoor extension** flag.

For connection of the Server remote diagnostics utility, administrator that connects via the utility, must have the **Use additional features** permission. Otherwise, access to the Server via the remote diagnostics utility will be forbidden.

To configure parameters for Server remote diagnostics utility


1. Select the **Administrating** item in the main menu of the Control Center, in the opened window, select **Dr.Web Server remote access** in the control menu.
2. Specify the connection protocol settings:
 - Set the **Use TLS** flag to enable connections of the remote diagnostics utility to Dr.Web Server via TLS protocol. If the flag is cleared, only TCP connections are allowed. For TLS connection, specify the following settings:
 - **Certificate**—TLS certificate file which will be verified on connection. The drop-down list contains available certificates from the Server folder.
 - **SSL private key**—SSL private key file which will be verified on connection. The drop-down list contains available private keys from the Server folder.
 - In the **Encryption key for TLS session tickets** field, specify the path to encryption key for TLS session tickets. Used to resume a TLS session based on session tickets which are encrypted using the specified key.
 - **Allowed cipher list** – the string defining the list of ciphers from OpenSSL package that allowed for use in client connections. Leave the field blank to use the `DEFAULT` value that means `ALL: !EXPORT: !LOW: !aNULL: !eNULL: !SSLv2`.



3. Specify the connection hosts settings:

- **Address**—IP address that is listened on the Server side for connecting the remote diagnostics utility.
- **Port**—port that is listened on the Server side for connecting the remote diagnostics utility. The 10101 port is used by default.

To add one more connection interface, click  and specify the values of added fields.

To forbid a connection from the previously allowed interface, remove it from the list by clicking  next to the line with this interface.

4. Click **Save**.



You can view the usage description of the console version of the Server remote diagnostics utility in the **Appendices** document, p. [H9.3. Dr.Web Server Remote Diagnostics Utility](#).


8.5. Setting Dr.Web Server Schedule


To edit Dr.Web Server schedule, perform the following actions:

1. Select the **Administering** item in the main menu of the Control Center, in the opened window, select **Dr.Web Server Task Scheduler** in the control menu. The list with the Server tasks will be opened.

2. To manage schedule, use the corresponding elements from the toolbar:


a) General elements on the toolbar are used to create new tasks and generally manage schedule section. These tools are always available on the toolbar.


 **Add tasks from default schedule**—add all tasks from the default schedule to the current schedule. At this, all current tasks are remained in the list and all tasks from the default schedule are added. Default schedule tasks are added in any case, even if the current schedule already contains these tasks (initial or modified), or completely coincides with the default schedule.

 **Set default schedule**—remove all tasks from the current schedule and set default task schedule.



Default schedule is a list of tasks that are created during the initial Server installation. This schedule cannot be changed.

 **Create task**—add a new task. This action is described in details below, in the [Task Editor](#) section.

 **Export settings from this section to the file**—export schedule to the file of special format.

 **Import settings to this section from the file**—import schedule from the file of special format.



Import of the task list for Dr.Web Server into the Task Schedule on workstations and vice versa is not allowed.

- b) To manage existing tasks, set the flags next to the necessary tasks or the common flag in the table header to select all task from the list. At this, elements on the toolbar to manage selected tasks become available:


Option		Action
Status	Enable execution	Activate execution of selected tasks according to their schedule, if they were disabled.
	Disable execution	Disable execution of selected tasks. Tasks remain on the list but will not be executed.
 The same option you can specify in the task editor on the General tab by setting the Enable execution flag.		
Severity	Make critical	Perform extra launch of the task if scheduled execution of this task has been omitted.
	Make not critical	Execute the task only at scheduled time regardless of whether a task launch has been omitted or not.
 The same option you can specify in the task editor on the General tab by setting the Critical task flag.		
 Duplicate settings	Duplicate tasks that are selected in the list of current schedule. When you run the Duplicate settings option, new tasks are created with settings similarly to the selected tasks.	
 Schedule repeatedly	For tasks which executed once: execute task one more time according to the specified time settings (changing execution multiplicity of the task is described below, in the Task Editor section).	
 Remove these settings	Remove selected task from the schedule.	
Execute task	Execute the tasks selected in the list immediately. At this, a task will be launched even if it is disabled for execution on a schedule.	

- To change task parameters, select it in the tasks list. The **Task editor** window described [below](#) opens.
- After editing the schedule, click **Save** to accept changes.



Task Editor

In the **Task Editor** you can specify settings to:

1. Create a new task.
For this click  **Create task** on the toolbar.
2. Edit existing task.
For this click the name of one of the tasks in the tasks list.

The window for editing a task opens. Settings for editing of existing task are similar to the settings of creating a new task.



Values of fields, marked with the * sign, must be obligatory specified.

To edit task settings

1. On the **General** tab, specify the following parameters:
 - In the **Name** field, specify the name of the task displayed in the schedule list.
 - Set the **Enable execution** flag, to enable the task execution. If the flag is cleared, the task remains on the list but will not be executed.



The same option you can specify on the main window of the Scheduler via the **Status** option on the toolbar.

- Set the **Critical task** flag to perform extra launch of the task if its scheduled execution has been omitted by any reason. The Scheduler rechecks the task list every minute and launches the omitted critical task if it was found. If at launch, the task was omitted several times, it will be executed only once.





The same option you can specify on the main window of the Scheduler via the **Severity** option on the toolbar.


- If the **Run the task asynchronously** flag is cleared, the task will be placed to the general queue of Scheduler tasks that are executed sequentially. Set the flag to execute this task in parallel out of order.
2. On the **Action** tab, in the **Action** drop-down list, select the type of the task and specify task parameters which are needed to perform the task:

Task type	Parameters and description
Back up critical server data	The task is designed to backup the following critical data of the Server: <ul style="list-style-type: none"> • database,




Task type	Parameters and description
	<ul style="list-style-type: none">• license key file,• private encryption key. <p>Specify the following parameters:</p> <ul style="list-style-type: none">• Path—path to the directory where the data will be saved (blank field means that the default directory will be used).• Maximum number of copies—maximum number of backup copies (the 0 value means no limitation). <p>For details see the Appendices document, p. Appendix H4.5.</p> <div data-bbox="496 645 1449 763" style="background-color: #e6f2e6; padding: 5px;"> Backup folder must be empty. Otherwise, the folder content will be deleted during the back up.</div>
Back up repository	<p>The task is designed for periodic backups of the repository.</p> <p>Specify the following parameters:</p> <ul style="list-style-type: none">• Path—full path of the directory where the backup copy will be stored.• Maximum number of copies—maximum number of repository backup copies which are stored by the task in the specified directory. If the maximum number of copies is reached, the oldest copy will be overwritten by the new one.• Repository area defines which part of information on anti-virus component will be saved:<ul style="list-style-type: none">▫ Entire repository—save all revisions from the repository for the components that are selected in the list below.▫ Only critical revisions—only revisions marked as important will be saved for the components that are selected in the list below.▫ Only configuration files—only configuration files will be saved for the components that are selected in the list below.• Set the flags for the components selected areas of which will be saved. <div data-bbox="496 1458 1449 1576" style="background-color: #e6f2e6; padding: 5px;"> Backup folder must be empty. Otherwise, the folder content will be deleted during the back up.</div>
Create statistic report	<p>The task is designed to create a report with statistics on the anti-virus network.</p> <p>To be able to create a report it is mandatory to enable the Statistic report notification (see Notification Configuration). The generated report is saved on a computer where the Server is installed. Report delivery depends on the type of notification:</p> <ul style="list-style-type: none">• For sending messages via Email: a letter with attached report and also the link to the report location is sent to the mail address which is specified in notification settings.• For all other methods of delivery: an appropriate notification with a link to the report location is sent.




Task type	Parameters and description
	<p>To create a task in the schedule you have to specify the following parameters:</p> <ul style="list-style-type: none">• Notifications profiles—name of notifications group with common settings for report generation. The title name can be specified when creating a new notifications group.• Report language—language of the data in the report.• Date format—format for dates display in statistic data. The following formats are available:<ul style="list-style-type: none">▫ European: DD-MM-YYYY HH:MM:SS▫ American: MM/DD/YYYY HH:MM:SS• Report format—document format to save the statistics report.• Report period—time period for which the statistics will be included in the report.• Groups—list of anti-virus network station groups which data will be included in the report. To select multiple groups, use the CTRL or SHIFT.• Report tables—list of statistical tables which data will be included in the report. To select multiple tables, use the CTRL or SHIFT.• Report retention period—time period for storing a report on the computer with running Server, starting from report generation.
Execute script	<p>The task is designed for executing lua script which is specified in the Script field.</p> <div data-bbox="496 1093 1449 1507" style="background-color: #e6f2e6; padding: 10px;"><p> Simultaneous execution of tasks with Execute script type on several Servers which use one database may result in errors.</p><hr/><p>When running lua scripts, administrator gets the access to all file system within the Server folder and some system commands on a computer with the Server installed.</p><p>To forbid the access to the schedule, disable the Edit Server schedule permission for the correspondent administrator (see Administrators and Administrative groups).</p></div>
License key expiration	<p>The task is designed to issue reminders about the license expiration of Dr.Web product.</p> <p>You have to set the period preceding license expiration starting from which the reminders will be issuing.</p>
Neighbor Server has not connected for a long time	<p>The task is designed to issue notifications in case the neighbor Servers have not been connected to the current Server for a long time.</p> <p>Notifications display settings can be configured in the Notification Configuration section using the Neighbor server has not been connected for a long time item.</p>




Task type	Parameters and description
	Set values in the Hours and Minutes fields to define a time period after which the neighbor Server will be considered as not connected for a long time.
Purge database	<p>The task is designed to collect and purge unused records in the Server database using the <code>VACUUM</code> command.</p> <p>No additional parameters required to run the task.</p>
Purge old records	<p>The task is designed to purge outdated information from the database. The types of deleted records is given in the task parameters.</p> <p>You have to specify the number of days after which the records in the database are considered outdated and purged from the Server.</p> <p>The period after which the records are purged is specified for each type of records separately.</p>
Purge old stations	<p>The task is designed to purge outdated stations.</p> <p>You have to specify the time period (90 days by default) after which all stations that have not been connected to the Server, are considered old and are moved to the Deleted group of the anti-virus network. The final deletion of such stations from the Server database is performed at execution of the Purge old records task (the time period of deleting the stations from the Deleted group is set in the Purge old records task parameters, for the Deleted stations type and counted from the moment of moving to the Deleted group).</p>
	<p>Outdated information is purged from the database to save disc space. The period in the Purge old records and Purge old stations tasks by default is 90 days. If you decrease the value, the statistics on the operation of the anti-virus network components will be less representative. If you increase the value, the Server may need extremely more resources.</p>
Purge outdated messages	<p>The task is designed for purging the following messages from the database:</p> <ul style="list-style-type: none">• agent notifications,• notifications for the web console,• reports created according to the schedule. <p>This also purges messages marked as obsolete, i.e. with expired retention period which can be configured:</p> <ul style="list-style-type: none">• for notifications: for appropriate sending method while creating a notification (see Notification Configuration).• for reports: in a task for creating reports. <p>No additional parameters required to run the task.</p>
Purge unspent events	<p>The task is designed to purge unspent events from the database.</p>





Task type	Parameters and description
	<p>You have to set the period for storing unsent events after which they will be purged.</p> <p>This refers to events that a subordinate Server sends to a master Server. If sending a message fails, it is moved to the unsent messages list. A subordinate Server continues its attempts to send the message at the specified interval. When the Purge unsent events task is run, events will be purged if their storage time has reached and exceeded specified period.</p>
Replace encryption key	<p>The task is designed for periodic replacement of the following tools providing encryption between components:</p> <ul style="list-style-type: none">• the <code>drwcsd.pri</code> private key on the Server,• the <code>drwcsd.pub</code> public key on workstations,• the <code>drwcsd-certificate.pem</code> certificate on workstations. <p>Because some workstations can be turned off at the time of replacement, the procedure is divided into two steps. You have to create two tasks to perform each one of these steps, it is recommended to perform the second step some time after the first one, when certain stations will probably connect to the Server.</p> <p>When creating a task, select the appropriate step from the drop down list:</p> <ul style="list-style-type: none">• Adding a new key—the first step of the procedure when the new inactive encryption key pair and certificate are created. The stations get the new public key and certificate upon the connection to the Server.• Deleting the old key and switching to the new key—the second step when the stations are notified about switching to the new encryption keys and certificate, followed by replacing the existing tools with the new ones: public keys and certificate on the stations and a private key on the Server. <p>If for any reason some stations did not receive the new public key and the certificate, they will not be able to connect to the Server. To resolve this problem, manually put the new public key and certificate on the station (you can view the procedure of replacing the key on station in the Appendices document, p. Connecting Dr.Web Agent to Other Dr.Web Server).</p>
Restart the Server	<p>The task is designed to restart the Server.</p> <p>No additional parameters required to run the task.</p>
Run program	<p>The task is designed to run custom program.</p> <div data-bbox="496 1704 1449 1823" style="background-color: #e6f2e6; padding: 10px;"> Programs launched under this task are executed in the background.</div> <p>Specify the following parameters:</p> <ul style="list-style-type: none">• The Path field—full name (with the path) of the program executable file to run.• The Arguments field—command line parameters to run the program.



Task type	Parameters and description
	<ul style="list-style-type: none">• Set the Wait for the completion of the program flag to wait for the completion of the program which has been launched by this task. At this, the Server logging the start of the program, the returned code and the time of the program end. If the Wait for the completion of the program flag is cleared, the task become completed right after the launch of the program and the Server logging only the start of the program.
Send message to station	<p>The task is designed to send arbitrary message to users of a station or group of stations.</p> <p>A message settings are given in the Sending Notifications to Stations section.</p>
Shut down the Server	<p>The task is designed to shut down the Server.</p> <p>No additional parameters required to run the task.</p>
Station has not connected for a long time	<p>The task is designed to issue notifications in case the stations have not been connected to the current Server for a long time.</p> <p>Notifications display settings can be configured in the Notification Configuration section using the Station has not been connected for a long time item.</p> <p>In the Days field specify a time period after which the station will be considered as not connected for a long time.</p>
Synchronization with Active Directory	<p>The task is designed to synchronize network structures: Active Directory containers which contains computers become groups of anti-virus network to which workstations are placed.</p> <p>Specify the following parameters:</p> <ul style="list-style-type: none">• Active Directory controller—Active Directory controller, e.g. dc.example.com.• Login—Active Directory user login.• Password—Active Directory user password. <div data-bbox="496 1413 1449 1700" style="background-color: #e6f2e6; padding: 10px;"><p> For the Servers under Windows OS, settings of Active Directory search are not obligatory. Information of a user on whose behalf the Server process is run (usually, it is LocalSystem) is used as a default registration information.</p><p>For the Servers under UNIX system-based OS, the settings must be obligatory specified.</p></div> <ul style="list-style-type: none">• In the Connection security drop-down list, select the type of encrypted data exchange:<ul style="list-style-type: none">▫ STARTTLS—switching to secured connection is performed by using the STARTTLS command. The 25 port is used by default for the connection.▫ SSL/TLS—establish a new secured TLS connection. The 465 port is used by default for the connection.



Task type	Parameters and description
	<ul style="list-style-type: none">▫ No—do not use encryption. Data exchange will be over an unprotected connection. <div style="background-color: #e6f2e6; padding: 10px;"> The task is disabled by default. To activate the task execution, set the Enable execution option in the task settings or on the toolbar as described above.</div>
Update repository	<p>The task is designed to launch the update of repository products from GUS.</p> <p>Specify the following parameters:</p> <ul style="list-style-type: none">• In the Product list, set the flags next to those repository products which will be updated by this task.• Set the Update license keys to activate the procedure of license keys automatic update during repository update. Detailed information is given in the Automatic Licenses Update section.
Wake stations	<p>The task is designed to turn on stations, for example before running the scanning task.</p> <p>The following task parameters define which stations will be turned on:</p> <ul style="list-style-type: none">• Wake all stations—every station which is connected to the Server will be turned on.• Wake stations by specified parameters—only stations that accord to the parameters below will be turned on:<ul style="list-style-type: none">▫ IP addresses—the list of IP addresses of the stations that will be turned on. The list is specified in the following format: 10.3.0.127, 10.4.0.1-10.4.0.5, 10.5.0.1/30. Use comma or newline to separate several addresses. You can also use DNS names of the stations instead of their IP addresses.▫ MAC addresses—the list of MAC addresses of the stations that will be turned on. The MAC-address octets have to be separated by the ':' sign. Use comma or newline to separate several addresses.▫ Groups—the list of groups of the stations that will be turned on. To edit the groups list, click Edit (or the group identifier if groups are already set) and select necessary groups in the opened window. Use CTRL and SHIFT to select several groups. <div style="background-color: #e6f2e6; padding: 10px;"> To run this task, all stations that are going to be turned on should be equipped with network cards with Wake-on-LAN support.</div> <p>To check whether your network card supports Wake-on-LAN, please refer to its documentation or see its properties (Control Panel → Network and Internet → Network Connections → Change Adapter Settings → Configure → Advanced, and for the Wake on Magic Packet property, set the Value → Enabled).</p>
Write to log file	<p>The task is designed to write to the Server log file specified string.</p>




Task type	Parameters and description
	String —message to be logged.

3. On the **Time** tab, specify the following parameters:

- In the **Period** drop-down list, set the launch mode of the task and setup the time according to the specified periodicity:

Launch type	Description
Daily	Specify the hour and the minute for the task to be launched at the time specified.
Every N minutes	The N value should be specified to set the time interval for the execution of the task. At N equal 60 or more, the task will be run every N minutes. At N less than 60, the task will be run every minute of the hour multiple of N .
Hourly	Specify a number from 0 to 59 to set the minute of every hour the task will be run.
Monthly	Specify the day of the month, the hour and the minute for the task to be launched at the time specified.
N minutes after initial task	In the Initial task drop-down list, select the task relatively to which the time of current task execution is set. In the Minute field, specify or select from the offered list the number of minutes that should pass after the execution of initial task to start execution of edited task.
Shut down	The task will be launched at Server shut down. No additional parameters required to run the task.
Start up	The task will be launched at Server start up. No additional parameters required to run the task.
Weekly	Select a day of the week, specify the hour and the minute, for the task to be launched at the time specified.

- Set the **Disable after the first execution** flag to execute the task only once at specified time. If the flag is cleared, the task will be executed multiple times according to the specified periodicity.

To repeat the launch of task already ones executed, use the  **Schedule repeatedly** on the toolbar of the schedule section.

