



Dr.WEB®

Anti-virus

for Windows servers

Administrator Manual

Defend what you create

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Dr.Web Anti-virus for Windows servers

Version 8.0

Administrator Manual

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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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1. Introduction

Dr.Web Anti-virus for Windows servers provides multi-level protection of RAM, hard disks, and removable devices against viruses, rootkits, Trojans, spyware, adware, hacktools, and other malicious programs. The module architecture of **Dr.Web Anti-virus for servers** is its significant feature. The anti-virus engine and virus databases are common for all components and different operating environments. At present, in addition to **Dr.Web products** for Windows, there are versions of anti-virus software for IBM® OS/2®, Novell® NetWare®, Macintosh®, Microsoft Windows Mobile®, Android®, Symbian®, and several Unix®-based systems (Linux®, FreeBSD®, and Solaris®).

Dr.Web Anti-virus for servers uses a convenient and efficient procedure for updating virus databases and program components via the Internet.

Dr.Web Anti-virus for servers can detect and remove undesirable programs (adware, dialers, jokes, riskware, and hacktools) from your computer. To detect undesirable programs and perform actions with the files contained in the programs, standard anti-virus components are used.

Dr.Web Anti-virus for servers includes the following components:

- **Dr.Web Scanner for Windows (Scanner)** is an anti-virus scanner with graphical interface. The program runs on user demand or as scheduled and checks the computer for viruses. There is also a command line version (**Dr.Web Console Scanner for Windows**).
- **SpIDer Guard® for Windows** is an anti-virus guard. The program resides in the main memory, checks files and memory on the fly, and detects virus-like activity.
- **Dr.Web Updater** allows registered users to receive updates of the virus database and other program files as well as automatically install them.



- **SpIDer Agent** is a utility that lets you set up and manage **Dr.Web Anti-virus for servers** components.

1.1. About This Manual

This Administrator Manual describes installation and effective utilization of **Dr.Web Anti-virus for servers**.

You can find detailed descriptions of all graphical user interface (GUI) elements in the Help system of **Dr.Web Anti-virus for servers** which can be accessed from any component.

This Administrator Manual describes how to install **Dr.Web Anti-virus for servers** and contains some words of advice on how to use the program and solve typical problems caused by virus threats. Mostly, it describes the standard operating modes of the program's components (with default settings).

The [Appendices](#) contain detailed information on how to set up **Dr.Web Anti-virus for servers**.



Due to constant development, program interface of your installation can mismatch the images given in this document. You can always find the actual documentation at <http://download.drweb.com/doc>.



1.2. Document Conventions

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

Convention	Description
Bold	Names of buttons and other elements of the graphical user interface (GUI), and required user input that must be entered exactly as given in the guide.
Green and bold	Names of Dr.Web products and components.
<u>Green and underlined</u>	Hyperlinks to topics and web pages.
Monospace	Code examples, input to the command line and application output.
<i>Italic</i>	Placeholders which represent information that must be supplied by the user. For command-line input, it indicates parameter values. In addition, it may indicate a term in position of a definition.
CAPITAL LETTERS	Names of keys and key sequences.
Plus sign ('+')	Indicates a combination of keys. For example, ALT+F1 means to hold down the ALT key while pressing the F1 key.
Exclamation mark	A warning about potential errors or any other important comment.

The following abbreviations are used in this Administrator Manual:

- GUI – Graphical User Interface (GUI version of a program, a version that utilizes the GUI)
- OS – operating system
- PC – personal computer
- RAM – Random Access Memory



1.3. System Requirements



Before installing **Dr.Web Anti-virus for servers**:

- Install all critical updates recommended by the operating system developer.
- Uninstall all other anti-virus packages from the computer to avoid possible incompatibility with their resident components.

Specification	Requirement
OS	<p>For 32-bit platforms:</p> <ul style="list-style-type: none">• Microsoft® Windows Server® 2003 SP1• Microsoft® Windows Server® 2008 <p>For 64-bit platforms:</p> <ul style="list-style-type: none">• Microsoft® Windows Server® 2008• Microsoft® Windows Server® 2008 R2• Microsoft® Windows Server® 2012• Microsoft® Windows Server® 2012 R2 <p>You may need to download and install certain system components from the official Microsoft website. If necessary, the program will notify you about the components required and provide download links.</p>
Hard disk space	<p>200 MB for Dr.Web Anti-virus for servers components.</p> <p>Files created during installation will require additional space.</p>
CPU	i686 compatible.
Resolution	Recommended minimum screen resolution is 800x600.
Free RAM	Minimum 512 MB of RAM.
Other	Internet connection for updating virus databases and Dr.Web Anti-virus for servers components.



Dr.Web Anti-virus for Windows Server is not compatible with **Dr.Web for Microsoft Exchange Server**, **Dr.Web for IBM Lotus Domino**, **Dr.Web for Kerio WinRoute**, **Dr.Web for Kerio MailServer**, **Dr.Web for Microsoft ISA Server and Forefront TMG**, **Dr.Web for Qbik WinGate** version 6.0 and earlier.



1.4. Licensing

The use rights for the **Dr.Web Anti-virus for servers** are specified in the key file.

To use **Dr.Web Anti-virus for servers**, [obtain](#) and [install](#) a key file.

For more information on licensing and types of key files, visit the [official Doctor Web website](#).

1.4.1. Key File

The key file contains the following information:

- list of components a user is allowed to use
- duration of the license
- other restrictions (i.e., the number of computers on which a program is allowed to be used)

Dr.Web Anti-virus for Windows Server requires a key file in order to operate correctly. *License key file* allows a user to use the software and receive technical support. Parameters of the license key file are set in accordance with the software's license agreement. It also contains information about the user and seller.

A *valid* license key file satisfies the following criteria:

- License is not expired
- All anti-virus components required by **Dr.Web Anti-virus for servers** are licensed
- Integrity of the license key file has not been violated

If any of the conditions are violated, the license key file becomes *invalid* and **Dr.Web Anti-virus for servers** stops detecting and neutralizing malicious programs.



1.4.2. Get Key File

To acquire key files via manual registration



To register and download key files, a valid Internet connection is required.

To receive a license key file, a product serial number is required.

1. Launch an Internet browser and go to the site specified on the product registration card supplied with your copy of the product.
2. Fill in the registration form.
3. Enter the serial number found on the registration card.
4. The license key file is archived and sent to the e-mail address you specified in the registration form. After registration, you can also download the license key file from the registration page. Windows operating systems extract files from ZIP-archives automatically. You do not need to purchase or install additional software.
5. [Install](#) the key file.

Subsequent Registration

If a key file is lost, you must register again by inputting the personal data you provided during the previous registration. You may use a different e-mail address. In this case, the key file will be sent to the address specified.

The number of times you can request a key file is limited. One serial number can be registered no more than 25 times. If requests in excess of that number are sent, no key file will be delivered. To receive a lost key file, contact [Technical Support](#), describe your problem in detail and state personal data you entered when you registered the serial number.



If no valid key file is found, the functionality of the program is blocked.

1.4.3. Renewing Registration

When your license expires or the security of your system is reinforced, you may need to update the license. The new license should be registered with the product. **Dr.Web Anti-virus for servers** supports hot license updates without stopping or reinstalling the product.

To renew license key files

1. Open [License Manager](#). To purchase a new license or renew an existing one, you can also use your personal web page on the **Doctor Web** website. To visit your page, use the **My Dr.Web** option in the **License Manager** or [SpIDer Agent](#) menu.
2. If your current key file is invalid, **Dr.Web Anti-virus for servers** automatically switches to the new license.



1.5. How to Test Anti-virus

The European Institute for Computer Anti-Virus Research (EICAR) Test File helps test the performance of anti-virus programs that detect viruses using signatures.

For this purpose, most anti-virus software vendors generally use a standard test.com program. This program was specially designed to let user test the reaction of newly installed anti-virus tools that detect viruses without compromising the security of their computers. Although the test.com program is not actually a virus, it is treated by the majority of anti-viruses as if it were one. Upon detecting this "virus", **Dr.Web Anti-virus for Windows servers** reports the following: EICAR Test File (Not a Virus!). Other anti-virus tools alert users in a similar way.

The test.com program is a 68-byte COM-file that prints the following line on the console when executed: EICAR-STANDARD-ANTI VIRUS-TEST-FILE!

The test.com file contains the following character string only:

```
X5O! P%@AP[ 4\ PZX54( P^ ) 7CC) 7} $EICAR-STANDARD-  
ANTI VIRUS-TEST-FILE! $H+H*
```

To create your own test file with the "virus", you can create a new file with this line and save it as test.com.



When you attempt to execute an EICAR file while **SpIDer Guard** is running in the **optimal mode**, the operation is not terminated and the file is not processed as malicious since it does not pose any actual threat to your system. However, if you copy or create such a file in your system, then it is detected by **SpIDer Guard** and moved to **Quarantine** by default.



1.6. Detection Methods

Dr.Web anti-virus solutions use several malicious software detection methods simultaneously, and that allows them to perform thorough checks on suspicious files and control software behaviour:

1. The scans begin with *signature analysis*, which is performed by comparing file code segments to the known virus signatures. A signature is a finite continuous sequence of bytes that is necessary and sufficient to identify a specific virus. To reduce the size of the signature dictionary, **Dr.Web anti-virus solutions** use signature checksums instead of complete signature sequences. Checksums uniquely identify signatures which preserves the correctness of virus detection and neutralization. The **Dr.Web virus databases** are composed in such a way that some entries can be used to detect not just specific viruses but whole classes of threats.
2. On completion of signature analysis, **Dr.Web anti-virus solutions** use the unique **Origins Tracing™** method to detect new and modified viruses that use known infection mechanisms. Thus, **Dr.Web** users are protected against viruses such as notorious blackmailer Trojan.Encoder.18 (also known as gpcodex). In addition to detecting new and modified viruses, the **Origins Tracing** mechanism considerably reduces the number of incidents of false triggering of the **Dr.Web** heuristics analyzer.
3. The detection method used by the *heuristics analyzer* is based on certain knowledge about the attributes that characterize malicious code. Each attribute or characteristic has a weight coefficient that determines the level of its severity and reliability. Depending on the sum weight of a file, the heuristics analyzer calculates the probability of unknown virus infection. As with any system of hypothesis testing under uncertainty, the heuristics analyzer may commit type I or type II errors (i.e., it may omit viruses or raise false alarms).



While performing any of the aforementioned checks, **Dr.Web anti-virus solutions** use the most recent information about known malicious software. As soon as **Doctor Web Virus Laboratory** experts discover new threats, they issue an update on virus signatures, behaviour characteristics, and attributes. In some cases updates can be issued several times per hour. Therefore even if a brand new virus passes through the **Dr.Web resident guards** and penetrates the system, then after update the virus is detected in the list of processes and neutralized.



2. Installing Dr.Web Anti-virus for servers

Before installing the program, we strongly recommend to:

- install all critical updates released by Microsoft for the OS version used on your computer (they are available on the company's updating web site at <http://windowsupdate.microsoft.com>);
- check the file system with the system utilities and remove the detected defects;
- close all active applications.



Dr.Web Anti-virus for servers is not compatible with other anti-virus software. Installing two anti-virus programs on one computer may lead to a system crash and the loss of important data.

Follow the dialog windows of the installation wizard. At any stage of the installation (before the files are copied onto the computer), you can return to the previous stage by clicking **Back**. To continue installation, click **Next**. To abort installation, click **Cancel**.



2.1. Installation Procedure



Only a user with administrative privileges can install **Dr.Web Anti-virus for servers**.

There are two installation modes of anti-virus software:

1. The background mode.
2. The usual mode.

Installing with command line parameters

To install **Dr.Web Anti-virus for servers** with command line parameters, enter in the command line the executable file name with necessary parameters (these parameters affect installation in background mode, installation language, reboot after installation).

Parameter	Description
reboot	Restart computer automatically after installation is complete.
lang	Language used for the installation. The value of this parameter is language in ISO 639-1 format.
silent	Installation in background mode.

For example, to start background installation of **Dr.Web Anti-virus for servers** with reboot after installation, execute the following command:

```
C:\Documents and Settings\drweb-800-winsrv.  
exe /silent yes /reboot yes
```

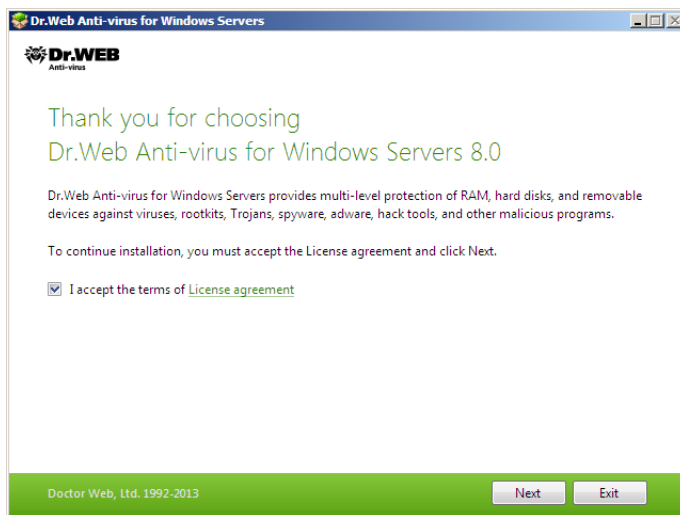


Installation Wizard checks if the installation file is the latest one. If newer installation file exists, you will be offered to download it before the installation.



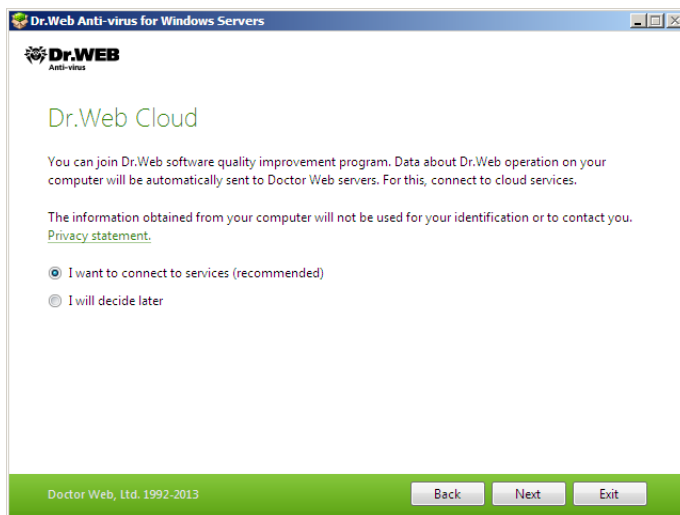
Usual Installation

1. If other anti-virus software is installed on your computer, the installation wizard informs you on incompatibility between **Dr.Web Anti-virus for servers** and other anti-virus products and offers to remove it.
2. Read the license agreement. To continue installation, you must accept its terms and click **Next**.





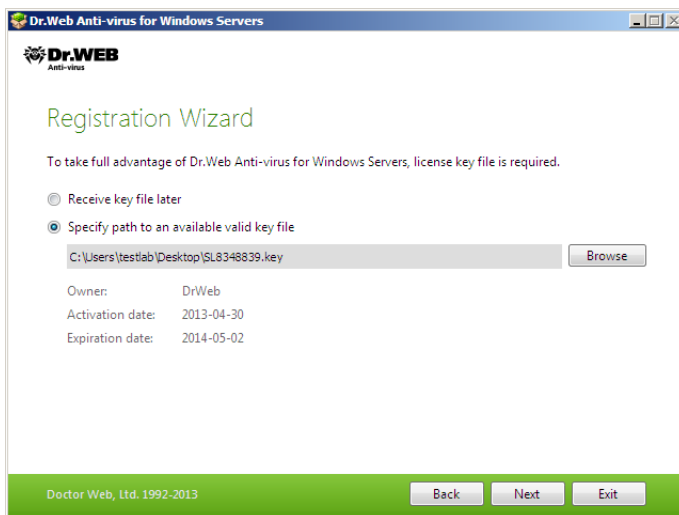
3. On this step, you are prompted to connect to **Dr.Web** software quality improvement program.



4. On this step, the installation wizard informs you that a key file is required for **Dr.Web Anti-virus for servers** operation. There are two types of key files: license and demo key file. Do one of the following actions:

- if a key file is present on the hard drive or removable media, click **Specify path to an available valid key file** and select the file in the open window. To change the path, click **Browse** and select another key file;
- if no key file is available, select **Receive key file later**. If you select this option, none of the program components will operate until you get a valid key file.

Click **Next**.



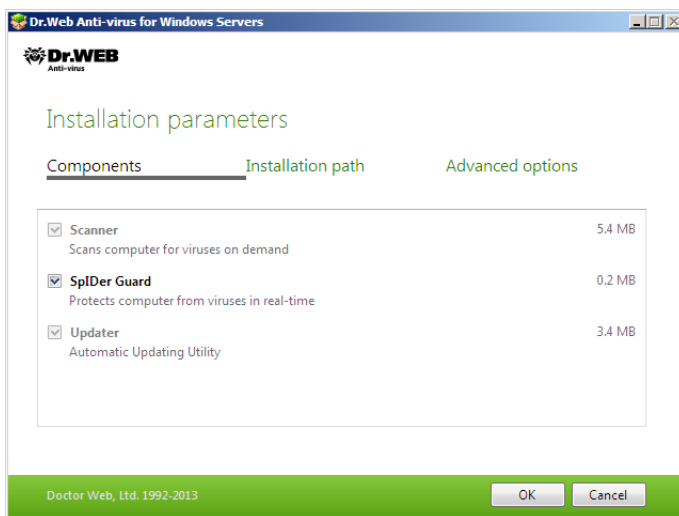
Use only a **Dr.Web Anti-virus for servers** key file. Key files of this type have the .key extension.