4. When all parameters for the task are specified, click **Save** to accept changes of edited parameters, if you editing existing task, or to create a new task with specified parameters if you created a new task.



8.6. Setting the Web Server Configuration



After each saving of changes in the **Web server configuration** section, the backup copy of the previous version of the web server configuration file is saved automatically. Only 10 last copies are stored.

Files are placed in the same folder as the configuration file itself and named according to the following format:

```
webmin.conf_<creation_time>
```

You can use created backup copies, particularly to restore the configuration file if the Control Center interface is not available.

To set the configuration parameters of the Web server

1. Select the **Administration** item in the main menu of the Control Center.
2. Select **Web server configuration** in the control menu. A window with Web server configuration will be opened.



Values of fields, marked with the * sign, must be obligatory specified.

3. On the toolbar, the following buttons to manage the section settings are available:
 - Restart Dr.Web Server**—restart the Server to apply changes that have been specified in this section. The button become enabled after you specified the changes in the section settings and click **Save**.
 - Restore configuration from the backup**—drop-down list with the backup of all section settings, which you can restore after making changes. The button become enabled after you specified the changes in the section settings and click **Save**.
 - Reset all parameters to initial values**—restore the values that all parameters in this section had before current editing (last saved values).
 - Reset all parameters to default values**—restore default values of all parameters in this section.
4. To apply the changes specified in the section settings, click **Save**, after this the Server must be rebooted. To do this, click **Restart Dr.Web Server** on the toolbar of this section.

8.6.1. General

On the **General** tab, specify the following Web server settings:

- **Dr.Web Server address**—IP address or DNS name of Dr.Web Server.
Parameter is specified in the following format:



<Server IP address or DNS name> [: <port>]

If the Server address is not specified, computer name returned by the operating system or the Server network address is used: DNS name, if available, otherwise—IP address.

If the port number is not specified, the port from a request is used (e.g., for requests to the Server from the Control Center or via the **Web API**). Particularly, for the requests from the Control Center it is the port specified in the address line for connection of the Control Center to the Server.

- **Number of parallel requests from clients**—number of parallel requests processed by the Web server. This parameter affects server performance. It is not recommended to change this parameter without need.
- **IO threads number**—number of threads serving data transmitted in network. This parameter affects Server performance. It is not recommended to change this parameter without need.
- **Timeout of HTTP/1 session (sec.)**—HTTP version 1 protocol session timeout. For persistent connections, Server releases the connection, if there are no requests received from a client during specific time slot. Timeout is relevant before the first data exchange within the session.
- **Minimal send rate via HTTP/1 (BPS)**—minimal acceptable data send rate. If outgoing network speed is lower than this value, connection will be rejected. Specify 0 to ignore this limit.
- **Minimal receive rate via HTTP/1 (BPS)**—minimal acceptable data receive rate. If incoming network speed is lower than this value, connection will be rejected. Specify 0 to ignore this limit.
- **Send buffer size (KB)**—size of buffers used when sending data. This parameter affects server performance. It is not recommended to change this parameter without need.
- **Receive buffer size (KB)**—size of buffers used when receiving data. This parameter affects server performance. It is not recommended to change this parameter without need.
- **Max request length (KB)**—Maximum allowed size of HTTP request.
- **Enable flood attack protection**—set the flag to provide protective measures against flood attacks. Specify the following parameters of attack detection:
 - **Period (sec)**—time period in seconds during which the certain number of requests must be received to confirm the flood attack from the client.
 - **Requests number**—the minimum number of requests that must be received during certain time period to confirm the flood attack from the client.
 - **Ban duration (sec)**—connections from the client will be prevented for the specified number of seconds.

In the **Compression** section, you can specify parameters of a traffic compression for data transmission over a communication channel with the Web server via HTTP/HTTPS:

- **Maximal response size to compress (KB)**—maximal size of HTTP responses which will be compressed. Specify the 0 value to disable limitation on maximal size of HTTP responses to be compressed.



- **Minimal response size to compress (B)**—minimal size of HTTP responses which will be compressed. Specify the 0 value to disable limitation on minimal size of HTTP responses to be compressed.
- **Priority order of compression types:**
 - **Defined by client**—priority order of compression types is defined by a client considering the allowed compression types.
 - **Defined by server**—priority order of compression types is defined by the server considering the allowed compression types. In this case, specify the using order of compression types in the list below. To change the order, drag and drop corresponding block over the root.

You can enable or disable and also set the order of use (if the order is defined by the Server) the following compression types:

- **Use GZIP compression**—set the flag to use this type of compression. In the **GZIP compression level** field, specify the value in the range 0-9. The 0 value disables compression.
- **Use Deflate compression**—set the flag to use this type of compression. In the **Deflate compression level** field, specify the value in the range 0-9. The 0 value disables compression.
- **Use Brotli compression**—set the flag to use this type of compression. In the **Brotli compression level** field, specify the value in the range 0-11. The 0 value disables compression.
- **Replace IP addresses**—set the flag to replace IP address with DNS names of computers in the Server log file.
- **Enable HTTP/2 support**—set the flag to support connections with the web server via HTTP protocol version 2.
 - **Timeout of HTTP/2 session (sec.)**—HTTP version 2 protocol session timeout. For persistent connections, server releases the connection, if there are no requests received from a client during specific time slot.
- **Keep-alive TLS connection**—set the flag to use keep-alive TLS connection. Older browsers may not work properly with regular TLS connections. Disable this parameter, if you have problems with TLS protocol.
- **Certificate**—path to TLS certificate file. The drop-down list contains available certificates from the Server folder.
- **SSL private key**—path to TLS private key file. The drop-down list contains available private keys from the Server folder.
- **Encryption key for TLS session tickets**—the path to encryption key for TLS session tickets. Used to resume a TLS session based on session tickets which are encrypted using the specified key.
- **Allowed cipher list**—the string defining the list of ciphers from OpenSSL package that allowed for use in client connections. Leave the field blank to use the `DEFAULT` value that means `ALL: !EXPORT: !LOW: !aNULL: !eNULL: !SSLv2`.



8.6.2. Additional

On the **Additional** tab, specify the following Web server settings:

- Set the **Show script errors** flag to show script errors in browser. This parameter is used by technical support and developers. It is not recommended to change this parameter without need.
- Set the **Trace scripts** flag to enable scripts tracing. This parameter is used by technical support and developers. It is not recommended to change this parameter without need.
- Set the **Abort scripts** flag to allow aborting of scripts execution. This parameter is used by technical support and developers. It is not recommended to change this parameter without need.

8.6.3. Transport

On the **Transport** tab, you can configure network addresses to listen for accepting incoming connections by the Web server, e.g., for connection of the Control Center or executing requests via the Web API:

In the **Addresses to listen** section, you can configure the list of interfaces to listen for accepting connections via the HTTP protocol:

- **Address**—the IP address of the network interface from which connections can be accepted.
- **HTTP port**—the port number of the network interface from which HTTP connections can be accepted.
- **HTTPS port**—the port number of the network interface from which HTTPS connections can be accepted.

By default, the following parameters are set to "listen" by the Web server:

- **Address:** 0.0.0.0—use "all network interfaces" for this computer, on which the Web server is installed.
- **HTTP Port:** 9080—use the standard 9080 port for the HTTP protocol.
- **HTTPS Port:** 9081—use the standard 9081 port for the HTTPS protocol.

To add a new address line, click  in the corresponding section. To delete the specific address line, click  next to the deleting address.

8.6.4. Security

On the **Security** tab, you can configure restrictions for network addresses from which the Web server receives HTTP and HTTPS requests.



General

- Set the **Redirect to a secure connection** flag to automatically redirect all HTTP connections to HTTPS.
- Set the **Return detailed header** flag to return environment details in the “Server” header by the web server.
- Set the **Convert URI to lowercase** flag to convert all URI in requests to the web server to lowercase. Only a fragment of URI hierarchical part that contains path is converted.

Access Restriction

To setup access limitations for any of connection type

1. To allow the access by HTTP or by HTTPS from definite addresses, add them to the **HTTP: Allowed** or **HTTPS: Allowed** lists correspondingly.
2. To deny the access by HTTP or by HTTPS from definite addresses, add them to the **HTTP: Denied** or **HTTPS: Denied** lists correspondingly.
3. The addresses not included into any of the lists are allowed or denied depending on whether the **HTTP denial priority** and **HTTPS denial priority** flags are set: if the flag is set, the addresses not included into any of the lists (or included into both of them) are denied. Otherwise, such addresses are allowed.

To edit the address list

1. Specify the network address in the corresponding field and click **Save**.
2. The network address is specified as: `<IP-address> / [<prefix>]`.



Lists for TCPv6 addresses will be available, if the IPv6 interface is installed on the computer.

3. To add a new field, click in the corresponding section.
4. To delete a field, click .

Examples of prefix usage:

1. Prefix 24 stands for a network with a network mask: 255.255.255.0
Containing 254 addresses.
Host addresses look like: 195.136.12.*
2. Prefix 8 stands for a network with a network mask: 255.0.0.0
Containing up to 16387064 addresses (256*256*256).
Host addresses look like: 125.*.*.*



8.7. User Hooks



When running lua scripts, administrator gets the access to all file system within the Server folder and some system commands on a computer with the Server installed.

To forbid the access to the user hooks, disable the **Edit Server configuration and repository configuration** permission for the correspondent administrator (see [Administrators and Administrative groups](#)).

User hooks, implemented as a lua-scripts, are meant for automation of the administrator work enabling quicker performance of certain tasks of Dr.Web Server.



User hooks are located in the following subfolder of the Server installation folder:

- for Windows OS: `var\extensions`
- for FreeBSD OS: `/var/drwcs/extensions`
- for Linux OS: `/var/opt/drwcs/extensions`

After the Server installation, pre-installed user hooks are located in this folder.

It is recommended to edit user hooks via the Control Center.

To configure user hooks execution

1. Select the **Administration** item in the main menu of the Control Center.
2. In the opened window, select the **User hooks** item in the control menu. User hooks settings window will be opened.

Hooks Tree

Hooks hierarchical list displays the tree view, nodes of which are hook groups and user hooks included into them.

Initially, hooks tree contains the following pre-installed groups:

- **Examples of the hooks**—contains templates of all available user hooks. On the base of these templates you can create your own user hooks. You cannot edit or execute the hook templates.
- **IBM Syslog**—contains templates of user hooks used in integration with IBM Tivoli system. Events corresponding to the enabled hooks, are written in the *Syslog* format.

All events are written into one file on the following path:

- for Windows OS:
`var\export\tivoli\syslog\drwcs_syslog.log`
- for FreeBSD OS:
`/var/drwcs/export/tivoli/syslog/drwcs_syslog.log`



- for Linux OS:
/var/opt/drwcs/export/tivoli/syslog/drwcs_syslog.log
- **IBM W7Log**—contains templates of user hooks used in integration with IBM Tivoli system. Events corresponding to the enabled hooks, are written in the *IBM W7Log XML* format.

For each event, the separate file is created on the following path:

- for Windows OS:
var\export\tivoli\w7log*<event_name>*_*<unix_timestamp>*
- for FreeBSD OS:
/var/drwcs/export/tivoli/w7log/*<event_name>*_*<unix_timestamp>*
- for Linux OS:
/var/opt/drwcs/export/tivoli/w7log/*<event_name>*_*<unix_timestamp>*

The icon of the tree element depends on the type and status of this element (see [table 8-7](#)).

Table 8-7. Icons of elements in the hooks tree

Icon	Description
Hooks groups	
	Hooks group for which hook execution is enabled.
	Hooks group for which hook execution is disabled.
Hooks	
	Hook is enabled to execute.
	Hook is disabled to execute.

Hooks Tree Managing

To manage objects in the hooks tree, use the following elements of the toolbar:

—drop-down list for adding an element to the hooks tree:

Add hook—add a new user hook.

Add hooks group—add a new user group for placing hooks in it.

Remove selected objects—remove user hook or hooks group which is selected in the hook tree.



Enable hook execution—the same action is performed in the hooks editor if you set the **Enable hook execution** flag. See also [Hooks activating](#).

Disable hook execution—the same action is performed in the hooks editor if you clear the **Enable hook execution** flag. See also [Hooks activating](#).



Hooks Groups Managing

To create a new group

1. On the toolbar, select  →  **Add hooks group**.
2. In the opened window, specify the following parameters:
 - Set the **Enable hook execution** flag to activate hooks which will be included into this group. See also [Hooks activating](#).
 - In the **Group name** field, specify an arbitrary name for the creating group.
3. Click **Save**.

To change the order of groups using



1. In the hooks tree, drag and drop the hooks group and place it in the necessary order relative to the other groups.
2. The order of hooks usage is automatically changed after changing groups order: the first will be performed the hooks from the groups that are placed higher in the hooks tree.

To move a hook to the other group

1. In the hooks tree, select a hook you want to move.
2. On the opened properties pane, in the **Parent group** drop-down list, select the group into which you want to move the hook.
3. Click **Save**.

Hooks Managing

To create a new hook

1. On the toolbar, select  →  **Add hook**.
2. In the opened window, specify the following parameters:
 - Set the **Enable hook execution** flag to activate the creating hook. See also [Hooks activating](#).
 - In the **Parent group** drop-down list, select the group into which you want to place the creating hook. Further, you can move the hook into other group—see [above](#).
 - In the **Hook** drop-down list, select the hook type. The hook type defines an action for which the hook will be called.
 - In the **Hook text** field, enter the lua script which will be executed when the hook called. The **Information on hook** subsection contains an action for which the hook will be called; information whether the Server database is available or not for this hook; and also contains the lists of input parameters and returned values for this type of hook.



3. Click **Save**.


To edit a hook

1. In the hooks tree, select a hook you want to edit.
2. In the right part of the window, the properties pane for this procedure automatically opens. You can edit all parameters which are specified on creating the hook except the **Hook** parameter. This parameter defines an action for which the hook will be called, and cannot be edited after the hook has been created.
3. Click **Save**.

Hooks Activation

Activation of hooks and hooks groups defines whether the hooks will be executed on corresponding event or not.

To activate a hook or a group of hooks

1. In the hooks tree, select a hook or a hooks group you want to activate.
2. Perform one of the following actions:
 - On the toolbar, click  **Enable hook execution**.
 - In the right part of the window on the properties pane of the selected object, set the **Enable hook execution** flag if it is cleared. Click **Save**.

Hooks activation features

To execute a hook on corresponding event, the following is necessary:

- a) the hook itself must be activated;
- b) the group that contains the hook must be activated.



If a hooks group is disabled, its hooks will not be executed even if they are activated.

On group activating, only those hooks will be executed that are directly activated.

8.8. Message Templates

In the **Message template** section contains the templates list of arbitrary text messages sent by administrator to stations of the anti-virus network (see [Sending Notifications to Stations](#)).

Messages can get into the templates list by one of the following ways:

1. A template can be created based on messages which were once sent by the administrator. You can create such template in the [Message Log](#) section.





2. A completely new template can be created. To do this, click **+ Create template** on the toolbar in the **Message templates** section. The message settings are the same as in the [Sending Notifications to Stations](#) section.

To manage message templates, use the following toolbar options:


 **Delete**—delete selected message templates.

 **Create template**—create a new message template (see [above](#)).


 **Edit**—edit the settings of an existing template. The option is available only if one template in the list is selected.

 **Send message to stations**—send one of several messages to station based on templates selected in the list (see below).

To send a single message

1. Set the flag next to the message template you want to send.
2. Click  **Send message to stations**.
3. The **Sending a message** window opens. Specify the following settings:
 - a) In the **Anti-virus network** tree, select receivers of the message from the given list—whether separate stations or groups of stations.
 - b) The message settings are the same as in the [Sending Notifications to Stations](#) section.
4. Click **Send**.

To send multiple messages

1. Set the flag next to the message templates you want to send.
2. Click  **Send message to stations**.
3. The **Sending multiple messages** window opens. The **Messages list** section contains the list of all message you have select for resending. The names of the messages correspond to their templates names.
4. Click **Send all**, to send all messages from the list.
5. To edit a message from the list, select it in the **Messages list** section. In the **Message settings** section, specify the following parameters:
 - a) In the **Anti-virus network** tree, select receivers of the message from the given list—whether separate stations or groups of stations.
 - b) The message settings are the same as in the [Sending Notifications to Stations](#) section.
 - c) To remove the selected message from the sending list, click **Remove**.




8.9. Setting Notifications

Dr.Web Enterprise Security Suite allows to send notifications about virus attacks, anti-virus network components states and other events to administrators of Dr.Web Enterprise Security Suite anti-virus network.


8.9.1. Notification Configuration

To configure notifications on anti-virus network events

1. Select the **Administration** item in the main menu of the Control Center. In the opened window, select **Notifications configuration** in the control menu.
2. Notifications are configured separately for each Control Center administrator. The name of the administrator whom notifications are displayed is given in the **Administrator who receives notifications** field. To configure notifications for another administrator, click  and select the administrator in the opened window.
3. At initial setup, one default notifications blocks (profiles) is added for the main **admin** administrator. If the administrator notification list is empty, click **Add notification** in the **Notification list** section.
4. To enable notifications sending, set the switch on the left of the notifications block header to the corresponding position:

—notifications sending for this block is enabled.

—notifications of this block are not sent.

5. In this section, you can create several notifications blocks (profiles), e.g., for the different sending methods. To add one more block, click  on the right of the notifications block settings. At the bottom of the page, one more notifications block will be added. Configuration of different notifications blocks as their templates texts is performed independently.
6. In the **Title** field, specify the name of added notifications block. This name is used, e.g. in configuration of the **Create statistic report** in the Server schedule. Further, to edit the header, click it and type necessary name. If you have more than one notification blocks, when you click the header text, the drop-down list with headers of existing notifications blocks will be prompted.
7. To configure notifications sending, select necessary type for notifications sending from the **Notifications send method** drop-down list:
 - [Dr.Web Agent](#)—send notifications via the Agent protocol.
 - [Email](#)—send notifications on email.
 - [Push-notifications](#)—send push notifications to Dr.Web Mobile Control Center. This option is available in the **Notifications send method** drop-down list only after Dr.Web Mobile Control Center has been connected to this Dr.Web Server.
 - [SNMP](#)—send notifications via the SNMP protocol.



- [Web console](#)—send notifications for viewing in the [Web console](#).

Settings description for each type of notifications sending is given in this section below.

8. In the notifications list, set the flags next to those notifications that will be sent according to the send method of current notifications block.
9. For the Server notifications sending, the predefined set of text messages is provided.