5. The window displays, informing you that the program is ready to be installed. To start installation with the default parameters, click **Install**.

To select components to be installed, specify the installation path and other additional parameters, click **Installation parameters**. The option is meant for experienced users.

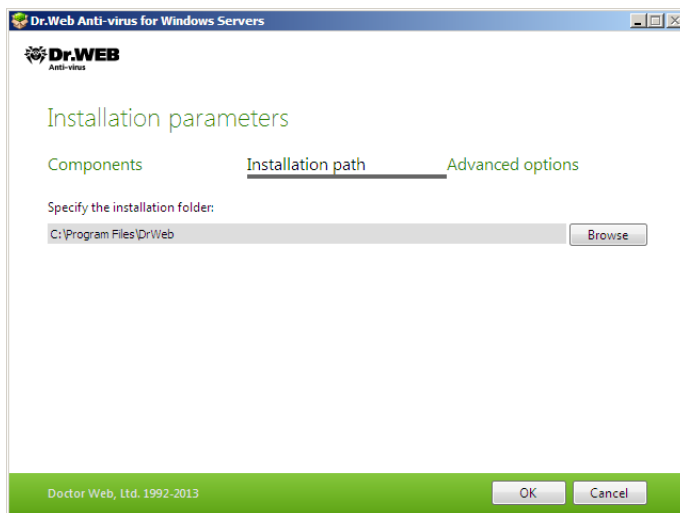


6. If you clicked **Install** on the previous step, go to the description of step 9. Otherwise, the **Installation parameters** window displays. On the first tab, you can specify the components to be installed.

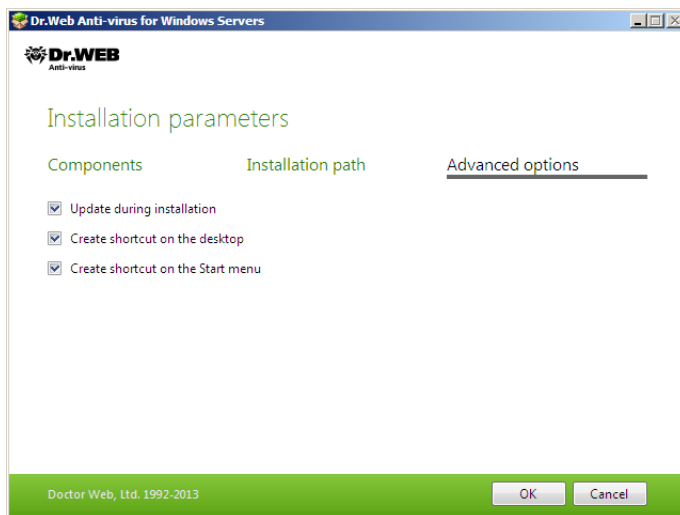




7. On this tab, you can change the installation path.



8. If you specified a valid key file on step 4, the last tab of the window allows you to select **Update during installation** checkbox to download updates to virus databases and other program components. The window also prompts you to create shortcuts to **Dr.Web Anti-virus for servers**.



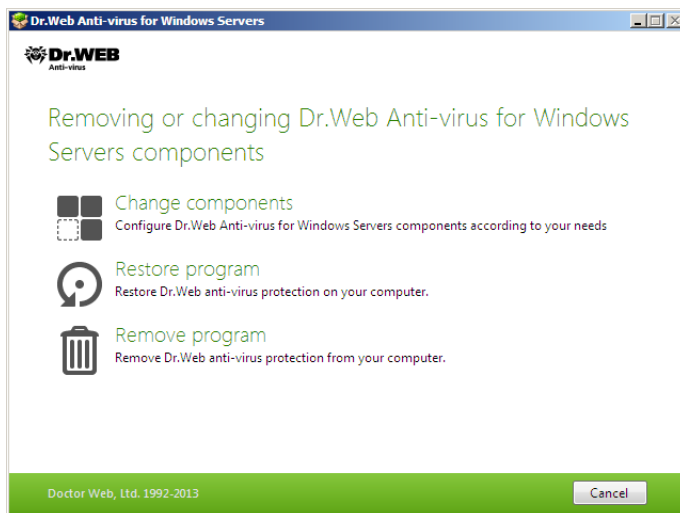
When you finish adjusting the installation parameters, click **OK**.

9. During default installation as well as if you specified a key file and selected **Update during installation** checkbox on step 8, the wizard updates virus databases and other **Dr.Web Anti-virus for servers** components. Updating starts automatically and does not require any additional actions.



2.2. Reinstalling and Removing Dr.Web Anti-virus for servers

1. Start the installation wizard with the special tool Add or Remove programs of the Windows operating system.
2. In the opened window, select the installation mode
 - to select the components to install, select **Change components**;
 - to restore anti-virus protection on your computer, select **Restore program**;
 - to remove all installed components, select **Remove program**.



3. To remove **Dr.Web Anti-virus for servers** or select components to be installed, it is required to enter the confirmation code from the picture in the opened window.
4. If the program prompts you, restart the computer to complete the procedure.



3. Getting Started

The installation program allows you to install the following **Dr.Web Anti-virus for servers** components on your computer:

- **Scanner** (GUI and console versions)
- **SpIDer Guard**
- **Automatic Updating Utility**
- **SpIDer Agent**

The components of **Dr.Web Anti-virus for servers** use common virus databases and anti-virus engine. In addition, uniform algorithms that detect and neutralize viruses in scanned objects are implemented. However, the methods of selecting objects for scanning differ greatly, which allows these components to be used for absolutely different and mutually supplementary PC protection policies.

For example, **Scanner for Windows** scans (on user demand or according to schedule) certain files (e.g., all files, selected logical disks, directories). By default, the main memory is scanned too. Since it is the user who decides when to launch a task, there is no need to worry about the sufficiency of computational resources needed for other important processes.

SpIDer Guard constantly resides in the main memory of the PC and intercepts calls made to the objects of the file system. The program checks for viruses in files that are being launched, created, or changed on the hard drives and those that are opened on removable media and network drives. Due to a balanced approach to the level of the file system scanning details the program hardly disturbs other processes on the PC. However, this results in insignificant decrease of virus detection reliability.

An advantage of the program is that it provides you with uninterrupted control of the virus situation during the entire time a PC is running. In addition, some viruses can only be detected by the guard through their specific activity.



Ensuring Protection Against Virus Threats

To ensure comprehensive anti-virus protection, we advise you to use the **Dr.Web Anti-virus for servers** components as follows:

- Scan your computer file system with the default (maximum) scanning detail settings.
- Keep default settings of **SpIDer Guard**.
- Perform a periodic complete scan of your PC that coincides with when virus database updates are issued (at least once a week).
- Immediately perform a complete scan whenever **SpIDer Guard** has been temporarily disabled and the PC was connected to the Internet or files were downloaded from removable media.




Anti-virus protection can only be effective if you update the virus databases and other program files regularly (preferably every hour). For more information, read [Automatic Updating](#).

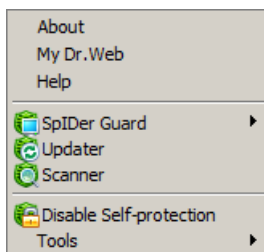


3.1. SpIDer Agent

After **Dr.Web Anti-virus for servers** has been installed, a **SpIDer Agent**  icon is added to the taskbar notification area.

If you hover the mouse cursor over the icon, a pop-up appears with information about the components that are running, the date of last update, and amount of virus signatures in the virus databases. Furthermore, notifications, which are adjusted in the settings (see below), may appear above the **SpIDer Agent**  icon.

The context menu of the icon allows to perform the main management and settings functions of **Dr.Web Anti-virus for servers**.



The **About** item opens a window showing information about your version of **Dr.Web Anti-virus for servers**.

The **My Dr.Web** item opens your personal web page on the **Doctor Web official website**. This page gives information about your license (e.g., period of usage, serial number), and allows you to renew your license, contact Technical Support, etc.

The **Help** item opens the **Dr.Web Anti-virus for servers** help system.



The **SpIDer Guard** and **Update** items allow you to access the management and settings features as well as statistics of the corresponding components.

The **Scanner** item runs **Dr.Web Scanner**.

The **Disable/Enable Self-protection** item allows you to disable/enable protection of **Dr.Web Anti-virus for servers** files, registry keys, and processes from damage and deletion.



You cannot disable self-protection when in [User mode](#). It is not recommended to disable self-protection.

If any problems occur during operation of defragmentation programs, disable self-protection temporarily.

To disable self-protection

- Select **Disable self-protection** in the **SpIDer Agent** menu.
- Enter the text displayed in the picture or **Dr.Web Anti-virus for servers** access password.

The **Enable self-protection** item will appear.



To rollback to a system restore point, disable self-protection.



The **Tools** item opens a submenu that provides access to:

- [License Manager](#)
- [Main settings](#) of **Dr.Web Anti-virus for servers** and particular components
- [Quarantine Manager](#)
- [Anti-virus Network](#)
- Components statistics
- Report generation wizard.

Before contacting **Doctor Web** Technical Support, generate a report that indicates how your operating system and **Dr.Web Anti-virus for servers** are functioning. To adjust parameters, in the opened window, click **Report settings**. The report will be stored as an archive in the Doctor Web subfolder of the %USERPROFILE% directory.

The **Administrative/User mode** item allows you to switch between full-function **Administrative mode** and restricted **User mode**. In **User mode**, access to settings of components is forbidden, as well as disabling of all components and self-protection. You need administrative rights to switch to **Administrative mode**.



This item displays when you do not have administrative privileges. For instance, when User Account Control of Windows Server 2008 operating system is enabled. Otherwise, the item is hidden and **SpIDer Agent** menu provides access to all features.




3.2. Main Settings



Dr.Web Anti-virus for servers settings are not available in [User](#) mode.

Centralized settings adjustment allows you to configure main **Dr.Web Anti-virus for servers** settings and settings of all its components except **Scanner**.


To configure main settings

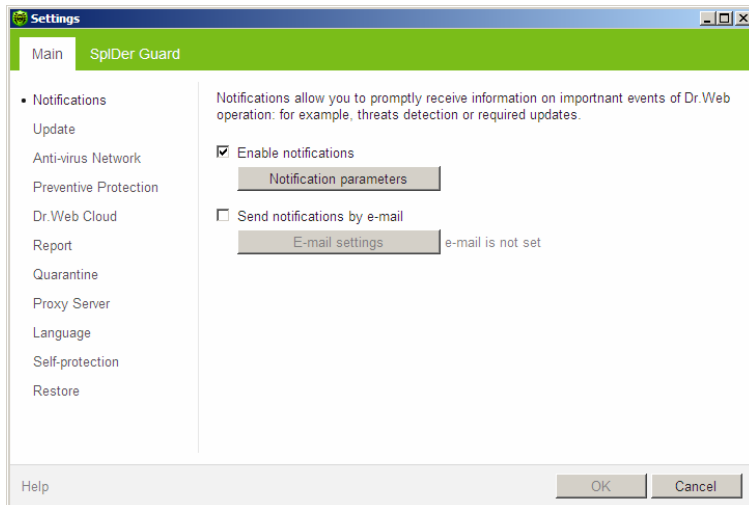
1. Click the **SpIDer Agent** icon  in the Windows notification area.
2. Select **Tools** and then select **Settings**. A settings window opens on the **Main** tab that contains the following pages:
 - The [Notifications](#) page, where you can configure **Dr.Web Anti-virus for servers** notification settings.
 - The [Update](#) page, where you can configure settings of **Dr.Web Anti-virus for servers** virus databases and components updating.
 - The [Anti-virus Network](#) page, where you can configure **Dr.Web Anti-virus for servers** operation as part of an anti-virus network.
 - The [Preventive Protection](#) page, where you can enable background scanning for rootkits and configure control of actions that may compromise security of your computer.
 - The [Dr.Web Cloud](#) page, where you can connect to **Doctor Web** cloud services.
 - The [Report](#) page, where you can configure event logging for **Dr.Web Anti-virus for servers** components.
 - The [Quarantine](#) page, where you can configure **Quarantine** that serves for isolation of infected and suspicious files.



- The [Proxy Server](#) page, where you can configure Internet connection parameters for **Dr.Web Anti-virus for servers** components.
 - The [Language](#) page, where you can select the language to use in the interface.
 - The [Self-protection](#) page, where you can configure additional security settings.
 - The [Restore](#) page, where you can configure import and export of **Dr.Web Anti-virus for servers** settings and restore their default values.
3. Configure required settings. For information on settings in the sections, click **Help**.

3.2.1. Notifications Page

On this page, you can set the types of e-mail notifications or pop-ups that appear above the **SpIDer Agent** icon  in the taskbar notification area.





To configure notifications

1. To receive notifications of any kind, select the **Enable notifications** checkbox.
2. Click **Notification parameters**. The windows listing available notifications opens.

Notification type	Desktop	E-mail
SplDer Guard	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Threat detected	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Preventive Protection	<input type="checkbox"/>	<input type="checkbox"/>
Self-protection state is changed	<input type="checkbox"/>	<input type="checkbox"/>
Access to protected object is blocked	<input type="checkbox"/>	<input type="checkbox"/>
Dr.Web Updater	<input type="checkbox"/>	<input type="checkbox"/>
Virus databases updated	<input type="checkbox"/>	<input type="checkbox"/>
Update error	<input type="checkbox"/>	<input type="checkbox"/>

☒ Do not show notifications in full-screen mode

Help OK Cancel

3. Locate types of notification that you want to receive and select the corresponding checkboxes. To display pop-up notifications, select checkboxes in the **Desktop** column. To receive notification in you mailbox, select checkboxes in the **E-mail** column.
4. If necessary, configure additional parameters:

Checkbox	Description
Do not show notifications in full-screen mode	Select this checkbox to hide notifications when an application is running in full screen mode on your computer (e.g. a game or a movie). Clear this checkbox to display notification regardless on the mode.

5. If you selected one or more e-mail notifications, [configure](#) sending e-mails from your computer.



6. After editing, click **OK** to save the changes or **Cancel** to cancel them.

To configure e-mail notifications

1. Make sure that the **Enable notifications** checkbox and all the necessary e-mail notifications are selected in the **Notification parameters** window are selected.
2. Select the **Send notifications by e-mail** checkbox.
3. Click **E-mail settings**. The window with e-mail parameters opens.

4. Specify the following parameters:

Option	Description
Address	Enter an e-mail address where to send the notifications.
SMTP Server	Enter the outgoing (SMTP) server for Dr.Web Anti-virus for servers to use when sending e-mail notifications.



Option	Description
Port	Enter the port for Dr.Web Anti-virus for servers to use when connecting to the e-mail server.
Login	Enter the login for Dr.Web Anti-virus for servers to use when connecting to the e-mail server.
Password	Enter the password to the login that should be used when connecting to the e-mail server.
Security	Select the security level for the connection.
Authentication	Select the authentication method that should be used when connecting to the e-mail server.

5. Click **Test** to send a test message using the provided parameters. If you do not receive the message within several minutes, check the provided connection details.
6. After editing, click **OK** to save the changes or **Cancel** to cancel them.

To suspend notifications temporary

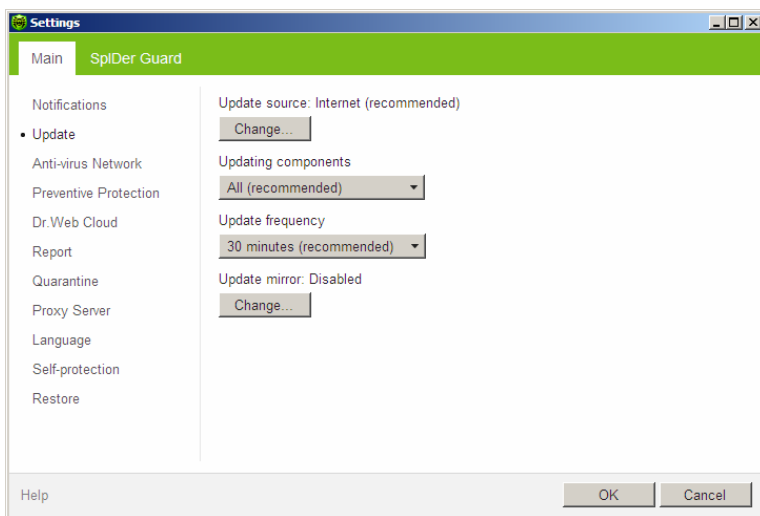
To disable sending e-mail notifications, clear the **Send notifications by e-mail** checkbox.

To disable all types of notifications, clear the **Enable notifications** checkbox.



3.2.2 Update Page

On this page, you can configure **Dr.Web Anti-virus for servers** update parameters such as components that should be updated, an updating source, update period, and update mirror.



Option	Description
Update source	You can specify a convenient update source.
Updating components	<p>You can choose one of the update modes:</p> <ul style="list-style-type: none">• All (recommended) – select to download updates to Dr.Web Anti-virus for servers virus databases, engine, and other components.• Only virus databases – select to download updates to Dr.Web Anti-virus for servers virus databases and engine; other components are not updated.
Update frequency	You can select frequency for checking of availability of updates.
Update mirror	You can create an update mirror that will be used by local network computers with installed Dr.Web product.



Update Source

To select an update source, click **Change**. In the opened window select one of the following update sources:

- **Internet (recommended)** – updates are to be downloaded from **Doctor Web** servers. This source is used by default;
- **Local or network folder** – updates are to be downloaded from a local or network folder, where updates were copied. To specify the path to the folder, click **Browse** and select the required folder, or enter the address manually. Enter the user name and password if necessary;
- **Anti-virus Network** – updates are to be downloaded from a local network computer if **Dr.Web Anti-virus for servers** product is installed and update mirror is created on it.