Description of predefined notifications and their parameters is given in the **Appendices** document, in p. [Appendix D1. Predefined Notifications Description](#).

To configure concrete notification, do the following:

- a) To switch into editing mode of the notifications settings, click on the section header.
- b) To change notifications settings, click a notification you want to edit. Notification template will be opened. If necessary, edit the text of notification to send. In the notification text you can use template variables (in braces). To add variables, use drop-down lists on the message header. When a message is being generated, the system replaces template variables with a certain text, which depends upon its current parameters. The list of available variables is given in the **Appendices** document, in p. [Appendix D3. The Parameters of the Notification System Templates](#).
- c) For email notifications, you are provided to add arbitrary user-defined fields in the **Headers** additional section, in the template editor for each notification (see step **b**). Headers must be formed according to the RFC 822, RFC 2822 standards and must not match with fields defined in the email standards. Particularly, the RFC 822 standard guarantees that specification does not contain headers started with `x-`, thus it is recommended to set the names in the following format: `x-header-name`. For example: `X-Template-Language: English`.
- d) For notifications from the **Station** subsection, you can set the list of stations on the events on which notifications will be send. In the template editing window, in the **Groups of monitored stations** tree, select groups of stations to monitor events and send corresponding notifications. To select several groups, use CTRL or SHIFT.
- e) To exit the notification editing mode, click on the section header.



For the **SNMP** send method, notification template texts are set at the side of SNMP receiver (*management station* in RFC 1067 term). Via the Control Center in the **Station** subsection, you can specify only the list of stations on the events on which notifications will be sent.

10. After editing, click **Save** to apply all specified changes.

Notifications via the Agent Protocol



Notifications via the Agent protocol can be sent to Dr.Web Agents for Windows only.



For notifications via the Agent protocol, specify the following parameters:

- In the **Resend by Dr.Web Server** section, specify the settings for notifications resends performed by Dr.Web Server when failed to send a message:
 - **Number**—the number of retries performed by Dr.Web Server when failed to send a message. Default is 10.
 - **Time-out**—period in seconds after which Dr.Web Server repeats the attempt to send a message. Default is 300 seconds.
- **Station**—identifier of a station to which notifications must be send. You can view station identifier in the stations [properties](#).
- **Send test message**—send the test message according to the specified settings of notification system.

Notifications on Email

For notifications on email, specify the following parameters:

- In the **Resend by Dr.Web Server** section, specify the settings for notifications resends performed by Dr.Web Server when failed to send a message:
 - **Number**—the number of retries performed by Dr.Web Server when failed to send a message. Default is 10.
 - **Time-out**—period in seconds after which Dr.Web Server repeats the attempt to send a message. Default is 300 seconds.
- **Recipient email addresses**—email addresses of notifications receivers. Only one email address of a receiver per each field. To add one more receiver field, click . To remove the field, click .



Parameters of email sending are configured in the **Administration** menu, in the **Dr.Web Server Configuration** section, on the **Network** tab, on the [Email](#) internal tab.

- **Send test message**—send the test message according to the specified settings of notification system.

Push Notifications

For Push notifications which are sent to Mobile Control Center, specify the following parameters:

- In the **Resend by Dr.Web Server** section, specify the settings for notifications resends performed by Dr.Web Server when failed to send a message:
 - **Number**—the number of retries performed by Dr.Web Server when failed to send a message. Default is 10.
 - **Time-out**—period in seconds after which Dr.Web Server repeats the attempt to send a message. Default is 300 seconds.



- **Send test message**—send the test message according to the specified settings of notification system.

Notifications via the SNMP Protocol

For notifications via the SNMP protocol, specify the following parameters:

- In the **Resend by Dr.Web Server** section, specify the settings for notifications resends performed by Dr.Web Server when failed to send a message:
 - **Number**—the number of retries performed by Dr.Web Server when failed to send a message. Default is 10.
 - **Time-out**—period in seconds after which Dr.Web Server repeats the attempt to send a message. Default is 300 seconds.
- In the **Resend by SNMP subsystem** section, specify the settings for notifications resends performed by SNMP subsystem when failed to send a message:
 - **Number**—the number of retries performed by SNMP subsystem when failed to send a message. Default is 5.
 - **Time-out**—period in seconds after which SNMP subsystem repeats the attempt to send a message. Default is 5 seconds.
- **Receiver**—entity that receives SNMP request. For example, IP address or DNS name. Only one receiver per each field. To add one more receiver field, click . To remove the field, click .
- **Sender**—entity that sends SNMP request. For example, IP address or DNS name (must be able to be solved by DNS server).
If the sender is not set, defaults are: "localhost" for Windows and "" for UNIX.
- **Community**—SNMP community or context. Default is `public`.
- **Send test message**—send the test message according to the specified settings of notification system.



To get description of OID during the SNMP trap parsing, you can use the MIB provided with the Server. The `DRWEB-ESUITE-NOTIFICATIONS-MIB.txt` and `DRWEB-MIB.txt` files are located in the `etc` subdirectory of the Server installation directory.

Notifications Displayed in the Web Console

For notifications displayed in the Web console, specify the following parameters:

- In the **Resend by Dr.Web Server** section, specify the settings for notifications resends performed by Dr.Web Server when failed to send a message:
 - **Number**—the number of retries performed by Dr.Web Server when failed to send a message. Default is 10.
 - **Time-out**—period in seconds after which Dr.Web Server repeats the attempt to send a message. Default is 300 seconds.



- **Notification storing time**—time period for storing a notification starting from its receiving. 1 day is by default. After specified period, notification is marked as outdated and deleted according to the **Purge outdated messages** task in the Server schedule settings.
For notifications that received by this sending method, you can specify unlimited storing time in the [Web Console Notifications](#) section.
- **Send test message**—send the test message according to the specified settings of notification system.

8.9.2. Web Console Notifications

Via the Control Center, you can view and manage administrator notifications which are received via the **Web console** method (sending of administrator notifications is displayed in the [Notifications Configuration](#) section).

To view and manage notifications

1. Select the **Administration** item in the main menu of the Control Center. In the opened window, select **Web console notifications** in the control menu. The list of notifications which were sent to the Web console will be opened.
2. To view the notification, click corresponding row of the table. The window with notification texts will be opened. At this, notification will be automatically marked as read.
3. To manage notifications list using options on the toolbar
 - a) To view notifications that were received during specific time period, use one of the following ways:
 - Select one of the predefined time periods from the drop-down list on the toolbar.
 - Select arbitrary dates of beginning and ending of time period from the drop-down calendars.


After editing these settings values, click **Update** to view notifications list according to the specified settings.


- b) To manage separate notifications, set the flags next to the necessary notifications or the common flag in the table header to select all notifications from the list. At this, the following elements on the toolbar become available:

 **Delete notifications**—delete all selected notifications without possibility of restore.

 **Mark notifications as read**—mark all selected notifications as read.


- c) To manage specific notification types, set the flags next to the notifications of corresponding types. At this, the following elements on the toolbar become available:


 **Unapproved stations**—option is available only when you select notifications with the **Station is waiting for approval** type. In the drop-down list, you can approve the registration or deny the access to the Server for stations from the selected notifications.

 **Scan**—option is available only when you select notifications with the **Epidemic in the network**, **Scan error**, **Security threat detected** types. In the drop-down list, you can



specify the parameters of Dr.Web Scanner launch on stations from the selected notifications.

 **Components management**—option is available only when you select notifications with the **Critical error of station update** type. In the drop-down list, you can set the launch type of anti-virus software update on stations from the selected notifications.

 **Reboot station**—option is available only when you select notifications with the **Station reboot required to apply updates** type. The option initiates reboot of the stations from the selected notifications.

- d) If necessary, you can export notifications into a file. Whose notifications will be exported that are currently displayed in the table according to the time interval settings and the table columns filter (see 4.b).

To export notifications, click one of the following buttons on the toolbar:



 **Save data in CSV file,**

 **Save data in HTML file,**

 **Save data in XML file,**


 **Save data in PDF file.**

4. To manage notifications list using the options provided by the table

- a) Set the  **Store message without automatic deletion** icon next to those notifications that should not be deleted after expiration of storage period (storage period is set before sending notification in the [Notifications Configuration](#) section in the **Web console** sending method settings). Such notifications are stored until you delete them manually in the **Web console notifications** section or clear the  icon next to these notifications.
- b) To display only specific notifications, click the header of a column you want to filter in the notifications table. In the opened menu, set the flags for notification parameters you want to display in the table.

The following sections are available for the filtering:

Column	Option	Action
Severity	Maximal	Display only notifications only with the specified severity level. To display all notifications, set all the flags.
	High	
	Medium	
	Low	
	Minimal	
Source	Agent	Display notifications related to events on stations.
	Server	Display notifications related to events on Server.

- c) To configure the table view, click the  icon in the right corner of the table header. In the drop-down list, you can configure the following options:



- Enable or disable line wrapping for long messages.
- Select the columns to display in the table (selected by the flag next to its name). To show/hide the column, click the line with its name.
- Select the order of the columns in the table. To change the order, drag-and-drop corresponding column in the list to the needed place.

8.9.3. Unsent Notifications

Via the Control Center you can track and manage administrative notifications failed to be sent according to the settings of the [Notification Configuration](#) section.

To view and manage unsent notifications

1. Select the **Administration** item in the main menu of the Control Center. In the opened window, select **Unsent Notifications** in the control menu. The list of unsent notifications of this Server will be opened.
2. To the unsent notifications list whose notifications are placed that was failed to be sent to the recipients, but number of resend attempts which is specified in this notification settings is not yet expired.
3. The table of unsent notifications contains the following information:
 - **Notification**—the name of notification from the list of preinstalled notifications.
 - **Title**—the name of notification block according to whose settings this notification is sent.
 - **Resends remained**—number of remained resend attempts that are taken after notification send failed. Initial number of resend attempts is specified at notifications setup in the [Notification Configuration](#) section. After notification has been sent, you cannot change the number of remained resends for this notification.
 - **Time of next resend**—date and time of the next notification resend attempt. Period to perform notification resend attempts is specified at notifications setup in the [Notification Configuration](#) section. After notification has been sent, you cannot change the period of remained resends for this notification.
 - **Receiver**—addresses of notification receivers.
 - **Error**—error that caused the failure of notification sending.
4. To manage unsent notifications:
 - a) Set the flags next to the specific notifications of the flag in the notifications table header to select all notifications in the list.
 - b) Use the following buttons on the toolbar:
 - ➡ **Resend**—send selected notifications immediately. At this, the immediate attempt to send the notification is performed. If the sending failed, the number of remained attempts is decremented by one and the time of the next attempt will be counted from the moment of the current sending with periodicity specified in the [Notification Configuration](#) section.
 - ✖ **Delete**—permanently delete all selected unsent notifications.



5. Unsent notifications are removed from the list in the following cases:
 - a) Notification is successfully sent to the receiver.
 - b) Notification is deleted by administrator manually via the **✖ Delete** button on the toolbar.
 - c) The number of resend attempts is over and notification was not sent.
 - d) In the [Notification Configuration](#) section, the notification block according to whose settings this notifications have been sending, is removed.

8.10. Administration of Dr.Web Server Repository

The *repository* of Dr.Web Server is designed to store benchmark copies of the anti-virus software and update them from GUS servers.

The repository deals with sets of files called *products*. Each product resides in a separate subfolder of the `var/repository` Server folder. The functions of the repository and their management are made separately for each product.

To administrate the updating in the repository product revisions are used. A revision is a correct state of product files at a certain time (including file names and checksums) and has its unique number.

The repository synchronizes revisions of products as follows:

- a) to Dr.Web Server from the product update site
- b) between different Dr.Web Servers in a multi-server configuration according to a specified synchronization policy
- c) from Dr.Web Server to workstations.

The repository allows to set up the following parameters:

- the list of product update sites in **a)** operations
- restrictions to the number of products requiring synchronization of **a)** type (thus, a user is enabled to track only necessary changes of certain files or categories of files)
- restrictions to product components requiring synchronization of **c)** type (a user can choose what should be installed on the workstation)
- control of switching to new revisions (independent testing of products before installation is possible)
- adding one's own components to products
- independent creation of new products which will be synchronized too.

Currently, the following products are provided:

- Dr.Web Server
- Dr.Web Agent (the Agent software, the anti-virus software for workstations under corresponding operation systems)
- Dr.Web Proxy server



- Dr.Web Updater
- Dr.Web virus databases
- SpIDer Gate bases
- Dr.Web Anti-spam bases
- Doctor Web company news.

8.10.1. Repository State

To view the repository state or update anti-virus network components

1. Select the **Administration** item in the main menu of the Control Center and click **Repository state** in the control menu of the opened window.
2. In the open window, you can view the list of products in the repository, date of currently used revision, date of the last downloaded revision, and products state.



The **State** column displays the state of the products in the Server repository at the time of last update.

3. To manage the repository contents, use the following buttons:
 - Click the **Check for updates** button to check whether updates to all of the products are available on the GUS servers. If the checked component is outdated, it will be updated automatically during the check.
 - To save the log of repository updates, click one of the following buttons on the toolbar:
 - Save data in CSV file,**
 - Save data in HTML file,**
 - Save data in XML file,**
 - Save data in PDF file.**
 - Click **Reload repository from disk**, to reload the current version of the repository from disk.

On startup, Server loads the repository contents to the memory. If during Server operation the administrator changed the contents bypassing Control Center, e.g, when updating the repository using an external utility or manually, reload the repository to enable the use of its downloaded version.

8.10.2. Delayed Updates

In the **Delayed Updates** section, you can view the list of products which updating is temporarily disabled on the following page: **Detailed repository configuration** → <Product> → [Delayed Updates](#). A delayed revision is considered *frozen*.



The table of frozen products contains the following information:

- **Repository folder**—name of the folder where a frozen product resides:
 - 05-drwmeta—Dr.Web Server security data,
 - 10-drwbases—virus databases,
 - 10-drwgatedb—SpiDer Gate bases,
 - 10-drwspamdb—Anti-spam bases,
 - 10-drwupgrade—Dr.Web Updater,
 - 15-drwhashdb—Known hashes of threats,
 - 20-drwagent—Dr.Web Agent for Windows,
 - 20-drwandroid11—Dr.Web Agent for Android,
 - 20-drwcs—Dr.Web Server,
 - 20-drwunix—Dr.Web Agent for UNIX,
 - 40-drwproxy—Dr.Web Proxy server,
 - 80-drwnews—Doctor Web News.
- **Revision**—number of the frozen revision.
- **Delayed till**—time until update of the product is delayed.

When clicking the table row, another table with detailed information on the frozen revision of the corresponding product opens.

The option to delay updates is useful when you need to temporarily cancel distribution of last product revision on all stations of the anti-virus network, e.g., if you want to perform preliminary testing of this revision on a limited number of stations.

To use delayed updates functions, perform the actions described in the **Detailed repository configuration** → [Delayed Updates](#) section.

To manage delayed updates

1. Set the flags next to the products, for which you want to specify actions on delayed updates. To select all products, set the flag in the heading of frozen products table.
2. On the toolbar, select the required action:
 - ✔ **Execute immediately**—disable the frozen state for the product and add the revision to the list of revisions propagating according on stations according to the [general procedure](#).
 - ✘ **Cancel update**—disable the frozen state for the product and forbid the revision. Updating from the GUS will be restored. The unfrozen revision will be removed from the product revision list. Upon receipt of the next revision, the unfrozen one will be removed from the disk.
 - 🕒 **Change updates delay time**—specify the time period for the product revision to be delayed. The reference time for a freeze is the moment of receiving the revision from the GUS.





3. If you did not specify an action to be applied upon removal of the frozen status, the revision becomes unfrozen when the time is out and is included to the list of revisions distributed to stations according to the [general procedure](#).



8.10.3. General Repository Configuration

In the **General repository configuration** section, you can specify parameters for connection to GUS and for updating repositories of all products.

To edit repository configuration

1. Select the **Administration** item in the main menu of the Control Center.
2. In the opened window, select the **General repository configuration** item in the control menu.
3. Configure all necessary parameters for updating from the GUS as described [below](#).
4. If during parameters editing you need to discard all changes, use the following buttons on the toolbar:

 **Reset all parameters to initial values**—restore the values that all parameters in this section had before current editing. To apply the similar action to a certain parameter value, use the  button next to each parameter.

 **Reset all parameters to default values**—restore all parameters from this section to their defaults, specified in the Server configuration file. To apply the similar action to a certain parameter value, use the  button next to this parameter.

5. Click **Save** to save all changes into repository configuration files. At that, the current version of the repository is reloaded from the disk.



It takes some time to apply the new settings of repository configuration. At immediate update of the repository from GUS once the configuration is changed, the previous settings can be used.

Dr.Web GUS

On the **Dr.Web GUS** tab, you can configure parameters for connection to Dr.Web Global Update System.



To edit GUS connection settings, use the following options:

- In the **Update receiving protocol** drop-down list, select the protocol type to receive updates from update servers. For all protocols, updates are downloaded according to the settings from the **Dr.Web Global Update System Servers List** section.
- In the **Base URI** field, specify the GUS servers folder where updates of Dr.Web products are located. For updating from Dr.Web GUS servers, do not change this setting without necessity.



- If in the **Update receiving protocol** list, you have selected one of the secure protocols that support encrypting, then in the **Allowed certificates** drop-down list, select the type of TLS certificates that will be automatically accepted for the connection established by the selected protocol.
- If in the **Allowed certificates** list, you have selected the **User-defined** option, then specify the path to the file with your TLS certificate in the **Certificate** field.
- **Login**—user login to authenticate on updates server, if the updates server requires authorisation. Also, this login is used for SSH authentication on updates server **By registration data**.
- **Password**—user password to authenticate on updates server, if the updates server requires authorisation. Also, this password is used for SSH authentication on updates server **By registration data**.
- In the **Authorization method** drop-down list, select the authorization method on an update server.
- The **Number of temporary stored revisions** field specifies the number of revisions for each product temporary stored on disk not including revisions which are marked on the **Revisions list** tab, in the **Detailed repository configuration** section.

If necessary, you can configure this setting separately for each product in the [Detailed Repository Configuration](#) section, but after the changes in the general configuration are saved, the setting will be changed to the general value.

- Set the **Use CDN** flag to allow receiving updates from GUS via Content Delivery Network.
- If necessary, edit the list of GUS servers from which the repository is updated, in the **Dr.Web Global Update System Servers List** section:
 - To add a GUS server to the list of servers used for updates, click  and specify the address of the GUS server in the appeared field.
 - To remove a GUS server from the list of used, click  next to the server which you want to delete.
 - GUS servers are listed in the order Dr.Web Server contacts them when updating the repository. To change the order of GUS servers, move a server as necessary by dragging the left root line of the server.