Update source

☒ Internet (recommended)

☐ Local or network folder

Path:

Username:

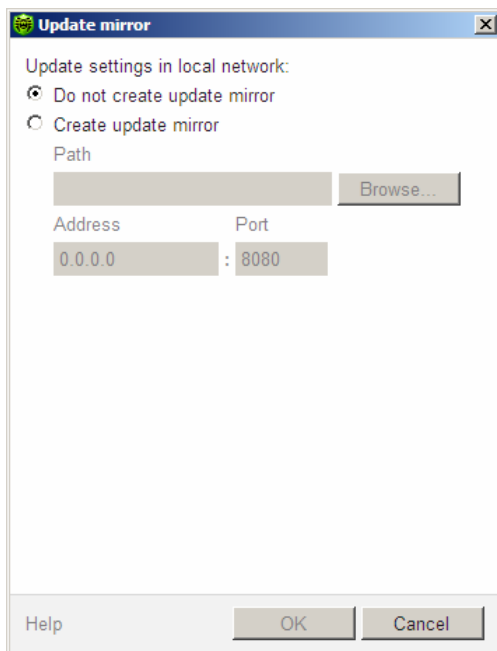
Password:

☐ Anti-virus Network



Update Mirror

To allow other local network computers with installed **Dr.Web** products to use your computer as an update source, under the **Update mirror** click **Change** and select **Create update mirror** in the opened window. Specify the path to the folder, where updates should be copied. If your computer is connected to several networks, you can specify IP-address available to computers of only one network. You can also specify the port for HTTP connections.



The image shows a Windows-style dialog box titled "Update mirror". It contains the following elements:

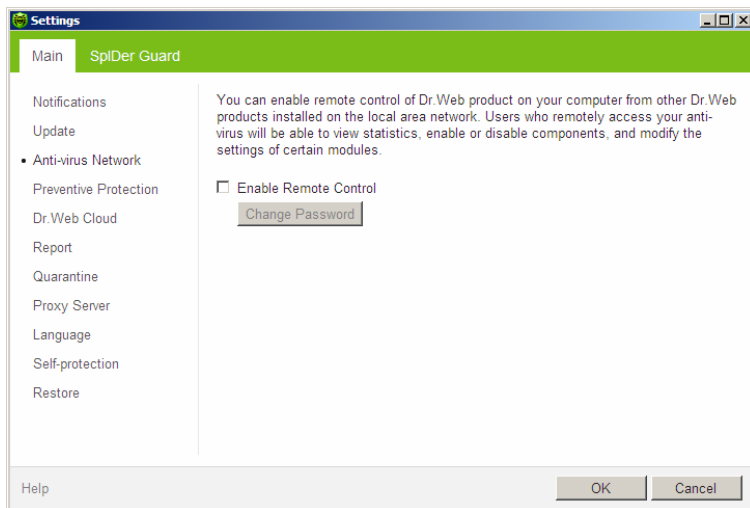
- A title bar with a close button (X).
- Text: "Update settings in local network:"
- Two radio buttons:
 - ☒ Do not create update mirror
 - ☐ Create update mirror
- A label "Path" followed by a text input field and a "Browse..." button.
- A label "Address" followed by a text input field containing "0.0.0.0".
- A label "Port" followed by a text input field containing "8080".
- A separator line.
- At the bottom, a "Help" button and "OK" and "Cancel" buttons.



3.2.3. Anti-virus Network

On this page, you can enable remote control of your anti-virus from other local network computers by **Anti-virus Network**. If your computer is connected to an anti-virus network, you can create local [update mirrors](#) and control anti-virus protection state or your computer remotely (view statistics, enable or disable **Dr.Web Anti-virus for servers** components and adjust their settings).

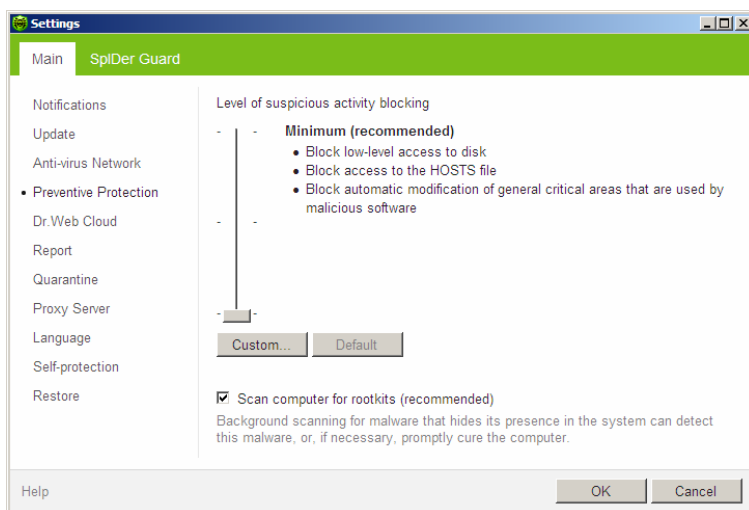
To prevent unauthorized access to **Dr.Web Anti-virus for servers** settings, set a password for remote control.





3.2.4. Preventive Protection Page

On this page, you can configure **Dr.Web Anti-virus for servers** reaction to such actions of other programs that can compromise security of your computer. You can also enable background scanning of your operating system for rootkits, i.e. malicious programs that are used for hiding changes to operating system such as running of particular processes, registry changes, modifications to files and folders.





Preventive Protection Level

In the default **Minimum** mode, **Dr.Web Anti-virus for servers** disables automatic changes to system objects, modification of which explicitly signifies a malicious attempt to damage the operating system. It also blocks low-level access to disk and protects the HOSTS file from modification.

If there is a high risk of your computer getting infected, you can increase protection by selecting the **Medium** mode. In this mode, **Dr.Web Anti-virus for servers** blocks access to the critical objects that can be potentially used by malicious software.



Using this mode may lead to compatibility problems with legitimate software that uses the protected registry branches.

When it is required to have total control of access to critical Windows objects, you can select the **Paranoid** mode. In this mode, **Dr.Web Anti-virus for servers** also provides you with interactive control over loading of drivers and automatic running of programs.

Custom Mode

This mode allows flexible configuration of **Dr.Web Anti-virus for servers** reaction to particular events that can compromise security of your computer.



If any problems occur during installation of important Microsoft updates or installation and operation of programs (including defragmentation programs), disable the corresponding options in this group.



Background Rootkit Scanning

Anti-rootkit component included in **Dr.Web Anti-virus for servers** provide options for background scanning of the operating system for complex threats and curing of detected active infections when necessary.

If this option is enabled, **Dr.Web Anti-rootkit** constantly resides in memory. In contrast to on-the-fly scanning of files by **SpIDer Guard**, scanning for rootkits includes checking of autorun objects, running processes and modules, Random Access Memory (RAM), MBR/VBR disks, computer BIOS system and other system objects.

One of the key features of the **Dr.Web Anti-rootkit** is delicate attitude towards consumption of system resources (processor time, free RAM and others) as well as consideration of hardware capacity.

When **Dr.Web Anti-rootkit** detects a threat, it notifies you on detection and neutralizes the malicious activity.



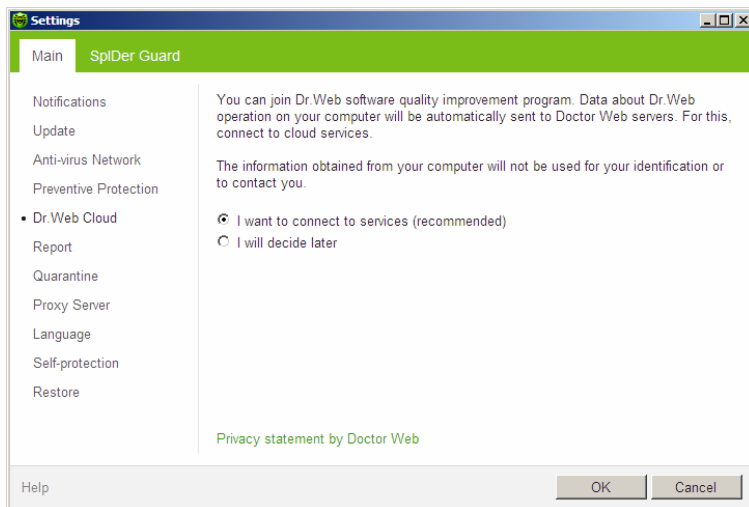
During background rootkit scanning, files and folders specified on [Exclusion](#) page of **SpIDer Guard** are excluded from scanning.

To enable background scanning, set the **Scan computer for rootkits (recommended)** checkbox.



3.2.5. Dr.Web Cloud Page

On this page, you can take part in **Dr.Web** quality improvement program.