After installation of Dr.Web Server, the list contains only update servers of the Doctor Web company. If necessary, you can setup your own update zones and include them into the list of servers to receive updates.

Task Scheduler

On the **Task Scheduler** tab, you can view all tasks on the repository update from Dr.Web Server schedule.

To edit specific update task, click the line of this task. The **Dr.Web Server Task Scheduler** sections will be opened.



Creating, removing and editing tasks on repository update is performed in the [Dr.Web Server Task Scheduler](#) section.

Dr.Web Agent for UNIX

On the **Dr.Web Agent for UNIX** tab, select UNIX system-based OS for which you want to update the components that are installed on workstations.



To disable all updates receiving from GUS for Agent for UNIX, open the **Detailed repository configuration** section, the **Dr.Web Agent for UNIX** item, and on the **Synchronization** tab, set the **Disable product update** flag.

Dr.Web Agent for Windows

- On the **Dr.Web Agent for Windows** tab, in the group of selection buttons, specify whether you want to update all components that will be installed on stations under Windows OS or update only virus databases.
- On the **Dr.Web Agent for Windows languages** tab, specify languages for the Agent and the anti-virus package interface of Windows OS, which will be downloaded from the GUS.

Dr.Web Server

- On the **Dr.Web Server** tab, specify OS for which you want to update Server files:
 - To receive updates for Servers under all supported OS, set the **Update all platforms available on GUS** flag.
 - To receive updates for Server under certain OS, set only flags located next to their names.



To disable all updates receiving from GUS for the Server, open the **Detailed repository configuration** section, the **Dr.Web Server** item, and on the **Synchronization** tab, set the **Disable product update** flag.

- On the **Doctor Web News** tab, specify a list of languages for the news feed.
You can configure subscription settings on news lines at the [Preferences](#) → **Subscription** section.

You can read news of Doctor Web company in the main menu of the Control Center, in the **Support** → **News** section.

- On the **Dr.Web Security Control Center languages** tab, specify the list of languages for Control Center interface to download from GUS.



8.10.4. Detailed Repository Configuration

The **Detailed repository configuration** section provides you with options to configure revision for each repository product separately.

To edit repository configuration

1. Select the **Administration** item on the main menu of the Control Center.
2. In the opened window, in the **Detailed repository configuration** subsection of the control menu, select the product you want to edit.
3. Configure all necessary repository settings for the selected product, described [below](#).
4. The following options to manage the whole repository product are available on the toolbar:
 - **Delete product from repository**—delete the product from repository completely. At this, all revisions of the product will be deleted and update of the product from GUS will be disabled. The button is available if the product has not yet been deleted from the repository. After the product has been deleted, the button changes its name to **Restore product in repository**.



After the product has been deleted from the repository, the **Revision list** tab will be empty, the other tabs in this section remain in the normal state but their settings do not applied because the product is not in the repository.

- **Restore product in repository**—restore the product in the repository if it was deleted earlier using the **Delete product from repository** button. At this, update of the product from GUS will be enabled. The most fresh revision of the product available on GUS will be downloaded to the repository. Please note the possible data amount to download. You can configure updates downloading in the [General repository configuration](#) section. After the product has been restored, the button changes its name to **Delete product from repository**.
- **Save and reload from disk**—save all your changes. At that, the current version of the repository is reloaded from the disk (see also [Repository state](#)).

Revision List

On the **Revision list** tab, you can view information on all revisions available on the Server for this product.

To delete separate revisions, set the flags next to these revisions and click **✖ Delete selected revisions** on the toolbar.












You cannot delete all revisions. A product must contain at least one revision.

To delete the whole product, use the **Delete product from repository** button.



Deleting revisions cannot be undone.

The table of revisions contains the following columns:

Column name	Description
Distributed	<p>Automatic marker in this column defines the state of product revisions. Two types of markers are available:</p> <p>—<i>Distributed revision</i>. Revision used for updating Agents and anti-virus software on the workstations.</p> <p>Revision for distribution is selected as follows:</p> <ol style="list-style-type: none">1. Revision indicated with the  marker in the Current column is distributed. Only one revision can be marked.2. If no revision is marked in the Current column, the revision indicated with the  marker in the Stored column is distributed.3. If no revision is marked in the Current and Stored columns, the last revision is distributed. <p>The automatic marker always indicates the distributed revision.</p> <p> —<i>Frozen revision</i>. A frozen revision is not distributed to stations, new revisions are not downloaded from the Server. For actions under frozen revision, refer to Delayed Updates.</p> <p>If a revision is frozen, the revision for distribution is selected as follows:</p> <ol style="list-style-type: none">1. If the  marker in the Current column is set, the current revision is distributed to stations.2. If the  marker in the Current column is not set, the revision that precedes the current one is distributed to stations.
Current	<p>Set the  marker to specify the revision used for updating Agents and anti-virus software on the stations.</p> <p>Only one revision can be selected as current.</p> <p>Alternatively, a marker that indicates the current revision can be not set.</p> <p>See also Downgrade Product Revision.</p>
Stored	<p>Set the  marker to save the revision when the repository is automatically cleaned up (see also Synchronization).</p> <p>The marker can be set for different revisions simultaneously.</p> <p>Alternatively, a marker can be not set.</p>



Column name	Description
	If the product revision is stable, you can mark it as stored and if unstable revision get downloaded from GUS, you will be able to roll back to the previous one.
Held	Automatic marker defines that components from this revision are installed on stations with update restrictions (in the Update restrictions section, the Update only bases and Forbid all updates options are set). The revision is not deleted when repository is purged automatically and can be used if failed components must be reinstalled on station or additional components of this revision must be installed.
Revision	The date the product revision was received. If the revision is frozen, the blocking status displays in the column as well.

Downgrade Product Revision

The ability to downgrade products installed at stations to previous versions is determined by the following provisions:

- Databases always can be downgraded to a previous version.
- To downgrade the Agent, this option must be allowed in the [Update restrictions](#) section.
- You cannot downgrade the Agent to a previous version if revision installed at station is marked as **Current**.



If you downgrade the Agent for Windows to a previous revision (to install the previous version of the Agent on stations), the stations will be forced to restart at interval of five minutes. You cannot change the interval or cancel the restart. Station users are notified about the upcoming restart in the popup message.

Synchronization

On the **Synchronization** tab, you can configure parameters for updating the Server repository from GUS:

- The **Number of temporary stored revisions** field specifies the number of product revisions temporary stored on disk not including revisions which are marked at least in one column of the **Revisions list** tab. When a new revision is received and the number of temporary stored revisions already reached the specified allowed value, the oldest temporary stored revision is removed. Revisions marked as **Current**, **Stored**, **Distributed** and **Held** are not automatically removed and are not taken into account when calculating temporary stored revisions.

This setting will be overwritten with a single value for all products if the [General Repository Configuration](#) section is edited.



- Set the **Disable product update** flag to disable receiving updates for this product from the GUS servers. Agents will be updated to the current revision on the Server (or according to the [procedure](#) used to select the distributed revision).

For some products, the following settings are also available:

- Set the **Update only following files** flag to receive updates from GUS only for the file listed below.
- Set the **Do not update only following files** flag to disable updating from GUS only for the file listed below.

Files can be specified in the format of regular expressions.

If both flags are set, files for an update are selected as follows:

1. From the full list of product files only those are selected that are specified in the **Update only following files** lists.
2. From the selection at step 1, files specified in the **Do not update only following files** lists are removed.
3. Files resulting from the selection at step 2 are updated from GUS.

Notifications

On the **Notifications** tab, you can configure notifications on repository updates:

- Set the **Do not notify only about following files** flag to disable notifications on events of the files listed below.
- Set the **Notify only about following files** flag to enable notifications on events of the files listed below.

Files can be specified in the format of regular expressions.

If exceptions list are not specified, all notifications enabled on the [Notifications configuration](#) page are sent.

Parameters of notifications on repository updates are configured in the Notifications configuration page, in the **Repository** section.

Delayed Updates

On the **Delayed updates** tab, you can delay distribution of updates on stations for the specified period of time. A delayed revision is considered *frozen*.

The option to delay updates is useful when you need to temporarily cancel distribution of last product revision on all stations of the anti-virus network, e.g., if you want to perform preliminary testing of this revision on a limited number of stations.





To use delayed updates functional

1. For the product, update of which you want to freeze, configure delayed updates as described [below](#).
2. To disable distribution of the last revision, set one of the previous revisions as a current on the [Revision list](#) tab.
3. For the group of stations that will receive the last revision, set the **Receive the latest updates** flag on the **Anti-virus Network** → [Update Restrictions for Workstations](#) section. Other workstations will receive the revision which you selected as current at step 2.
4. The next downloaded from the GUS revision which is satisfying the conditions specified for the **Delay updates for the following files only** option, will be frozen and delayed for the time period specified in the **Change updates delay time** list.

To configure delayed updates

1. Set the **Delay updates** flag to temporarily disable downloading updates from GUS servers for this product.
2. In the **Updates delay time** drop-down list, select the time period to delay downloading of updates starting from the moment of their receive from the GUS servers.
3. If required, set the **Delay updates for the following files only** flag to delay distribution of updates that contain files which corresponds to the masks specified below. Masks are specified in the format of regular expressions.
If the flag is cleared, all updates from the GUS are frozen.

To disable the frozen state

- On the **Revision list** tab, click  **Execute immediately** to disable the frozen state for the product and add the revision to the list of revisions distributed to stations according to the [general procedure](#).
- On the **Revision list** tab, click  **Cancel update** to disable the frozen state for the product and forbid the revision. Updating from the GUS is restored. Unfrozen revision will be removed from the list of product revisions. After the next revision is received, the unfrozen revision will be removed from the disk.
- When the time specified in the **Change updates delay time** list is out, the revision becomes unfrozen and is included to the list of revisions distributed to stations according to the [general procedure](#).

You can manage frozen revisions for all products on the [Delayed Updates](#) page.

8.10.5. Repository Content

The **Repository content** section allows to view and manage current repository content as files and folders of repository folder.



The main window of **Repository content** section contains hierarchical tree of repository content displays all folders and files of current version of the repository with the list of all revisions for each product.

View Information on the Repository

To view information on all repository objects, select the object in the hierarchical tree of repository content. The properties panel with the following information will be opened:


- The **Selected objects** subsection contains detailed information on the object selected in the repository content tree: **Type**, **Size** (for separate file only), **Creation date** and **Modification date**.
- The **Repository state** subsection contains general information on all repository objects: current list of objects and the date of their last update.

Manage Repository

To manage repository content, use the following buttons on the toolbar:

 [Export repository file to an archive.](#)

 [Import archive with repository files.](#)

 **Delete selected objects**—delete objects selected in the repository content tree without possibility to restore.



After you change the repository content, e.g. delete or import repository objects, to use the changed data by the Server you must reload the repository.

See the [Repository State](#) section.

Repository Export

To save repository file into a zip archive, perform the following actions:

1. In the hierarchical tree of the repository content, select the product, separate product revision or entire repository. Entire repository will be exported if nothing is selected in the tree or the **Repository** tree header is selected. To select several objects, use CTRL or SHIFT.

Please note the general type of exported objects during repository export:

- a) Zip archives of repository products. Such archives contains one of the following repository object types:
 - Entire repository.
 - Entire product.
 - Entire separate revision.




Archives generated during export of these objects can be **imported** via the **Repository content** section. The name of such archives contains the `repository_` prefix.

b) Zip archives of separate repository files.



Archives generated during export of separated files and folders which are lower than objects from the **a)** item in the hierarchical tree, cannot be imported via the **Repository content** section. The name of such archives contains the `files_` prefix.

Such archives can be used as backup copies of files for manual replacement. But it is not recommended to replace repository files manually, bypassing the **Repository content** section.

2. Click  **Export repository file to an archive** on the toolbar.
3. Specify the path to save zip archive with selected repository object according to the web browser settings in which the Control Center is opened.

Repository Import

To load repository files from a zip archive, perform the following actions:

1. Click  **Import archive with repository files** on the toolbar.
2. In the opened window, in the **Select file** section, specify the zip archive with repository files. To select the file you can use the  button.

You can import only those zip archives that have been collected during the export of one of the following repository object types:

- Entire repository.
- Entire product.
- Entire separate revision.

The name of such archives during export contains the `repository_` prefix.

3. In the **Import settings** section, specify the following parameters:
 - **Add missing revisions only**—in this import mode, only those revisions of repository will be added that are missing in the current version. Other revisions remain unchanged.
 - **Replace entire repository**—in this import mode, repository is fully replaced with the imported one.
 - Set the **Import configuration files** flag to import configuration files when importing repository.
4. Click **Import** to start the import process.



8.11. Additional Features

8.11.1. Database Management

The **Database management** section allows to perform direct maintenance of the database with which Dr.Web Server is operated.

The **General** section contains the following parameters:

- The **Last DB maintenance** field—the date of last execution of the database maintenance commands from this section.
- The list of commands to maintain the database which includes:
 - Commands similar to the tasks from [Dr.Web Server schedule](#). The names of commands correspond to the names of tasks in the **Action** section of the Server schedule (description of corresponding schedule tasks is given in the [Tasks types and their parameters](#) table).
 - The **Analyse database** command. It is designed to optimise the Server database using the `analyze` command.
 - The **Purge non-activated stations** command. It is designed to delete accounts of stations that were created in the anti-virus network but have never been connected to the Server. Specify the period after which the unused station accounts should be purged. You can view the list of unused station accounts in the hierarchical list of the anti-virus network, in the **Status** → **New** group.

To execute database maintenance commands

1. In the commands list, set the flags for the commands you want to execute.
If necessary, change the time periods for the database purging commands, after which stored information is confirmed outdated and should be removed from the Server.
2. Click **Apply now**. All selected commands will be executed immediately.
For postponed or/and periodic automatic execution of these commands (except **Analyse database**), use [Server Task Scheduler](#).


To manage database use the following buttons on the toolbar:

 [Import](#),

 [Export](#).

Database Export

To save the database information into a file, perform the following actions:

1. Click  **Export** on the toolbar.
2. In the export settings configuration window, select one of the following variants:



- **Export entire database** to save all information from the database into a gz archive. Exported XML file is similar to the database export file which is obtained when running the Server executable file from the command line with the `xmlexportdb` switch. This export file can be imported when running the Server executable file from the command line with the `xmlimportdb` switch. These commands are described in details in the **Appendices** documents, in the [H4.3. Database Commands](#) section).
 - **Export information on stations and groups** to save information about the objects of the anti-virus network into a zip archive. In the result of this command execution, all information on groups of stations and stations accounts of the anti-virus network served by this Servers, is save into the file of a specific format. Export file contains the following information about stations: properties, components configuration, permissions, update restrictions settings, schedule, installing components list, statistics, information on deleted stations; about groups: properties, components configuration, permissions, update restrictions settings, schedule, installing components list, parent group ID. Further, export file can be [imported](#) via the **Database management** section.
 - In the **Anti-virus network** tree, you can select one or several user groups. In this case, export will contain information only on selected groups and on stations for which the selected groups are primary. If no group is selected, export will contain information on all stations and user groups of the anti-virus network.
3. Click **Export**.
 4. Specify the path to save the archive with the database according to the web browser settings in which the Control Center is opened.



Database Import

You can use the import procedure of the database containing information on the objects of anti-virus network, to transfer the information either on the new Server or on the Server which is already operating into anti-virus network, particularly to merge the lists of served stations of two Servers.



All imported stations will be able to connect to the Server on which you perform the import. When you performing the import, please note that you must have corresponding number of available licenses to connect imported stations. E.g., if necessary, in the [License Manager](#) section, add the license key from the Server, from which the information about stations had been imported.

To load the database from a file, perform the following actions:

1. Click  **Import** on the toolbar.
2. In the import window, specify the zip archive with the database file. To select the file, you can use the  button.

You can import only those zip archives that have been obtained during the export of the database for the **Export information on stations and groups** option.



3. Click **Import** to start the import process.
4. If during import, there are stations or/and groups with the same identifiers which are included both into imported data and into current Server database, the **Collisions** section opens to configure actions on duplicated objects.

Groups and stations lists are presented in separated tables.

For corresponding objects table, in the **Groups import mode** or **Stations import mode** drop-down list, select one of the collision resolving option:

- **Save import data for all**—delete all information on duplicated objects from the current Server database and overwrite it with the information from the imported database. The action is applied simultaneously to all duplicated objects in this table.
- **Save current data for all**—save all information on duplicated objects from the current Server database. Information on duplicated objects from the imported database will be ignored. The action is applied simultaneously to all duplicated objects in this table.
- **Select manually**—specify the action for each duplicated objects manually. In this mode, the list of duplicated objects become editable. Set the options for those objects, which will be saved.

Click **Save**.

8.11.2. Dr.Web Server Statistics

Via the Control Center, you can view the statistics on Dr.Web Server operating on the level of system resources usage of a computer on which Dr.Web Server is installed and also network interaction with anti-virus network components and external resources such as GUS.

To view Dr.Web Server operation statistics

1. Select the **Administering** item in the main menu of the Control Center.
2. In the opened window, select the **Dr.Web Server statistics** item of the control menu.
3. In the opened window, the following statistic data sections are presented:
 - **Customer activity**—data on number of served clients, which are connected to this Server: Dr.Web Agents, neighbor Dr.Web Servers and Dr.Web Agent installers.
 - **Network traffic**—parameters of incoming and outgoing network traffic for exchanging data with the Server.
 - **System resources usage**—usage parameters of system resources of the computer on which the Server is installed.
 - **Microsoft NAP**—[Dr.Web NAP Validator](#) operation parameters.
 - **Database usage**—parameters of the Server database accessing.
 - **File cache usage**—parameters of accessing the file cache of the computer on which the Server is installed.
 - **DNS cache usage**—parameters of accessing the cache which stores queries to DNS servers on the computer on which the Server is installed.



- **Alerts**—parameters of the administrative [notifications](#) subsystem operation.
 - **Repository**—parameters of data exchange between the Server repository and GUS servers.
 - **Web statistics**—parameters of sending infection statistics to Doctor Web company servers.
 - **Web server statistics**—parameters of usage of the Web server.
 - **Cluster**—parameters of accessing via the interserver synchronization protocol in Servers cluster system for multiserver network configuration.
 - **Multicast updates transfer**—parameters of data exchange at [multicast updates](#) transmission on workstations via the multicast protocol.
4. To view statistic data of specific section, click the section name.
 5. In the opened list, the section parameters with dynamic counters of values are given.
 6. At the statistic section opening, the graphical representation for each parameter changes is enabled. At this:
 - To disable graphical representation, click the section name. When graphical representation is disabled, the digital value of parameters still dynamically refreshes.
 - To enable graphical representation of the data repeatedly, click the section name ones more.
 - The names of the sections and their parameters for which the graphical representation is enabled, are marked with the bold font.
 7. To edit the parameters refresh frequency, use the following toolbar options:
 - In the **Refresh rate** drop-down list, select the necessary data refresh frequency. After the drop-down list value changed, the time period of digital and graphical data refreshing is automatically applied.
 - Click **Refresh** to refresh all statistic data values at a time.
 8. On mouse hover over the graphical data, the selected point digital value is displayed as the following:
 - **Abs**—parameter absolute value.
 - **Delta**—incrementation of the parameter value relative to its previous value according to the data refresh rate.
 9. To hide the section parameters, click the arrow on the left of the section name. When the section parameters are hidden, the graphical statistic data is cleared and on the parameters opening, the drawing starts from the beginning.

8.11.3. Backups

The **Backups** section allows to view as files and folders and also save locally contents of Dr.Web Server critical data backup copies.

During backup, the following objects are saved: repository settings, configuration files, encryption keys, certificates, embedded database backup.



Dr.Web Server critical data backup copies are saved in the following cases:

- As a result of the **Back up critical server data** task execution according to the Server [schedule](#).
- As a result of back up when running the Server executable file from the command line with the backup switch. This command is described in details in the **Appendices** documents, in the [H4.5. Backup of Dr.Web Server Critical Data](#).

View Information on Backups


To view information on the backup, select the object related to the necessary backup in the hierarchical tree. Backups are placed in the tree according to the directories of their storage: the `var/backups` default folder, and also all paths of backup storage specified in the Server schedule tasks.

When selecting backup directories or files, the properties panel with the following information on the object is opened: **Type**, **Size** (for separate file only), **Creation date** and **Modification date**.

Manage Backups

To manage backups, use the following buttons on the toolbar:

 **Backup**—back up Server critical data.

 **Export**—save the backup of selected object to the computer on which the Control Center is opened.

 **Delete selected objects**—delete objects selected in the tree without possibility to restore.

Backup Export

To save the backup locally, perform the following actions:

1. In the hierarchical tree, select the necessary backups (to select entire backup, it is enough to select in the tree the folder that corresponds to this backup), or separate files from the backup composition. To select several objects, use CTRL or SHIFT.

Please note the general type of exported objects during the export:

- a) Zip archives of the backups are saved for the following selected objects:

- One or several entire backups (when selecting folders which correspond to the backups).
- Several separate files from the backups composition.


- b) Separate files from the backups composition. If only one file have been selected for the export, it will be saved as it is without archiving.

2. Click  **Export** on the toolbar.



3. Specify the path to save selected objects according to the web browser settings in which the Control Center is opened.

Back up

To back up Server critical data, click  **Backup** on the toolbar. The data will be saved into gz archive. Backup files are similar to files which are obtained when running the Server executable file from the command line with the backup switch.

This command is described in details in the **Appendices** documents, in the [H4.5. Backup of Dr.Web Server Critical Data](#).

8.12. Peculiarities of a Network with Several Dr.Web Servers

Dr.Web Enterprise Security Suite allows to build an anti-virus network with several Dr.Web Servers. In such networks each workstation is assigned to one Server, which allows to distribute the load between them.

The connections between the Servers can have an hierarchical structure, which allows optimally distribute the load between the Servers.

To exchange information between the Servers a special *interserver synchronization protocol* is used.

Features provided by interserver synchronization protocol:

- Distributing updates between Servers within anti-virus network.
- Immediate transmission of updates as soon as they are received from Dr.Web GUS servers.
- Transmitting statistic information on protection stations states between connected Servers.
- Transmitting licenses for protected stations between neighbor Servers.

8.12.1. Building a Network with Several Dr.Web Servers

Several Dr.Web Servers can be installed in an anti-virus network. Each Dr.Web Agent connects to one of them; each Server with connected anti-virus workstations functions as a separate anti-virus network as described in previous Chapters.

Dr.Web Enterprise Security Suite allows to connect such anti-virus networks by transferring data between Dr.Web Servers.

Dr.Web Server can send to another Dr.Web Server

- software and virus database updates (only one of them is to receive updates from Dr.Web GUS servers);
- information on virus events, statistics, etc.;



- licenses for protected stations (you can configure licenses propagation between Servers in the [License Manager](#)).

The program provides for two types of connections between Dr.Web Servers:

- a *parent-child* type of connection, where the principle Server transfers updates to the subordinate one and receives information about events,
- a *peer to peer* connection, where data types and transfer directions are set up individually.

An example of a multi-server structure is presented in Figure [8-1](#).

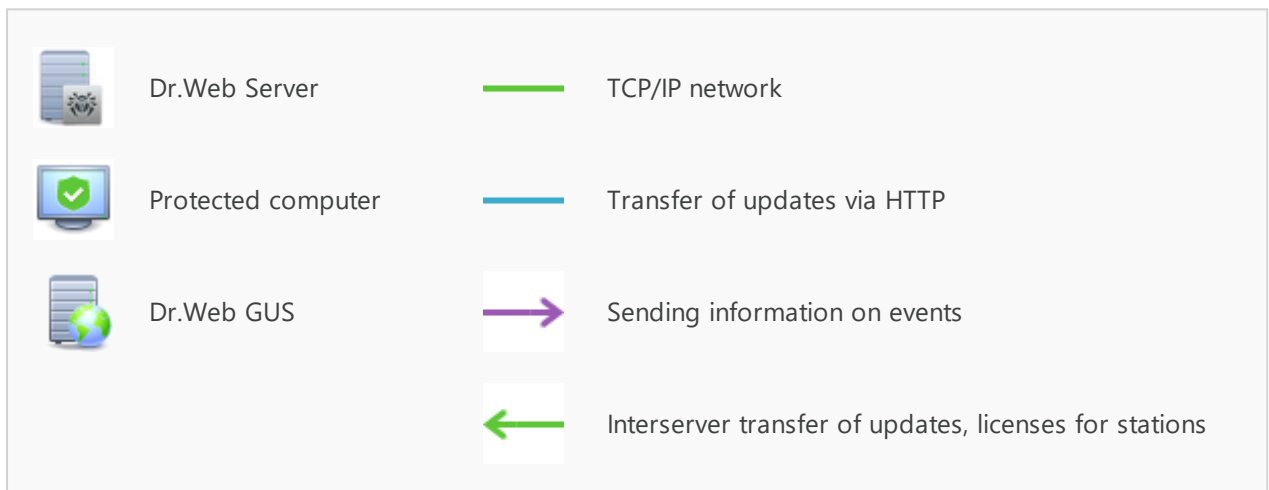
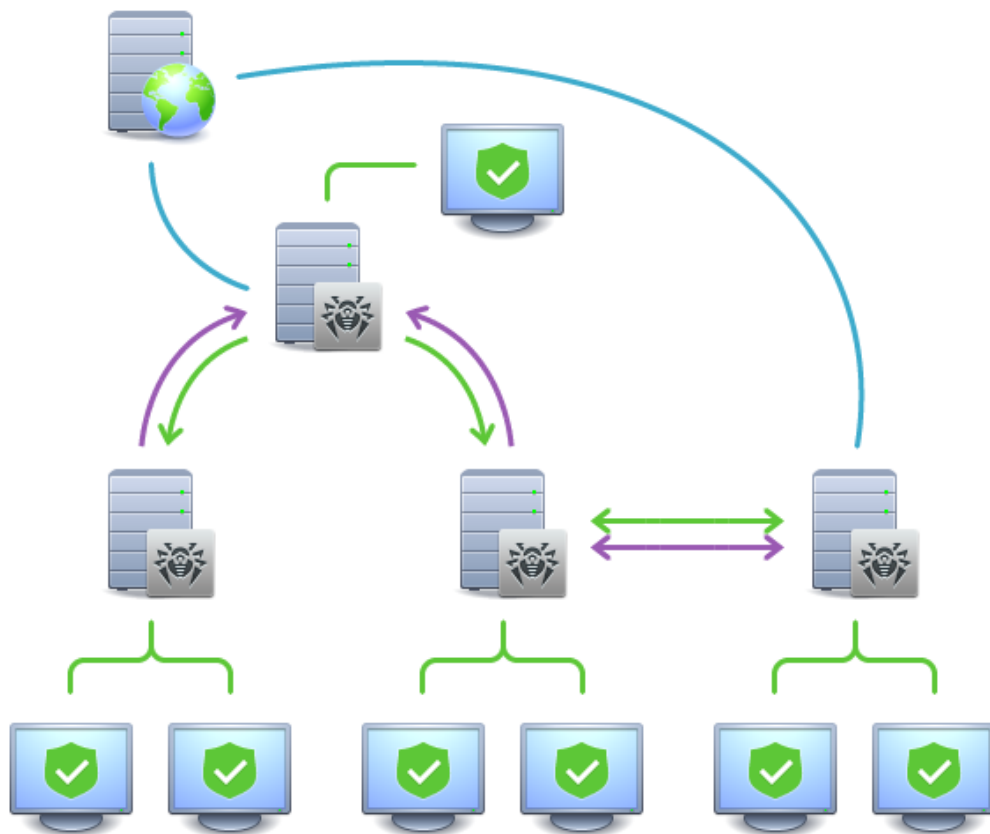


Figure 8-1. A multi-server network

Some advantages of the anti-virus network with several Dr.Web Servers:

1. Receiving of updates from Dr.Web GUS servers by one principle Dr.Web Server and their subsequent distribution to the other Servers directly or through intermediates.



Servers that receive updates from the superior Server, do not receive updates from GUS even if such task is set in the schedule.

Still, in case the parent Server is inaccessible, it is recommended to keep the task for updating from the GUS on subordinate Servers. This allows the Agents which are connected to the subordinate Server to receive updated virus databases and program modules (see also p. [General Repository Configuration](#)).



In the task for updating from GUS on the superior Server propagating updates, you must set up the receiving updates of the Server software for all operating systems installed on all subordinate Servers, which receive updates from this superior Server (see p. [General Repository Configuration](#)).

2. Distribution of workstations between several Servers, decreasing the load on each of them.
3. Consolidation of data from several Servers on one Server; the possibility to view all the data through Dr.Web Security Control Center connected to such Server.



Dr.Web Enterprise Security Suite anti-virus monitors and prevents the creation of cyclic data flows.

4. Available licenses for protected stations can be donated to the neighbor Server. At this, the license key itself remains at the disposal of the distributing Server, available licenses are propagated to a neighbor Server for a specified time period and after it has expired, the licenses are revoked.

8.12.2. Setting Connections between Several Dr.Web Servers

To use several Servers in an anti-virus network, you should set up connections between these Servers.

It is advisable to make a plan of the anti-virus network structure first. All data flows, connections of the "peer to peer" and "parent-child" types should be indicated. Then, each Server included into the network connections with any "neighboring" Servers ("neighbors" have at least one dataflow between them) should be set up. After that, for each Server included into the network, you should set up connections with "neighboring" Servers ("neighbors" have at least one data flow between them).

Example of configuring of a connection between Parent and Child Dr.Web Servers



Values of fields, marked with the * sign, must be obligatory specified.

1. Make sure that both Dr.Web Servers operate normally.



2. To each of Dr.Web Servers give “meaningful” names, as it will help prevent mistakes while connecting and administering Dr.Web Servers. You can change the names through Dr.Web Security Control Center menu: **Administration** → **Dr.Web Server configuration** on the **General** tab in the **Name** field. In this example we name the parent Server `MAIN`, and the child Server—`AUXILIARY`.
3. On both Dr.Web Servers, enable the server protocol. To do this, on Dr.Web Security Control Center **Administration** menu, select **Dr.Web Server configuration**. On the **Modules** tab, set the **Dr.Web Server protocol** flag (see p. [Modules](#)).



If the server protocol is disabled, the message about enabling this protocol will be shown and the link to the corresponding section of Dr.Web Security Control Center will be given during creation of new connection.

4. Restart both Dr.Web Servers.
5. Via Dr.Web Security Control Center of the child Server (`AUXILIARY`), add the parent Server (`MAIN`) to the list of neighbor Servers.

To do this, select **Anti-virus Network** item in the main menu. A window with the hierarchical list of the anti-virus network will be opened. To add a Server to the list, click the **+ Add a network object** → **+ Create neighbor** on the toolbar.

A window with connection settings between the current and a new Server will be opened. Specify the following parameters:

- **Type** of creating neighbor is **Parent**.
- **Name**—the name of the parent Server (`MAIN`).
- **Password***—an arbitrary password to access the parent Server.
- **Own certificates of Dr.Web Server**—the list of SSL certificates of configuring Server. Click and select the `drwcsd-certificate.pem` certificate file of the current Server. To add one more certificate, click and add the certificate to a new field.
- **Certificates of neighbor Dr.Web Server***—the list of SSL certificates of connecting parent Server. Click and select the `drwcsd-certificate.pem` certificate file of the parent Server. To add one more certificate, click and add the certificate to a new field.
- **Address***—the network address of the parent Server and the connection port. Use the following format: `<Server_address> : <port>`.

You can browse the list of Servers, available in the network. To do this:

- a) Click the arrow on the right of the **Address** field.
- b) In the opened window, specify networks in the following format: with a hyphen (for example, `10.4.0.1-10.4.0.10`), separated by a comma with a whitespace (for example, `10.4.0.1-10.4.0.10, 10.4.0.35-10.4.0.90`), with a network prefix (for example, `10.4.0.0/24`).
- c) Click to browse the network for available Servers.
- d) Select the Server in the list of available Servers. Its address will be set to the Address field to create connection.



- **URL of Dr.Web Security Control Center**—you can specify the address of a start web page for Dr.Web Security Control Center of the main Server (see p. [Dr.Web Security Control Center](#)).
- In the **Connection parameters** drop-down lists, specify the type of creating neighbor Servers connection.
- In the **Encryption** and **Compression** drop-down lists, specify parameters of traffic encryption and compression between connecting Servers (see p. [Traffic Encryption and Compression](#)).
- **Validity period of donated licenses**—time period on which licenses are donated from the key on the parent Server. The setting is used if the parent Server donates licenses to the current Server.
- **Period for accepted licenses renewal**—the setting is not used in creating a parent Server.
- **License synchronization period**—interval for synchronizing information about donating licenses between Servers.
- Flags in **Licenses**, **Updates** and **Events** sections are set according to parent-child type of connection and cannot be changed:
 - parent Server sends licenses to child Servers;
 - parent Server sends updates to child Servers;
 - parent Server receives information about events from child Servers.
- Configure administrator notification:
 - Set the **Send notifications on events of neighbor Server** flag to send notifications to the administrator about the events received from the configuring child Server. If the flag is cleared, the administrator will receive notifications on events only on the own Server. You can configure the sending of certain notifications in the [Notification Configuration](#) section.
 - Set the **Send notifications on events of neighbor Server at threat detection by known hashes** flag to send notifications to the administrator about the events received from the configuring child Server in case of security threat detection by known hashes of threats. If the flag is cleared, the administrator will receive notifications on events only on the own Server. You can configure the sending of certain notifications in the [Notification Configuration](#) section.

The flag is available only if the usage of bulletins of known threat hashes is licensed. You can check the license in the information on a license key that can be found in the [License Manager](#) section, the **Allowed lists of hash bulletins** parameter (the license in at least one of the license keys used by the Server is sufficient).



Using these options may significantly increase the number of received notifications.

When configuring peer Servers, these options are available only if the **Receive** flag is set in the **Events** section.



The following notifications are available about events on the neighbor Server: **Security threat detected, Report of Preventive protection, Scan error, Scan statistics.**

The following separate notifications are provided about event on the neighbor Server in case of security threat detection by known hashes of threats: **Security threat detected by known hashes of threats, Scan error at threat detection by known hashes of threats, Report of Preventive protection on threats detection by known hashes of threats.**

- In the **Update restrictions** → **Events** section, you can configure the schedule of events transmission from the current Server to the parent one (editing of the **Update restrictions** table is the same as editing schedule table in the [Update Restrictions for Workstations](#) section).

Click **Save**.

As a result, the Parent Server (MAIN) will be included to the **Parents** and **Offline** folders (see [Figure 8-2](#)).

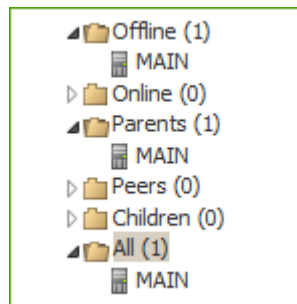


Figure 8-2.

6. Open Dr.Web Security Control Center of the parent Server (MAIN) and add the child Server (AUXILIARY) to the list of neighbor Servers.

To do this, select **Neighborhood** item in the main menu. A window with the hierarchical list of the anti-virus network will be opened. To add a Server to the list, click the **+ Add a network object** → **+ Create neighbor** on the toolbar.

A window with connection settings between the current and a new Server will be opened. Specify the following parameters:

- **Type** of creating neighbor is **Child**.
- **Name**—the name of the child Server (AUXILIARY).
- **Password***—type the same password as at step 5.
- **Own certificates of Dr.Web Server**—the list of SSL certificates of configuring Server. Click and select the `drwcsd-certificate.pem` certificate file of the current Server. To add one more certificate, click and add the certificate to a new field.
- **Certificates of neighbor Dr.Web Server***—the list of SSL certificates of connecting child Server. Click and select the `drwcsd-certificate.pem` certificate file of the child Server. To add one more certificate, click and add the certificate to a new field.



- **URL of Dr.Web Security Control Center**—you can specify the address of a start web page for Dr.Web Security Control Center of the child Server (see p. [Dr.Web Security Control Center](#)).
- In the **Connection parameters** drop-down lists, specify the type of creating neighbor Servers connection.
- In the **Encryption** and **Compression** drop-down lists, specify parameters of traffic encryption and compression between connecting Servers (see p. [Traffic Encryption and Compression](#)).
- **Validity period of donated licenses**—the setting is not used in creating a child Server.
- **Period for accepted licenses renewal**—period till the license expiration, starting from which the child Server initiates renewal of the license which is accepted from the current Server. The setting is used if the child Server accepts licenses from the current Server.
- **License synchronization period**—interval for synchronizing information about donating licenses between Servers.
- Flags in **Updates** and **Events** sections are set according to *parent-child* type of connection and cannot be changed:
 - child Server receives licenses from the main Server;
 - child Server receives updates from the main Server;
 - child Server send information about events to the main Server.
- The **Send notifications on events of neighbor Server** option is disabled and cannot be changed, because the child Server does not receive events from the main Server.
- In the **Update restrictions** → **Updates** section, you can configure the schedule of updates transmission from the current Server to the child one (editing of the **Update restrictions** table is the same as editing schedule table in the [Update Restrictions for Workstations](#) section).