Software Quality Improvement Program

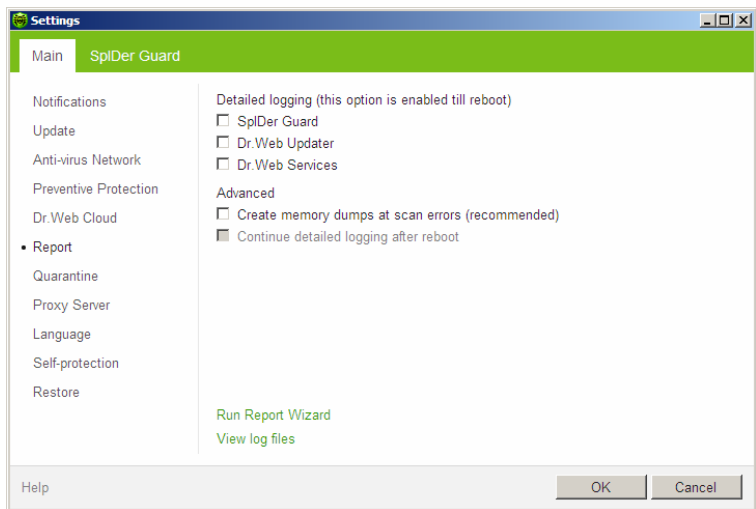
If you participate in the software quality improvement program, impersonal data about **Dr.Web Anti-virus for servers** operation on your computer will be periodically sent to the company servers. Received information is not used to identify or contact you.

Click the **Privacy statement by Doctor Web** link to look through a privacy statement on **Doctor Web website**.



3.2.6. Report Page

On this page, you can configure keeping records in the log files of **Dr.Web Anti-virus for servers** components.



By default, reports are kept in the standard mode and the following information is logged:

Component	Information
SpIDer Guard	<p>Time of updates and SpIDer Guard starts and stops, virus events, names of scanned files, names of packers and contents of scanned complex objects (archives, e-mail attachments, file containers).</p> <p>It is recommended to use this mode to determine the most frequent objects scanned by SpIDer Guard. If necessary, you can add these objects to the list of exclusions in order to increase computer performance.</p>
Updater	<p>List of updated Dr.Web Anti-virus for servers files and their downloading states, details on execution of auxiliary scripts, date and time of updates, details on Dr.Web Anti-virus for servers components restarting after update.</p>



Component	Information
Dr.Web Services	Information on Dr.Web components, changing of Dr.Web components settings, components starts and stops, preventive protection events, connections to anti-virus network.

To view log files

To view log files, click **Open folder containing log files**.

To enable detailed logging



Logging detailed data on **Dr.Web Anti-virus for servers** operation may result in considerable log growth and increase in process load. It is recommended to use this mode only when errors occur or by request of **Doctor Web** Technical Support.

1. To enable detailed logging for a **Dr.Web Anti-virus for servers** component, set the corresponding checkbox.
2. By default, detailed logging mode is used before the first restart of the operating system. If it is necessary to log component activity before and after the restart, set the **Continue detailed logging after reboot** checkbox.
3. Save the changes.



By default, size of log files is restricted to 10 MB.

Advanced Settings

The **Create memory dumps at scan errors (recommended)** option allows to save maximum of useful information about failures of **Dr.Web Anti-virus for servers** components. This helps **Doctor Web** Technical Support specialists analyze an occurred problem in detail and find a solution. It is recommended to enable this option when operational errors occur.



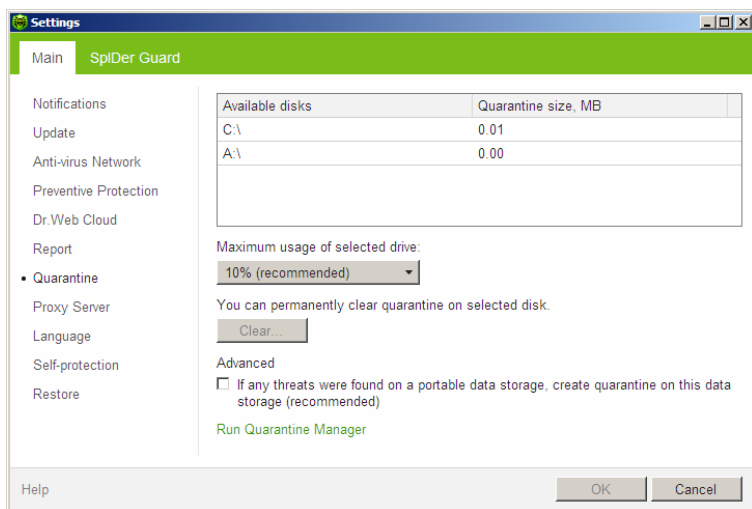
On this page, you can also collect data about your operating system and **Dr.Web Anti-virus for servers** operation to report this technical information to **Doctor Web** Technical Support. To do this, click on **Run Report Wizard**.



3.2.7. Quarantine Page

On this page, you can configure **Quarantine**, estimate its size, and delete isolated files from a specified logical drive.

Folders of **Quarantine** are created separately on each logical drive where suspicious files are found.



To limit Quarantine size

1. To set maximum **Quarantine** size on a particular drive, select the drive in the list.
2. In the **Maximum usage of selected drive** list, select a required restriction.

The upper allowance of the **Quarantine** size is counted as a percentage of total disk space (for several logical drives, this size counts for every drive which include the **Quarantine** folder). The **100%** value means unlimited **Quarantine** folder size.



To empty Quarantine

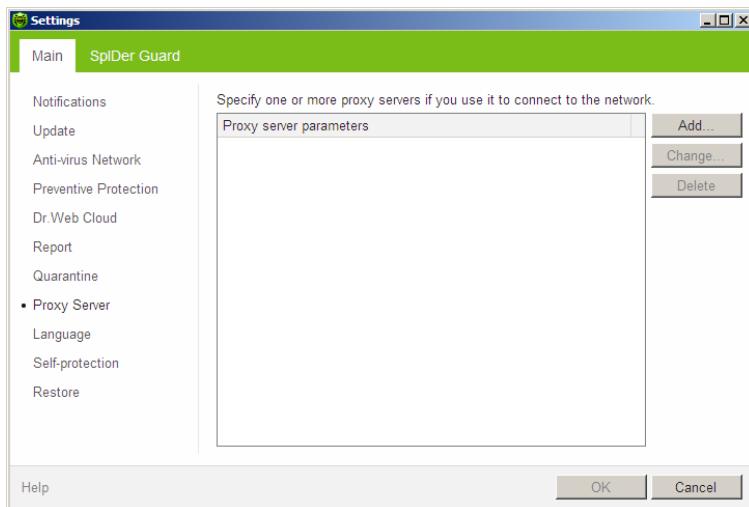
1. To remove all quarantined files on a particular drive, select the drive in the list.
2. Click **Remove** and confirm the deletion when prompted.

Use **Advanced** settings to select the mode of isolating infected objects detected at portable data carriers. By default, detected threats are moved to the **Quarantine** folder on this data carrier without being encrypted. The **Quarantine** folder is created on portable data carriers only when they are accessible for writing. The use of separate folders and omission of encryption on portable data carriers prevents possible data loss.



3.2.8. Proxy Server Page

On this page, you can specify connection parameters for **Dr.Web Anti-virus for servers** components.



By default, all components use direct connection mode. If necessary, you can specify connection parameters to one or several proxy servers.

To list proxy servers

1. In **Dr.Web Anti-virus for servers** [Main settings](#), select the **Proxy Server** page.
2. To add a new proxy server, click **Add**. The window with connection settings opens.



The image shows a 'Proxy server parameters' dialog box. It contains the following fields: 'Address' and 'Port' (text boxes), 'User' (text box), 'Password' (text box), and 'Authorization type' (a dropdown menu currently set to 'None'). At the bottom, there are 'Help', 'OK', and 'Cancel' buttons.

3. Specify the following parameters for connection to the proxy server:

Parameter	Description
Address	Specify the address of the proxy server.
Port	Specify the port of the proxy server.
Username	Specify the username to use when connecting to the proxy server.
Password	Specify the password to use when connecting to the proxy server under the provided username.
Authorization type	Select an authorization type required to connect to the proxy server.
Dr.Web Anti-virus for servers components	To enable a component to use the specified proxy server for Internet connections, select the corresponding checkbox next to the component name.

4. If necessary, repeat steps 2 to 3 to add other proxy servers. To edit settings for connection to a proxy server, select the required proxy in the list and click **Change**. To remove a proxy server from the list, select the required proxy and click **Delete**.
5. After editing, click **OK** to save the changes or **Cancel** to cancel them.