Click **Save**.

As a result, the child Server (AUXILIARY) will be included to the **Children** and **Offline** folders (see [Figure 8-3](#)).

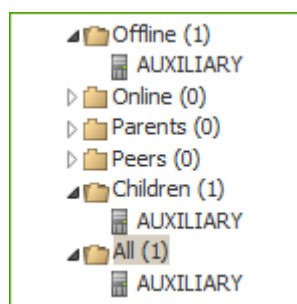


Figure 8-3.

7. Wait until the connection between Servers is established (usually it takes not more than a minute). Press f5 from time to time to update the Servers list. After the Servers have been connected, the child Server (AUXILIARY) will move from the **Offline** folder to the **Online** folder (see [Figure 8-4](#)).

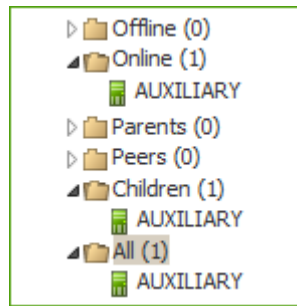


Figure 8-4.

8. Open Dr.Web Security Control Center of the child Server (AUXILIARY) to make sure that the parent Server (MAIN) is connected to the child Server (AUXILIARY) (see [Figure 8-5](#)).

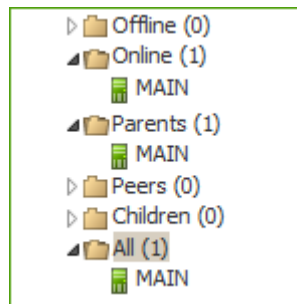


Figure 8-5.



You may not connect several Servers with the same pair of parameters: password and the SSL certificate.



For peer to peer connections between Servers, it is recommended to set Server address in the settings for one of them only.

It will not take effect on the Servers interconnection, but allows to avoid messages like **Link with the same key id is already activated** in the Servers log files.

Connection between two Dr.Web Servers can be failed because of the following reasons:

- Network problems.
- Wrong address of the parent Server was set during connection setup.
- Wrong certificates at one of connecting Servers.
- Wrong access password at one of connecting Servers (passwords on connecting Servers do not match).

If you need to establish a new interserver connection between Servers of 10 and 11 versions, perform the following additional actions:

1. When creating a connection, specify the public key of the Server v.11 on the Server v.10.



2. Generate certificate from the private key of the Server v.10 using the `drwsign` utility (the `gencert` command) from the Server v.11 kit (see the **Appendices** document, p. [H9.1. Digital Keys and Certificates Generation Utility](#)). Specify this certificate when creating a connection on the Server v.11.

8.12.3. Using an Anti-Virus Network with Several Dr.Web Servers

The peculiarity of a multi-server network is that updates from Dr.Web GUS servers can be received by a part of Dr.Web Servers (as a rule, one or several parent Servers) and update tasks should be scheduled on these Servers only (for information on how to set Servers schedule, read p. [Setting Dr.Web Server Schedule](#)). Any Server which has received updates from Dr.Web GUS servers or some other Servers distributes them immediately to all connected child Servers and those peer Servers for which this option is enabled.



Dr.Web Enterprise Security Suite anti-virus automatically monitors the situations when due to an imperfect structure of the network or incorrect Server configuration an update already received is sent again to the same Server, and cancels the updating.

The administrator can receive consolidated data about important events on the anti-virus stations linked to any Server via interserver connections.

To view information on virus events on all Dr.Web Servers linked to the current Dr.Web Server

1. Select **Anti-virus Network** item in the main menu of the Control Center. In the anti-virus network tree, in the **Neighbors** group, select the neighbor Server information of which you want to view.
2. In the control menu, select **General** → **Hardware and software**, to view the statistics on hardware and software on protected stations connected to the selected neighbor Server. Information given in this section, is the same as the information in the sections for stations connected to your Server (see [Hardware and Software on Stations under Windows® OS](#)).
3. To view statistics on anti-virus components operation on protected stations connected to the selected neighbor Server, select corresponding item in the **Statistics** section of the control menu.

Information given in this section, is the same as the information in the sections for stations connected to your Server (see [Statistics](#)).

8.12.4. Dr.Web Servers Cluster



You must upgrade Servers within the cluster from installation packages only. At this, you must stop all the Servers and upgrade them one after another. Upgrading via the Control Center (transition to a new revision) should not be used because after you upgrade the first



Server in using the common database, all other Servers will not be able to operate and upgrade.

For creation of the Servers cluster in the anti-virus network, the following prescriptions must be implemented:

1. The same configuration files

All Servers must have the same `drwcsd.pub` and `drwcsd.pri` encryption keys and the `drwcsd-certificate.pem` Server certificate.

If encryption keys and certificate have not been created before, during installation of the first Server of a cluster, they will be generated automatically.

You can get necessary encryption keys for installation of the next Servers of a cluster, via the Control Center: **Administration** → **Encryption keys** menu. At this both private key and certificate may be needed: if the `drwcsd.pri` private encryption key is specified during the Server installation, the `drwcsd.pub` public key and the `drwcsd-certificate.pem` certificate are generated automatically, but at the certificate generating, the new version is created and the certificate must be replaced with the same version on all the Servers of a cluster (see [Tools to Ensure Secure Connection](#)).



Location of configuration files is given in the [Dr.Web Server](#) section.

2. Common Server name

For all Servers, the same IP address or DNS name of the Server must be specified to use it for generating Agent installation files for an anti-virus network stations.

This name is specified via the Control Center: **Administration** → **Dr.Web Server configuration** → the **Network** tab → the [Download](#) tab → the **Dr.Web Server address** field. Settings of this section are stored in the `download.conf` configuration file (description of the file is given in the **Appendices** document, p. [G3. Download.conf Configuration File](#)).

3. Cluster usage setup

At the network DNS server, the common cluster name must be registered for each Server and load balancing must be set.

For automatically applying of the settings in Dr.Web Servers cluster, the specific cluster protocol must be used.

To configure cluster protocol, it is necessary for each Server in the Control Center open the **Administration** → **Dr.Web Server configuration** menu and specify the following settings:

- a) To enable cluster protocol, on the [Modules](#) tab, set the **Dr.Web Servers cluster protocol** flag.



- b) To configure parameters for interaction of the Servers within a cluster, on the [Cluster](#) tab specify the corresponding parameters.
- c) After configuring of the necessary parameters, click **Save** and restart the Servers.

For Example

- Multicast group: 232.0.0.1
- Port: 11111
- Interface: 0.0.0.0

In this example, for all Servers of a cluster, transports for all interfaces are configured. In other cases, e.g., if one of the networks is external for the cluster and the Agents are connected from it, and the second network is intercluster, when cluster protocol is better to open only for interfaces of the internal network. In this case, the following addresses must be set as an interfaces: 192.168.1.1, ..., 192.168.1.N.

4. The same database



To be able to work with a common database, all Dr.Web Servers must be the same version.

All Dr.Web Servers within one cluster, must operate with the same external database.

As in the case of the database without cluster, each of the Servers calls the database independently and all Servers data is stored separately. Wherever relevant, Server gets from the database only records for its ID which is unique for each Server. Usage of the same database allows the Servers operate with the Agents, firstly registered on other Servers of a cluster.

When you creating a Servers cluster with the same database, please consider the following features:

- The database may be installed either separately from all Servers or on the one of the computers on which the Server of a cluster in installed.
- The database must be created before installation of the first Server of a cluster or before the connection of the first Server to the database.
- When adding new hosts into the cluster (except the first Server), during the Servers installation it is not recommended to set the common database which is used in this cluster directly. Otherwise, it may cause the deletion of the information already stored into the database. It is recommended to install the Servers firstly with an embedded database and after the installation to switch them to the common external database.

Switch the Servers to the external database usage you can via the Control Center: in the **Administration** → **Dr.Web Server configuration** → on the [Database](#) tab or via the `drwcsd.conf` Servers configuration file.

- Except the first Server of a cluster, it is not recommended to add the Servers already operating within anti-virus network with other external or embedded database to a cluster. It will cause the loss of data: information on stations, statistics, settings (except the settings which are stored in the configuration files), because data are completely erased



from the base during the import. In this case, only a part of some of the settings can be imported.

5. The same version of the repository

On all Servers of a cluster, repositories must contain updates of the same version.

You can reach this requirement by one of the following ways:

- Update all Servers of a cluster from the GUS simultaneously. In this case, all Servers contain the latest version of updates. Update all Servers repositories is also can be configured from the local update zone which will distribute the same confirmed version of products updates or the latest version in case if the GUS mirror is created.
- It is allowed to create hybrid structure that combines both cluster of the Servers and hierarchical structure based on interserver connections. At this, on of the Servers (may be either the Server within a cluster or not included into a cluster) is assigned as a parent and receives updates from the GUS. Other Servers of a cluster are the child hosts and receive updates from the parent Server via the interserver connections.

If Servers of a cluster are configured to receive updates from the local zone (GUS mirror) or from the parent Server, it is necessary to track functionality of this zone of the parent Server. If a host that distributes updates is denied of service, it is necessary to reconfigure one of the other Servers to operate as a parent Server or create a new update zone to receive updates from the GUS correspondingly.

6. Features of licenses distribution for the stations

To distribute licenses between Servers of a cluster, you can use the following approaches:

- a) Do not configure hierarchical structure of the Servers within the cluster. It is enough to add the license key (or several keys) on one of the cluster Servers. Information on this license key will be added into the common database. Thus, the license key is used by all the Servers of the cluster simultaneously. The total number of licenses stored in the common database must correspond to the total number of stations served by all the cluster Servers.



To use a license key on all the Servers of a cluster, not only on the one on which the key was added, the other Servers of a cluster must be restarted after the key is added.

- b) Create hybrid structure that combines both cluster of the Servers and hierarchical structure based on interserver connections. Such structure is useful if for serving the Agents you use the Servers both included into the cluster and outside the cluster. In this case, the necessary number of licenses are propagated from a license key via the interserver connection directly during operation:
 - From the Server outside the cluster to one of the cluster Servers. Propagated licenses are used by all cluster Servers as described in the step a).
 - From the one of the cluster Servers (i.e. from the key used by all cluster Servers) to the Server outside the cluster.



Administrator of the anti-virus network should manually configure propagation of necessary number of licenses for a necessary time period (for more details, see [Licenses Propagation via Interserver Connections](#)).

For example, you can configure hierarchical structure of Servers and allocate the parent Server (may be either the Server within a cluster or not included into a cluster) which will be propagate both repository updates and licenses from a license file.

7. Tasks in the Server schedule

To avoid duplicates in queries to the database, it is recommended to execute the following tasks from the Server schedule only on the one of the Servers: **Purge Old Data, Backup sensitive data, Purge old stations, Purge expired stations, Purge unsent IS events**. For example, on the Server which is located on the same computer as the common external database. Or on the most productive computer of a cluster, if configuration of the Servers are differ and the database is located on the separate computer.



Chapter 9: Updating Dr.Web Enterprise Security Suite Software and Its Components

This chapter describes the update of Dr.Web Enterprise Security Suite components that is performed during the product operation and cannot be used to upgrade to a new version.

Upgrade of the product and its components to a new version is described in the **Installation Manual**, in the [Chapter 6: Upgrading Dr.Web Enterprise Security Suite Software and Its Components](#) section.



Before updating Dr.Web Enterprise Security Suite and its components, it is strongly recommended to ensure the validity of the TCP/IP protocol settings to provide the Internet connection. Particularly, the DNS service must be enabled and properly configured.

Before updating the software it is recommended configure the repository including access to Dr.Web GUS (see [General Repository Configuration](#)).

9.1. Updating Dr.Web Server and Restoring from the Backup

Control Center provides the following features for managing Dr.Web Server software:

- Update the Server software to one of the available versions downloaded from the GUS and stored in the Server repository. Description of settings for updating the repository from GUS, is given in the [Administration of Dr.Web Server Repository](#) section.
- Rollback the Server software to the saved backup. The Server backups are created automatically during update to the new version in the **Dr.Web Server Updates** section (step 4 in the procedure below).



Upgrading the Server within version 10 can be also performed via the Server distribution kit. The procedure is described in the **Installation Manual**, in the [Upgrading Dr.Web Server for Windows® OS](#) or [Upgrading Dr.Web Server for UNIX® System-Based OS](#) sections.

Not all Server updates within version 10 have the distribution kit file. Some of them can be installed via the Control Center only.

After the Server upgrade under UNIX system-based OS via the Control Center, the Server version in the OS package manager will not be changed.

To manage Dr.Web Server software

1. Select the **Administrating** item in the main menu of the Control Center, in the opened window, select **Dr.Web Server** in the control menu.



- To open the Server versions list, perform one of the following actions:
 - Click the current version of the Server in the main window.
 - Click **Versions list**.
- This opens the **Dr.Web Server Updates** section with the list of available updates and backups of the Server. At this:
 - The **Current version** list contains the version of the Server, used at the moment. The **Change list** section contains the brief list of new features and the list of errors which had been resolved in this version relatively to the previous updates version.
 - The **All versions** list contains the list of this Server updates downloaded from GUS. The **Change list** section contains the brief list of new features the list of errors which had been resolved in each update.

For the version that corresponds to the first installation of the Server from the installation package, in the **Change list** is empty.

- The **Backups** list contains the list of backup copies which are stored for this Server. The **Date** section contains the information on the date of the back up.
- To update the Server software, set the option next to the necessary version of the Server in the **All versions** list and click **Save**.



You can update only to a later version of the Server regarding to the currently used version.

During the Server update, the current version is saved as a backup (placed to the **Backups** section), and version to which update is performed, is moved from the **All versions** to the **Current version** section.

Backup copies are saved in the following folder:

```
var → update → backup → <old_version>-<new_version>
```

During update, the `var → dwupdater.log` log file is created or supplemented.

- To rollback the Server software to the saved backup copy, set the option next to the necessary version of the Server in the **Backups** list and click **Save**.

During the Server software rollback, the applied backup copy is placed to the **Current version** section.

9.2. Manual Update of Dr.Web Server Repository

To view the repository state or update anti-virus network components

- Select the **Administration** item in the main menu of the Control Center and click **Repository state** in the control menu of the opened window.
- In the open window, you can view the list of products in the repository, date of currently used revision, date of the last downloaded revision, and products state.



The **State** column displays the state of the products in the Server repository at the time of last update.

3. To manage the repository contents, use the following buttons:

- Click the **Check for updates** button to check whether updates to all of the products are available on the GUS servers. If the checked component is outdated, it will be updated automatically during the check.
- To save the log of repository updates, click one of the following buttons on the toolbar:
 - Save data in CSV file,**
 - Save data in HTML file,**
 - Save data in XML file,**
 - Save data in PDF file.**
- Click **Reload repository from disk**, to reload the current version of the repository from disk.

On startup, Server loads the repository contents to the memory. If during Server operation the administrator changed the contents bypassing Control Center, e.g, when updating the repository using an external utility or manually, reload the repository to enable the use of its downloaded version.

9.3. Scheduled Update of Dr.Web Server Repository

You can configure a task schedule on Dr.Web Server for regularly software updates (for more details on the schedule, see p. [Setting Dr.Web Server Schedule](#)).

To configure the schedule to update Dr.Web Server repository

1. Select the **Administration** item in the main menu and click **Dr.Web Server Task Scheduler** in the control menu. The list with the current tasks of the Server will be opened.
2. To add a new task, click **Create task** on the toolbar. Task editor window opens.
3. On the **General** tab, specify the following parameters:
 - In the **Name** field, specify the name of the task displayed in the schedule list.
 - Set the **Enable execution** flag, to enable the task execution. If the flag is cleared, the task remains on the list but will not be executed.
 - Set the **Critical task** flag to perform extra launch of the task if its scheduled execution has been omitted by any reason. The Scheduler rechecks the task list every minute and launches the omitted critical task if it was found. If at launch, the task was omitted several times, it will be executed only once.
 - If the **Run the task asynchronously** flag is cleared, the task will be placed to the general queue of Scheduler tasks that are executed sequentially. Set the flag to execute this task in parallel out of order.



4. On the **Action** tab, specify the following parameters:
 - In the **Action** drop-down list, select the **Update repository** task type.
 - In the **Product** list, set the flags next to those repository products which will be updated by this task.
 - Set the **Update license keys** to activate the procedure of license keys automatic update during repository update. Detailed information is given in the [Automatic Licenses Update](#) section.
5. On the **Time** tab, specify the following parameters:
 - In the **Period** drop-down list, set the launch mode of the task and setup the time according to the specified periodicity:
 - Set the **Disable after the first execution** flag to execute the task only once at specified time. If the flag is cleared, the task will be executed multiple times according to the specified periodicity.
6. Click **Save** to create a new task with specified parameters.

9.4. Updating the Repository of a Server not Connected to the Internet

9.4.1. Copying Repository of Other Dr.Web Server

If Dr.Web Server is not connected to the Internet, its repository can be updated manually by copying the repository of another updated Dr.Web Server.



This method is not intended for upgrading the Server to a new version.

To deploy the updates of the repository from other Dr.Web Server

1. Update the repository of the Server connected to Internet from the section **Administration** → [Repository State](#) in the Control Center.
2. Export the repository or its part (necessary products) via the Control Center from the [Repository Content](#) section. At this, you must export only those types of objects that are supported to be imported.
3. Copy the archive with exported repository on a computer with the Server to be updated. Import downloaded repository on the Server via the Control Center from the **Administration** → [Repository Content](#) section.



If you use specific repository settings such as revisions froze or update the Agents only from the specified revision (not the last), when during the repository import, you must enable the **Add missing revisions only** option and disable the **Import configuration files** option.



9.4.2. Downloading Repository from GUS

If you cannot connect any of Dr.Web Servers to the Internet, you can download the repository from GUS without using the Server software. To do this, use Dr.Web Repository Loader standard utility.

Features of Use

- To download the repository from GUS, you need a license key of Dr.Web Enterprise Security Suite or its MD5 hash which you can view in the Control Center in the **Administration** → **License Manager** section.
- You can launch Dr.Web Repository Loader in the following modes:
 - [graphical](#) version of utility (under Windows OS only),
 - [console](#) version of utility.
- When downloading the repository from the GUS, a proxy server can be used.