3.2.9. Language Page

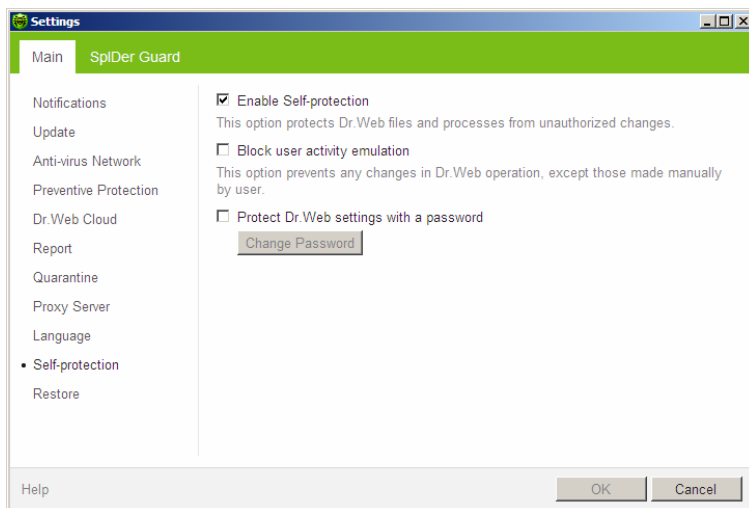
On this page, you can select the language to use in the **Dr.Web Anti-virus for servers** graphical interface. All available languages are listed automatically.





3.2.10. Self-protection Page

On this page, you can configure protection of **Dr.Web Anti-virus for servers** itself from unauthorized modification by anti-antivirus programs or accidental damage.



The **Enable Self-protection** option allows to protect **Dr.Web Anti-virus for servers** files, registry keys and processes from damage and deletion. It is not recommended to disable self-protection.

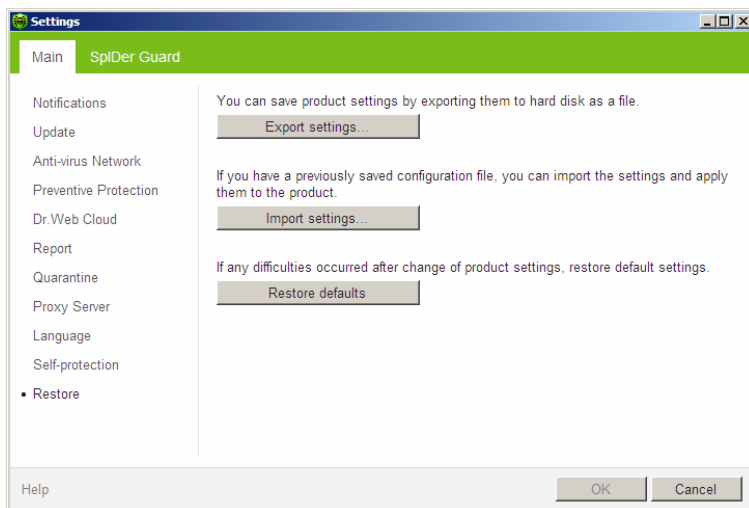
The **Block user-activity emulation** option allows to prevent any automatic changes in **Dr.Web Anti-virus for servers** operation, including execution of scripts that emulate user interaction with **Dr.Web Anti-virus for servers** and are launched by the user.

The **Protect Dr.Web settings with a password** option allows to set a password that will be required to access settings of **Dr.Web Anti-virus for servers**.



3.2.11. Restore Page


On this page, you can restore all **Dr.Web Anti-virus for servers** settings to their default values as well as export settings or import them.

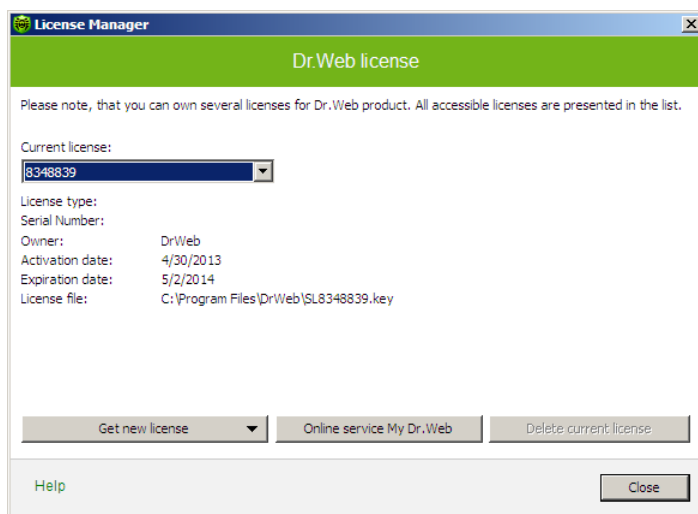




3.3. License Manager

License Manager shows information from the **Dr.Web Anti-virus for servers** key files in an understandable form.

To open **License Manager**, click the **SpIDer Agent**  icon in the notification area, select **Tools**, and then select **License Manager**.



The **Online service My Dr.Web** item opens your personal web page on the **official Dr.Web Anti-virus for servers website**. This page gives information about your license (period of usage, serial number), allows to renew your license, contact Technical Support, etc.

To add a key file

1. Click **Get new licence**. In the drop-down menu, select **from file**.
2. Select the file in a standard window.



3. **Dr.Web Anti-virus for servers** starts using the key file automatically.

To delete a key file from a list, select it and click **Delete current licence**. Last used key cannot be removed.



By default, the license key file should be located in the **Dr.Web Anti-virus for servers** installation folder. **Dr.Web Anti-virus for servers** verifies the file regularly. Do not edit or otherwise modify the file to prevent the license from compromise.

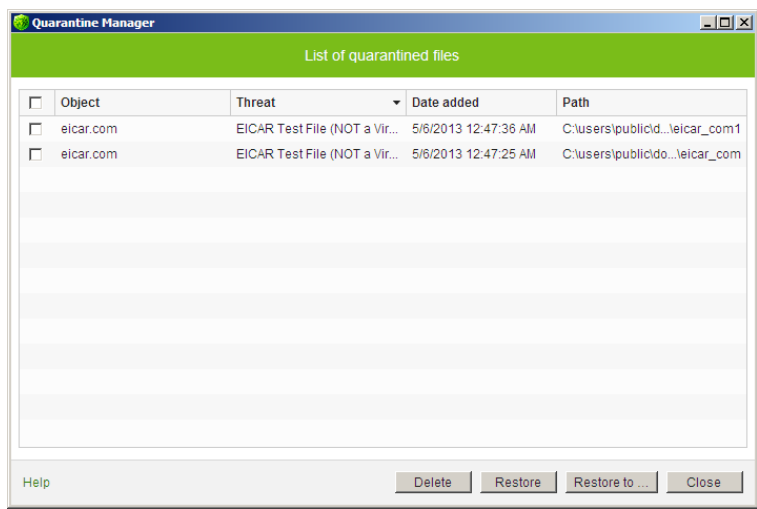
If no valid license key file is found, **Dr.Web Anti-virus for servers** components are blocked.



3.4. Quarantine

The **Quarantine** section of **Dr.Web Anti-virus for servers** serves for isolation of files that are suspicious as malware. **Quarantine** folders are created separately on each logic disk where suspicious files are found. When infected objects are detected at the portable data carrier accessible for writing, the Quarantine folder will be created on the data carrier and infected objects will be moved to this folder.

To open **Quarantine Manager**, click the **SpIDer Agent**  icon in the notification area, select **Tools**, and then select **Quarantine Manager**.



The central table lists the following information on quarantined objects that are available to you:

- **Object** – name of the quarantined object
- **Threat** – malware class of the object, which is assigned by **Dr.Web Anti-virus for servers** when the object is quarantined



- **Date added** – the date and time when the object was moved to **Quarantine**
- **Path** – full path to the object before it was quarantined



Quarantine displays objects which can be accessed by your user account.

To view hidden objects, open the **Dr.Web Anti-virus for servers** installation folder and run the `dwgrui.exe` file under a more privileged account, or run **Dr.Web Anti-virus for servers** under an administrative account.


To manage quarantined objects

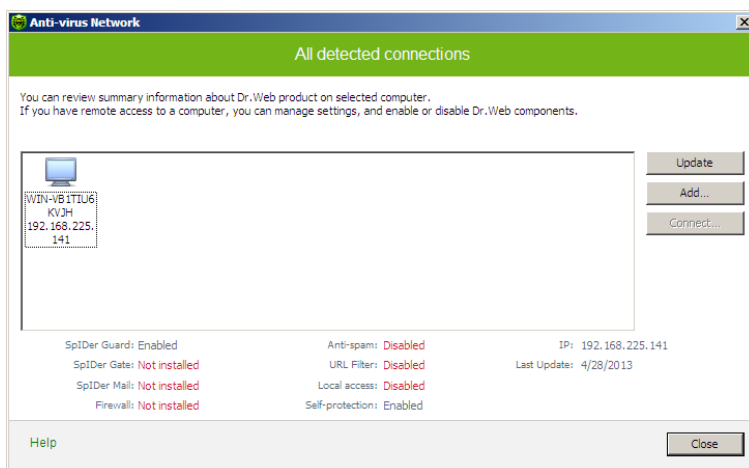
1. Select checkboxes for one or more objects that you want to manage.
2. Click one of the following buttons to apply the necessary action:


Button	Description
Restore	Removes the selected objects from the quarantine and restores them to their original location (the folder where the object had resided before it was moved to the quarantine). Use this option only when you are sure that the selected objects are not harmful.
Restore to	Removes the selected objects from the quarantine and restores them to selected location. Use this option only when you are sure that the selected objects are not harmful.
Delete	Deletes the selected objects from the quarantine and from the system.