Possible Uses

Download with the manual replacement

1. Download the Server repository from GUS using Dr.Web Repository Loader utility.
When downloading, create an archive of the repository:
 - a) For the graphical utility: select the **Load repository** mode and set the **Archive repository** flag in the utility main window.
 - b) For the console utility: use the `--archive` switch.
2. Copy the archive with exported repository on a computer with Dr.Web Server to be updated.
Import downloaded repository on Dr.Web Server via the Control Center from the **Administration** → [Repository Content](#) section.



If you use specific repository settings such as revisions froze or update the Agents only from the specific revisions (not the last), when during the repository import, you must enable the **Add missing revisions only** option and disable the **Import configuration files** option.

Create the repository mirror on a local network server

1. Download the Server repository from GUS using Dr.Web Repository Loader utility.
When downloading, set the **Synchronize update mirror** option in the utility main window.
2. Put the downloaded repository on your LAN web server that will be used to propagate repository updates.



3. In the **Administration** → [General Repository Configuration](#) section, configure receiving updates by Dr.Web Server from your local mirror, not from Dr.Web GUS. Protocol of updates loading depends on the type of the server from the step 2: HTTP/HTTPS for web server, FTP/FTPS for FTP server, etc. Exception is the FILE protocol—it is not available to be used on network (see [Create the repository mirror on Dr.Web Server](#)).

Create the repository mirror on Dr.Web Server

1. Download the Server repository from GUS using Dr.Web Repository Loader utility.
When downloading, set the **Synchronize update mirror** option in the utility main window.
2. Put the downloaded mirror in the arbitrary folder on a computer with Dr.Web Server installed.
3. In the **Administration** → [General Repository Configuration](#) section, configure receiving updates via the FILE protocol.

In the **Base URI** field, specify the local path to the folder with the mirror. The **Dr.Web Global Update System Servers List** parameter is not used.



Make sure that the mirror resides in the folder named `11.00`. At this, the path in the **Base URI** field must be specified up to this folder, not including the folder itself.

9.4.2.1. GUI Utility

GUI version of Dr.Web Repository Loader utility is available under Windows OS and can be downloaded via the Control Center, in the **Administration** → **Utilities** section. You can run this utility version on any computer under Windows OS with Internet access.

The utility resides in the `webmin\utilities` folder of the Server installation folder. Executable file is `drweb-reploader-gui-windows-<bitness>.exe`.

To download repository via the GUI version of Dr.Web Repository Loader

1. Run the GUI version of Dr.Web Repository Loader utility.
2. In the main window of the utility, specify the following parameters:
 - a) **License key or MD5 of the key**—specify Dr.Web license key file. Click **Browse** and select active license key file. Instead of a license key you can specify only MD5 hash of a license key, which you can view in the Control Center in the **Administration** → **License Manager** section.
 - b) **Downloading folder**—specify the folder for downloading the repository.
 - c) In the **Mode** list, select one of the updates loading mode:
 - **Load repository**—repository is downloaded in the Server repository format. Loaded files can be directly imported via the Control Center as the Server repository updates.
 - **Synchronize update mirror**—repository is downloaded in the GUS updates zone format. Loaded files can be placed on the updates mirror in your local network. Further,



Servers can be configured to receive updates directly from this updates mirror containing the last version of the repository but not from the GUS servers.

- d) Set the **Archive repository** flag to pack downloaded repository into a zip archive automatically. This option allows to get prepared archive file for import downloaded repository archive to the Server via the Control Center, for the **Administrating** → [Repository Content](#) section.
3. If you want to change the additional settings for GUS connections and updates downloading, click **Additional settings**. In the opened settings window, the following tabs are available:
- a) On the **Products** tab, you can change the list of products to download. In the opened settings window, the list of all repository available for downloading for the GUS is presented:
 - To update the list of products currently available on the GUS, click **Update**.
 - Set the flags next to whose products that you want to download from the GUS or the flag in the head of the table to select all products from the list.
 - b) On the **Dr.Web GUS** tab, you can configure update servers parameters:
 - GUS servers are listed in the order the utility contacts them when downloading the repository. To change GUS server order, use the **Up** and **Down** buttons.
 - To add a GUS server to the list of servers used for updates, specify the address of the GUS server under the servers list and click **Add**.
 - To remove a GUS server from the list of used, select the server you want to delete and click **Remove**.
 - In the **Base URI** field, specify a GUS servers folder where updates of Dr.Web products are located.
 - In the **Protocol** drop-down list, select the protocol type to receive updates from update servers. For all protocols, updates are downloaded according to the settings of the GUS servers list.
 - In the **Allowed certificates** drop-down list, select the type of SSL certificates that will be automatically accepted. This option is used only for secure protocols that support encrypting.
 - **Login** and **Password**—user credentials to authenticate on updates server, if the updates server requires authorization.
 - Set the **Use CDN** flag to allow downloading repository from GUS via Content Delivery Network.
 - c) On the **Proxy Server** tab, you can specify parameters for connecting to the GUS via the proxy server:
 - **Proxy server address** and **Port**—the network address and the port number of the proxy server to use correspondingly.
 - **Login** and **Password**—authorization parameters on the proxy server if used proxy server requests authorization.



- d) On the **Scheduler** tab, you can configure the schedule to receive updates periodically. To execute the schedule, the Task schedule of Windows OS is used. At this, you do not have to launch the utility manually, the repository downloading performed automatically according to the specified time slots.
 - e) On the **Log** tab, you can configure parameters of updates downloading log.
- Click **OK** to apply specified changes and to return to the main widow of Dr.Web Repository Loader.
4. After configuring all parameters, click **Download** in the main window of Dr.Web Repository Loader to start connecting to the GUS and downloading the repository.

9.4.2.2. Console Utility

The following versions of Dr.Web Repository Loader console utility are provided:

Executable file	Location	Description
drweb-reploder- <OS>-<bitness>	Control Center, the Administration → Utilities section	Independent version of the utility. Can be launched from any directory or on any computer with corresponding operating system.
	The webmin/utilities Server directory	
drwreploder	The bin Server directory	Utility version depends on server libraries. Can be launched only from its location directory.



Command line switches for the console version of the Repository Loader utility are described in the **Appendices** document, in the p. [H9.5. Dr.Web Repository Loader](#).

9.5. Update Restrictions for Workstations



Via Dr.Web Security Control Center you can configure limits for the network traffic bandwidth for transmitting updates from Server to Agents at protected workstations in particular time slots.

For more details see [Workstation Traffic Limitations](#).



Restrictions of the update rate are not applied for additional installation of new components and also for updates launched by administrator using the **Restore failed components** toolbar option.

**To configure station update mode, perform the following actions:**

1. Select the **Anti-virus network** item in the main menu, in the opened window click the name of a station or group in the hierarchical list. Select **Update restrictions** in the [control menu](#).
2. In the **Update restriction** drop-down list, select the limitation mode:
 - **Update all products**—do not restrict distribution of updates on stations.
 - **Forbid all updates**—forbid distribution of all updates on stations during time slots that are specified in the **Stations update timetable** table below.
 - **Update only bases**—forbid distribution of updates only for program modules during time slots that are specified in the **Stations update timetable** table below. Virus bases updates will be performed with no changes in a normal mode.
3. Set the **Ignore the aging of virus databases** flag to reduce the severity of stations state with outdated virus databases. If the flag is set, the stations with outdated virus databases will be displayed in the anti-virus network with the general icon , and in the **Status** section, the stations will have the **Low** severity. If the flag is cleared, the stations with outdated virus databases will be displayed in the anti-virus network with the  icon (if the [Settings of tree view](#) → **Show stations states severity** option on the toolbar is enabled), and in the **Status** section, the stations will have the **Maximal** or **High** severity.
4. In the **Interval of revisions relevance** field, specify the time interval during which revisions of the products installed at stations are considered relevant when new revisions appear in the Server repository.
5. Set the **Receive the latest updates** flag to transmit all components updates to the stations not depending on the limitations that are specified in the [Detailed Repository Configuration](#) section.

If the flag is cleared, station receives only those updates which are marked as current updates for distribution.
6. Set the **Allow revisions downgrade** flag to allow downgrading Agent versions at stations from the Server repository according to the distribution settings.

See also [Downgrade Product Revision](#).
7. Set the **Limit updates traffic** flag to limit the network traffic bandwidth for transmitting updates from Server to Agents.


If the flag is cleared, updates for Agents are transferred without limitation of network traffic bandwidth.

If the flag is set, specify the following fields:

 - It the **Default speed** field, specify the value of maximal speed for updates transmission used by default, i.e. if other limitations are not set (empty white cells in the schedule table). Also, default speed value is applied for periods when data transfer is prohibited but the update process already started (see below).
 - It the **Maximal transmission speed (KB/s)** field, specify the value of maximal speed for updates transmission. At this, updates will be transferred in ranges of specified bandwidth of summary network traffic for all Agents updates.



It is allowed to configure up to five limits on updates transmission speed. To add one more field for the speed limitation, click **+**. To remove the limitation, click **-** next to the limit you want to remove.

 The values of the **Default speed** and **Maximal transmission speed (KB/s)** fields must meet the following limitations:


- The 0 value cannot be set. Minimal allowed limitation value is 1 KB/s.
- Empty value (the field is not set) cancels all limitations on update traffic for the corresponding time period.

In the schedule table, you can set the data transfer restrictions mode separately for each 30 minutes of each day of the week.

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Su																								
Mo																								
Tu																								
We																								
Th																								
Fr																								
Sa																								





To change the mode of limitations on data transmission, click the corresponding block of the table. Also, you can select several time blocks using drag-and-drop.

Cells color is changed in cycle according to the color scheme under the table.


 It is forbidden to start updates transmission at time periods, which correspond the **Data transfer is prohibited** value. If updates transferring already had been launched when this period started, it will not be terminated, but maximal transmission speed will be set to the value from the **Default speed** field.

8. After editing is complete, click **Save** to accept changes.


In the toolbar, the following options to manage the section content are also available:

-  **Reset all parameters to initial values**—restore the values that all parameters in this section had before current editing (last saved values).
-  **Reset all parameters to default values**—restore default values of all parameters in this section.
-  **Propagate these settings to another object**—copy settings from this section to settings of other station, group or several groups and workstations.
-  **Set inheritance of settings from primary group**—remove personal settings of a station and set inheritance of settings in this section from a primary group.



 **Copy settings from primary group and set them as a personal**—copy settings of this section from a primary group and set them for selected stations. Inheritance is not set and stations settings considered as a personal.

 **Export settings from this section to the file**—save all settings from this section to a file of a special format.

 **Import settings to this section from the file**—replace all settings in this section with settings from the file of a special format.

9.6. Updating Mobile Dr.Web Agents

If user's computer, laptop or mobile device has no connection to Dr.Web Server for a long time, it is recommended to set Dr.Web Agent *Mobile mode* of operation on the station to receive updates opportunely from Dr.Web GUS.



The Mobile mode will be available in the Agent settings if the Mobile mode is allowed in the Control Center, in the **Anti-virus Network** → **Permissions** → *<operating_system>* → **General** → **Run in mobile mode**.

In the Mobile mode, the Agent tries to connect to the Server three times and, if unsuccessful, performs an HTTP update from the GUS. The Agent tries continuously to find the Server at interval of about a minute.

When the Agent is functioning in the Mobile mode, the Agent is not connected to Dr.Web Server. All changes made for this station at the Server, will take effect once the Agent Mobile mode is switched off and the connection with the Server is re-established.



In the mobile mode only virus databases are updated.

In the Mobile mode, the Agent operation is not limited in time, but the virus databases are updated from GUS only till the expiration date of the station license key, information on which has been saved by the Agent at last connection to the Server (the license key itself is stored on the Server).

Description of mobile mode configuration at the Agent side is given in the **User Manual**.



Chapter 10: Configuring the Additional Components

10.1. Proxy Server

The anti-virus network may consist of one or several Proxy servers.

The main function of a Proxy server is to establish a connection between Dr.Web Server and Dr.Web Agents in cases when it is impossible to set up direct access (e.g. if Dr.Web Server and Dr.Web Agents are located in separate networks which do not have packet routing between them).

The Proxy server allows using any computer included in an anti-virus network for the following purposes:

- As update relay center to reduce the network load on the Server and on connection between the Server and the Proxy server, as well as to reduce the time required for protected stations to get updates by using the caching function.
- As a distribution center of virus events coming from protected stations to the Server, which also reduces network load and allows keeping up with cases when, for example, a group of stations is located in a network segment, which is isolated from the segment the Server is in.



To establish a connection between the Server and clients via the Proxy server, it is recommended to disable traffic encryption. For this, it is enough to set the no value for the **Encryption** parameter in the [Dr.Web Server Configuration → General](#) section.

General Functions

A proxy server performs the following functions:

1. Network listening and receipt of connections according to the specified protocol and port.
2. Protocol translation (supported protocols: TCP/IP).
3. Data transmission between Dr.Web Server and Dr.Web Agents according to the Proxy server settings.
4. Caching of Agent and anti-virus package updates, which are translated by the Server. In case of using cache of the Proxy server to translate updates, following are provided:
 - reducing of network traffic,
 - reducing of Agent updates receiving time.
5. Supporting the traffic encryption between the Servers and the Agents.



Proxy servers can be composed to hierarchical structure.

The general diagram of the anti-virus network when a Proxy server is used is illustrated in the figure 10-1.

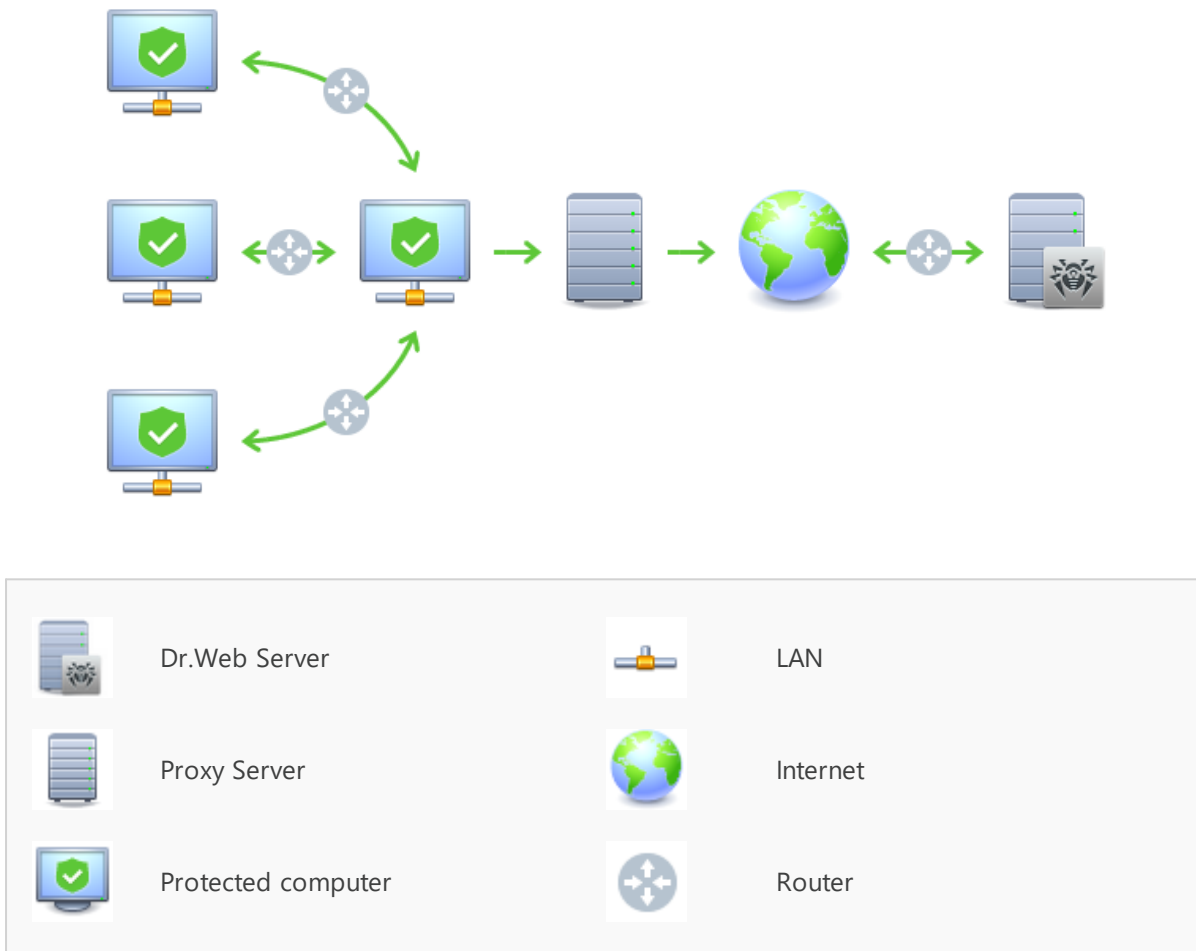


Figure 10-1. Diagram of the anti-virus network when a proxy server is used

Principle of Operation

When a proxy server is used, the following operations are performed

1. If the address of the Server is not specified on the Agent, the Agent sends a multicast request according to the protocol of the network.
2. If the Proxy server is set up to translate connections (the `discovery="yes"` parameter), a message about the availability of an operating Proxy server is sent to the Agent.
3. The Agent sets the received Proxy server parameters for Dr.Web Server. Further intercommunication is performed transparently for the Agent.



4. The Proxy server listens specified ports for incoming connections via given protocols according to the configuration file.
5. For each incoming connection from the Agent (or Dr.Web Server) the Proxy server establishes a connection with Dr.Web Server (or Agent).

The forwarding algorithm for the list of Dr.Web Servers

1. Proxy server loads to RAM the list of Dr.Web Servers from the `drwcsd-proxy.conf` configuration file (see the **Appendices** document, p. [Appendix G4](#)).
2. Dr.Web Agent connects to the Proxy server.
3. Proxy server forwards Dr.Web Agent to the first Server from Dr.Web Servers list loaded in the RAM.
4. Proxy server rotate the list in the RAM and moves Dr.Web Server from the first position to the end of list.



Proxy Server does not save changed order of Servers to its configuration file. After restart of Proxy server, the list of Dr.Web Servers is loaded to the RAM in original version, which is stored in the configuration file.

5. When the next Agent connects to the Proxy server, procedure is repeated from the step 2.
6. If Dr.Web Server disconnects from the anti-virus network (e.g., gets offline or denies of service), the Agent connects to the Proxy server repeatedly and procedure is repeated from the step 2.



[Network scanner](#) which is launched from an external network (in respect to the Agents) is unable to locate the installed Agents.



If the **Replace NetBIOS names** flag is set and anti-virus network contains the Proxy server, when for all stations connected to the Server via the Proxy server, in Dr.Web Security Control Center, the name of computer on which the Proxy server is installed, will be shown instead of stations names.

Traffic Encryption and Compression

Proxy server supports traffic compression. Transferred data is processed regardless of whether traffic is compressed or not.

Proxy server supports traffic encryption. To support the encryption, the Proxy server must connect to the Server (see **Installation Manual**, p. [Connecting the Proxy Server to the Dr.Web Server](#)) and sign its certificate by certificate and private key of the Server. The traffic encryption between the Server and the Proxy server is performed using the Server certificate; the traffic encryption between the Agents and the Proxy server is performed using the Proxy server certificate that is signed by the Server certificate and private key.



Caching

Proxy server supports traffic caching.

Products are cached by revisions. Each revision stores in separate directory. Directories with all next revisions contain *hard links* on existing files from old revisions and originals for changed files. Thus, files for each version are stored on a hard drive in a single exemplar, all directories for next revisions contain only links on unchanged files.

According to the settings specified in the configuration file, the following actions are performed if the caching is enabled:

- Outdated revisions are periodically deleted. By default—once per hour.
- Only latest revisions are stored. All other, earlier revisions are considered outdated and are deleted. By default 3 last revisions are stored.
- Unused *memory mapped* files are periodically unloaded. By default—each 10 minutes.

Settings

The Proxy server does not have a GUI. Its settings can be edited by one of the following ways:

1. Remotely via the Control Center if the Proxy server is connected to Dr.Web Server (see [Remote Configuration of the Proxy Server](#)).
2. Locally via the configuration file. The format of the configuration file is described in the **Appendices** document, p. [Appendix G4](#).



Only user with administrative rights on the computer can manage settings (edit configuration file) of Proxy server.

For proper operation of Proxy server under Linux system-based OS after computer reboot, you must edit system network configuration without Network manager.

Starting and Stopping

To start and stop the Proxy server under Windows OS, open **Control Panel** → **Administration** → **Services**, then double-click `drwcsd-proxy` and select a necessary action in the opened window.

To start and stop the Proxy server under a UNIX-based OS, use the `start` and `stop` commands with scripts created during installation of the Proxy server (see the **Installation Manual**, p. [Installing Proxy Server](#)).



To start the Proxy-server under both Windows OS and UNIX system-based OS, you can run the `drwcsd-proxy` executable file with corresponding switches (see the **Appendices** document, p. [H9. Proxy Server](#)).

10.1.1. Remote Configuration of the Proxy Server

After connecting Dr.Web Proxy server to Dr.Web Server, you will be able to configure the Proxy server via the Control Center remotely.



Detailed information on connection settings is given in the **Installation manual**, p. [Connecting the Proxy Server to Dr.Web Server](#).



The Proxy server can accept settings only from a specific set of connected Servers that are marked as managing. If none of the Servers is marked as managing, when Proxy server connects to all the Servers by rotation till the first valid (not empty) configuration.

To specify the settings of the Proxy server

1. Select the **Anti-virus network** item in the main menu of the Control Center, in the hierarchical list of the opened window, click the name of the Proxy server or the **Proxies** group and its subgroups.
2. In the opened [control menu](#), select **Dr.Web Proxy server**. Settings section opens.
3. On the **Certificate** tab, you can set the list of Dr.Web Server certificates. You must set all certificates of all Servers to which the Proxy server connects and to which the client traffic is forwarded.
 - The Server certificate is required to connect to the Server for remote settings configuration and to support the traffic encryption between the Server and the Proxy server.
 - The Proxy server certificate is signed by the Server certificate and private key (the procedure is performed automatically on the Server after connection, and no administrator interception is required) and is required to connect Agents and to support the traffic encryption between the Agents and the Proxy server.
4. On the **Listen** tab, you can specify the parameters of traffic receiving and forwarding by the Proxy server.

For single network listening settings, you can specify single settings for all clients connections, and settings specified separately for each Server.

To add one more block of settings, click .

To remove the block of settings, click next to the block you want to remove.

For each block you can separately specify the following parameters of the Proxy server operation:

- a) In the sections of listening settings:



- In the **Address to listen** field, specify the IP address that will be "listened" by the Proxy server. The 0.0.0.0 value means "listen" for all interfaces.



Addresses should be specified in the network addresses format described in the **Appendices** document, p. [Appendix E. The Specification of Network Addresses](#).

- In the **Port** field, specify the number of port that will be "listened" by the Proxy server. By default, it is the 2193 port.
 - Set the **Discovery** flag to enable the Server imitation mode. This mode allows clients to detect the Proxy server as Dr.Web Server during its search via multicast requests.
 - Set the **Multicasting** flag so that the Proxy server replies to multicast requests addressed to the Server.
 - In the **Multicast group** field, specify an IP address of a multicast group to include the Proxy server. Specified interface will be listened by the Proxy server for interaction with clients during active Dr.Web Servers searching. If you leave this field blank, the Proxy server will not be included in any of multicast groups. Default multicast group to which the Server is included is 231.0.0.1.
- b) In the **Settings for connection with clients** section:
- In the **Encryption** drop-down list, select the encryption mode of traffic for channels between Proxy server and served clients: Agents and Agent installers.
 - In the **Compression** drop-down list, select the compression mode of traffic for channels between Proxy server and served clients: Agents and Agent installers. In the **Compression level** field, select the compression level (from 1 to 9).
- c) In the **Settings for connection with Dr.Web Servers** section, you can specify the list of Servers to which the traffic will be forwarded:

The Servers order in the list defines the order to forward client traffic and the order to connect the Proxy server to the Servers for receiving the settings. To change the Servers order, drag required lines with a mouse.

To manage the Servers, use the buttons on the toolbar of the Servers list:

- edit the settings for connection with selected Dr.Web Server.
- add the settings for connection with Dr.Web Server.
- remove the settings for connection with selected Dr.Web Server.

When editing and adding the settings for connection with the Server, the opened window provides the following options:

- In the **Proxy server settings can be managed from this Server** drop-down list, select one of the following to set the Server managing:
 - Yes**—the Server is explicit managing. You can assign managing to any number of Servers; Proxy server connects to all the managing Servers by their order in the settings until it gets the first valid (not empty) configuration.
 - No**—the Server will not be managing under any conditions. Also, you can assign none of the Servers managing. In this case, the Proxy server parameters (including the assignment of managing Servers) can be configured only locally via the Proxy server



configuration file (see the **Appendices** document, section [G4. Proxy Server Configuration File](#)).

Possible—the Server will be managing only if there are no explicit managing Servers (with the **Yes** value for this option).

- In the **Redirection address** field, specify an address of Dr.Web Server to which the connections that are established by the Proxy server, will be forwarded.



If the **Redirection address** field is not specified or the `udp/` value is set, the Proxy server uses detection service to find Dr.Web Server by sending the multicast requests (see step 9).

Addresses should be specified in the network addresses format described in the **Appendices** document, p. [Appendix E. The Specification of Network Addresses](#).

- In the **Encryption** drop-down lists, select the encryption mode of traffic for channels between Proxy server and specified Dr.Web Server.
- In the **Compression** drop-down lists, select the compression mode of traffic for channels between Proxy server and specified Dr.Web Server. In the **Compression level** field, select the compression level (from 1 to 9).

In the table, you can specify the traffic restriction settings in the same way as the Server settings given in the [Updates](#) and [Installations](#) sections.

5. On the **Cache** tab, specify the following settings of the Proxy server caching:

Set the **Enable caching** flag to cache the data transferred by the Proxy server, and specify the following parameters:

- In the **Revisions deleting interval (min)** field, specify the interval for deleting old revisions from the cache if their number exceeds the maximum number of revisions to remain. The value is set in minutes. Default is 60 minutes.
 - In the **Number of revisions to remain** field, specify the maximum number of each product revisions to remain in the cache after the cleanup. By default, 3 last revisions are stored, the older revisions are deleted.
- In the **Unload interval of unused files (min)** field, specify the time interval in minutes for unloading unused files from the memory. Default is 10 minutes.
- In the **Integrity check mode** drop-down list, select the integrity check mode for data stored in the cache:
 - **at startup**—at startup of the Proxy server (may take a long time).
 - **idle**—at the downtime of the Proxy server operating.
- Set the **Use proactive caching** flag to load new revisions for the selected products to the Proxy server from Dr.Web Server according to the schedule below. For this time period, revisions are loaded to the Proxy server as soon as they are received by Dr.Web Server from GUS. If the flag is cleared, new revisions are loaded to the Proxy server only when the Agent requests these revisions from the Server.
 - In the list below, set the flags for the products to synchronize.



- In the **Repository synchronization timetable** section, specify the schedule to load the updates for the selected products.
To change the mode of limitations on data transmission, click the corresponding block of the table. Also, you can select several time blocks using drag-and-drop.
Cells color is changed in cycle according to the color scheme under the table: data transmission is allowed without traffic limitations or data transmission is forbidden.
6. On the **Events** tab, specify the following parameters of events sending:
 - Set the **Cache events** flag to cache events received from the Agents. At this, the events are sent to the Server every 15 minutes for the time period that is allowed for the events sending in the timetable below. If the caching is disabled, events will be sent to the Server immediately after receiving by the Proxy server.
 - In the **Events sending timetable** section, specify the schedule to send events received from the Agents.
To change the mode of limitations on data transmission, click the corresponding block of the table. Also, you can select several time blocks using drag-and-drop.
Cells color is changed in cycle according to the color scheme under the table: events transmission is allowed without traffic limitations or events transmission is forbidden.
 7. On the **Dump** tab, specify the following settings:
 - Set the **Create memory dumps** flag to create memory dumps if critical errors occur in the Proxy server operation.
 - In the Maximum number of dumps field, specify the maximum number of memory dumps. When the specified value is reached, the oldest dumps are deleted when creating new ones. Memory dumps setup is available for Windows OS only.
 8. On the **DNS** tab, you can configure the parameters of DNS server usage. Settings are similar to the [DNS settings for Dr.Web Server](#).
 9. On the **Discovery** tab, you can configure the settings to store responses on multicast requests when searching for Dr.Web Servers for redirecting clients (see step 4c).
 - **For positive responses, sec.**—the storage time (in seconds) of the list of Servers that responded to the multicast request when searching for Dr.Web Servers. After the specified period, the request is resent.
 - **For negative responses, sec.**—the storage time (in seconds) of the information that none of Dr.Web Servers has responded to the multicast request. After the specified period, the request is resent.
 10. On the **Updates** tab, you can configure the parameters of the Proxy server automatic update from Dr.Web Server:
 - Set the **Enable automatic update** flag to download for Dr.Web Server and install new Proxy server revisions automatically. The update schedule depends on the settings of proactive caching of the Proxy server (see step 5):
 - a) If the Proxy server is not included into the list for the proactive caching (including if the caching is not used), when the Proxy server updates will be downloaded and installed according to the automatic updates schedule.



b) If the Proxy server is included into the list for the proactive caching, the Proxy server updates will be automatically downloaded according to the proactive caching schedule. When a new revision of the Proxy server is received, the update to this revision is performed according to the automatic updates schedule.

- In the **Automatic update schedule** section, specify the schedule according to which the automatic updates will be performed.

To change the mode of limitations on data transmission, click the corresponding block of the table. Also, you can select several time blocks using drag-and-drop.

Cells color is changed in cycle according to the color scheme under the table: updates transmission is allowed without traffic limitations or updates transmission is forbidden.

11. After editing is complete, click **Save**.

10.2. NAP Validator

Overview

Microsoft® Network Access Protection (NAP) is a policy enforcement platform built into Windows OS that allows you to better protect network assets by enforcing compliance with system health requirements.

With NAP, you can create customized health requirement policies to validate computer health in the following cases:

- before allowing access or communication,
- automatically update compliant computers to ensure ongoing compliance,
- optionally confine noncompliant computers to a restricted network until they become compliant.

Detailed description of NAP technology is given on [Microsoft company web site](#).

NAP in Dr.Web Enterprise Security Suite

Dr.Web Enterprise Security Suite allows you to use the NAP technology to check health of Dr.Web anti-virus software on protected workstations. This functionality is provided by use of Dr.Web NAP Validator.

Means of Health Validation

- A NAP health policy server which is installed and configured in the network.
- Dr.Web NAP Validator which is an implementation of NAP System Help Validator (SHV) with use of Dr.Web custom policies extensions. This component is installed on the computer where the NAP server resides.
- System Health Agents (SHAs) which are installed automatically on the workstations during installation of Dr.Web Agents.



- Dr.Web Server which serves as the NAP remediation server and ensures health of anti-virus software on workstations.

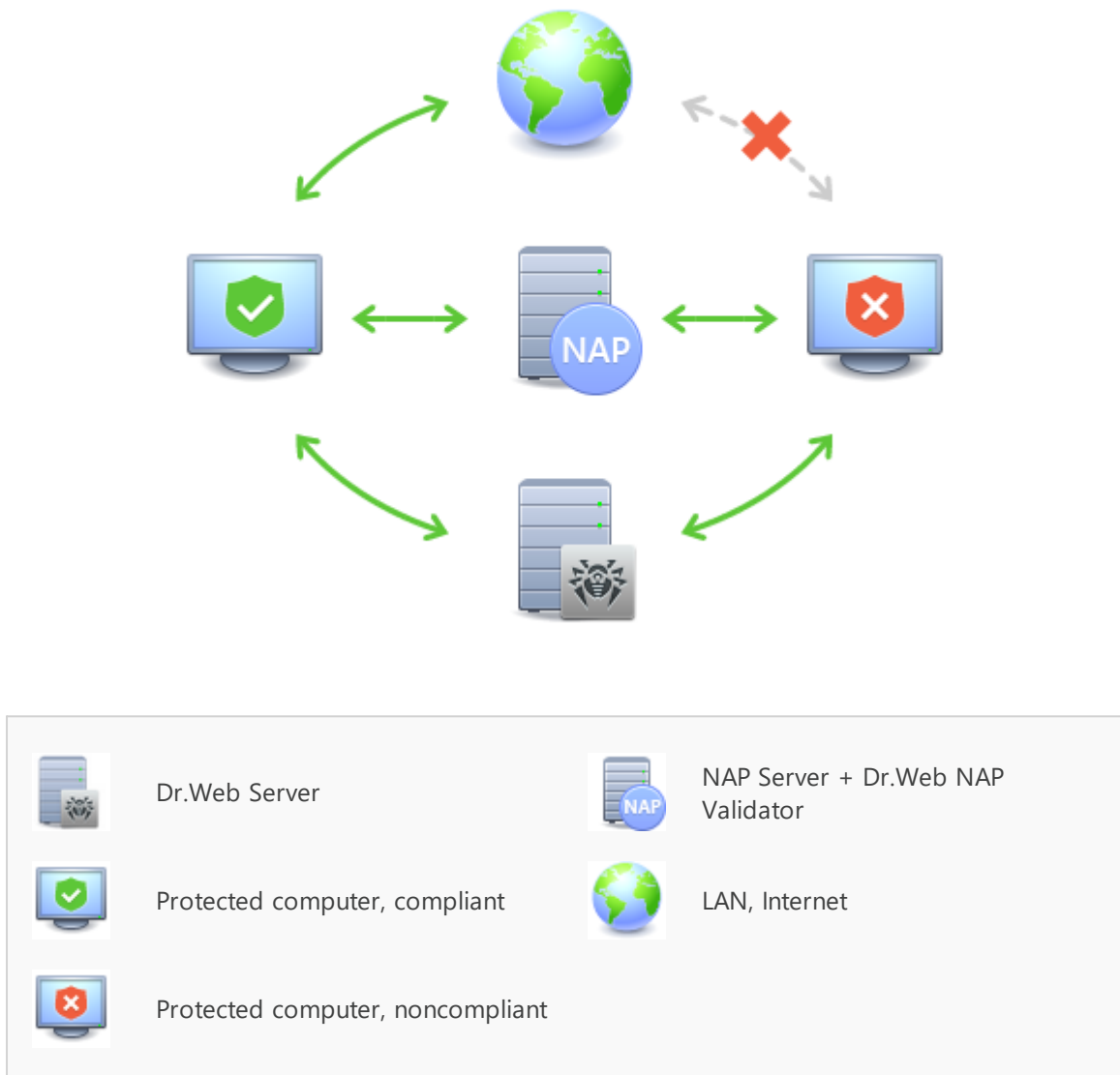


Figure 10-2. Diagram of the anti-virus network when NAP is used

Workstation Validation Procedure

1. Validation is activated when you configure the corresponding settings of the Agent.
2. The SHA connect to Dr.Web NAP Validator installed on the NAP server.
3. Dr.Web NAP Validator determines compliance of workstations against the health requirement policies as described [below](#). To determine health compliance, NAP Validator checks workstation anti-virus state against the corresponding health requirement policies, and then classifies the workstation in one of the following ways:
 - Workstations which meet the health policy requirements are classified as compliant and allowed unlimited access and communication on the network.



- Workstations which do not meet at least one requirement of the health policy are classified as noncompliant and have their access limited to Dr.Web Server only. The Server allows noncompliant workstations to update the system with the necessary anti-virus settings. After update, the workstations are validated again.

Health Policy Requirements

1. Dr.Web Agent must be started and running (Agent health).
2. Dr.Web virus databases must be up-to-date, i.e. databases on the workstation must be similar to those on the Server.

Configuring NAP Validator

After installation of Dr.Web NAP Validator (see **Installation Manual**, p. [Installing NAP Validator](#)) on a computer where a NAP server resides, you need to perform the following actions:

1. To open NAP server configuration component, run the `nps.msc` command.
2. In the **Policies** section, select **Health Policies**.
3. In the opened window, open properties of the following elements:
 - **NAP DHCP Compliant.** In the settings windows, set the **Dr.Web System Health Validator** flag which prescribes to use Dr.Web NAP Validator component policies. To classify workstations as compliant only when all health policy requirements are met, select **Client passed all SHV checks** in the drop-down list.
 - **NAP DHCP Noncompliant.** In the settings windows, set the **Dr.Web System Health Validator** flag which prescribes to use Dr.Web NAP Validator component policies. To classify workstations as noncompliant if any of the health policy requirements are not met, select **Client failed one or more SHV checks** in the drop-down list.



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