3.5. Anti-virus Network

This section allows to manage version 8.0 of **Dr.Web Anti-virus for Windows**, **Dr.Web Anti-virus for Windows Servers**, or **Dr.Web Security Space** on other computers of your network. To access **Dr.Web Anti-virus for servers** remote control, in the context menu of the **SpIDer Agent** icon  in the taskbar notification area, select **Tools**, and then select **Anti-virus Network** item.



To access remote anti-virus, select a computer in the list and click **Connect**. Enter password specified in settings of the remote anti-virus. An icon for the remote **SpIDer Agent**  appears in the Windows notification area. The user of the remote anti-virus will be notified about remote connection. The following items to configure and manage remote **Dr.Web Anti-virus for servers** are available (set of components depends on which **Dr.Web product** is installed):

- **About**
- **Register license**
- **My Dr.Web**
- **Help**
- **SpIDer Guard**



- **SpIDer Mail**
- **SpIDer Gate**
- **Parental Control**
- **Firewall**
- **Tools**
- [Update](#)
- **Enable/Disable Self-protection**

The **Tools** item opens a submenu that provides access to:

- [License Manager](#)
- **Dr.Web Anti-virus for servers** [settings](#)
- Report generation wizard.

You can manage settings, enable or disable components, and look through statistics.

Anti-virus Network, **Quarantine Manager** and **Scanner** are not available. **Firewall** settings and statistics are not available as well, but you can enable or disable **Firewall** (if you accessed **Dr.Web Anti-virus** or **Dr.Web Security Space**). Also you can select the **Disconnect** item to terminate remote connection.

If required computer is not on the list, you can try to add it manually. For this, click **Add** button and enter IP-address.



You can establish only one connection with remote **Dr.Web product**. If one connection is already established, the **Connect** button is disabled.

Computers are listed in **Anti-virus Network** if **Dr.Web** products installed on these computers allow remote connection. You can allow connection to your **Dr.Web Anti-virus for servers** on the **Anti-virus Network** page in [Main settings](#).

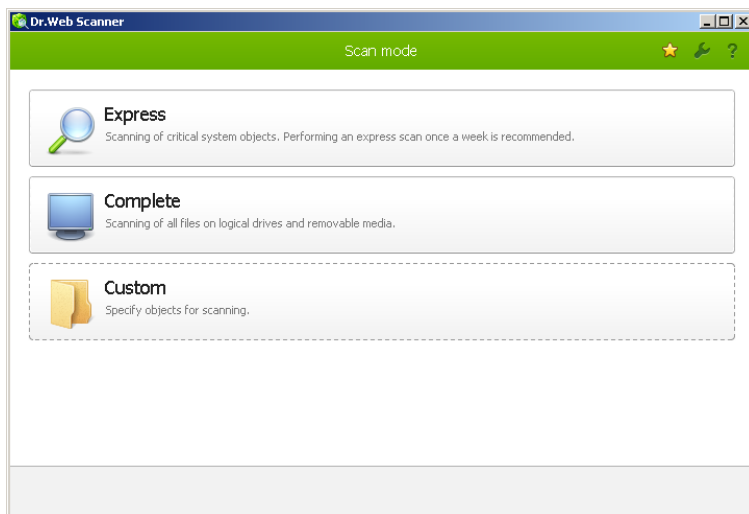


This option is not available in [User](#) mode.



4. Dr.Web Scanner

By default, the program scans all files for viruses using both the virus database and the heuristic analyzer (a method based on the general algorithms of virus developing allowing to detect the viruses unknown to the program with a high probability). Executable files compressed with special packers are unpacked when scanned. Files in archives of all commonly used types (ACE, ALZIP, AR, ARJ, BGA, 7-ZIP, BZIP2, CAB, GZIP, DZ, HA, HKI, LHA, RAR, TAR, ZIP, etc.), in containers (1C, CHM, MSI, RTF, ISO, CPIO, DEB, RPM, etc.), and in mailboxes of mail programs (the format of mail messages should conform to RFC822) are also checked.



By default, **Dr.Web Scanner** uses all [detection methods](#) to detect viruses and other malicious software. Information on all infected or suspicious objects displays in the table where you can manually select a necessary action.



The default settings are optimal for most cases. However, if necessary, you can modify actions suggested upon threat detection by using **Dr.Web Scanner** [settings window](#). Please note that you can set custom action for each detected threat after scan is completed, but common reaction for a particular threat type should be configured beforehand.

4.1. Scanning Your System

Dr.Web Scanner is installed as a usual Windows application and can be launched by the user or automatically (see [Automatic Launch of Scanning](#)).



It is recommended for the scanner to be run by a user with administrator rights because files to which unprivileged users have no access (including system folders) are not scanned.

To launch Scanner

Do one of the following:

- Click the **Dr.Web Scanner** icon on the Desktop.
- Click the **Scanner** item in the context menu of the **SpIDer Agent** icon in the taskbar notification area (see [SpIDer Agent](#) chapter).
- Click the **Dr.Web Scanner** item in **All Programs** → **Dr.Web** directory of the Windows **Start** menu.
- Run the corresponding command in the Windows command line (read [Command Line Scanning Mode](#)).

When **Scanner** launches, its main window opens.

There are 3 scanning modes: **Express scan**, **Complete scan** and **Custom scan**. Depending on the selected mode, either a list of objects which will be scanned or a file system tree is displayed at the center of the window.

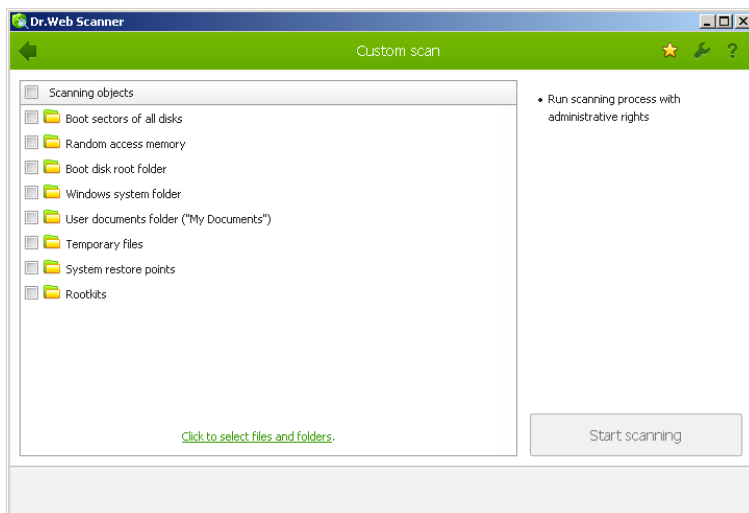


In **Express scan** mode the following objects are scanned:

- Random access memory
- Boot sectors of all disks
- Boot disk root directory
- Windows system folder
- User documents folder ("My documents")
- System temporary folder
- User temporary folder

If scanning process is running under administrative privileges, then in this mode **Scanner** also checks if rootkits are present in the system.

If **Complete scan** mode is selected, random access memory and all hard drives (including boot sectors of all disks) are scanned. **Scanner** also runs a check on rootkits.



Custom scan mode allows you to select objects for scanning: any folders and files, and such objects as random access memory, boot sectors, etc. To start scanning selected objects, click **Start scanning**.



When scanning starts, **Pause** and **Stop** buttons become available. You can do the following:

- to pause scanning, click **Pause** button. To resume scanning after pause, click **Resume** button;
- to stop scanning, click **Stop** button.



The **Pause** button is not available at scanning processes and RAM.



4.2. Neutralizing Detected Threats

By default, if known viruses or computer threats of other types are detected during scanning, **Dr.Web Scanner** informs you about them. You can neutralize all detected threats at once by clicking **Neutralize**. In this case **Dr.Web Scanner** applies the most effective actions according its configuration and threat type.

Threats to your security can be neutralized either by restoring the original state of each infected objects (*curing*), or, when curing is impossible, by removing the infected object completely from your operating system (*deleting*).



By clicking **Neutralize** you apply actions to the objects selected in the table. **Dr.Web Anti-virus for servers** selects all objects by default once scanning completes. When necessary, you can customize selection by using checkboxes next to object names or threat categories from the drop-down menu in the table header.

Dr.Web Scanner

Scanning completed

Dr.Web Scanner detected threats.
It is highly recommended to neutralize all detected threats immediately. Dr.Web Scanner will apply actions according to settings.

Threats detected: 307
Threats neutralized: 0
Scan time: 00:00:11

Neutralize

<input type="checkbox"/>	Object	Threat	Action	Path
<input checked="" type="checkbox"/>	base64.eml	Infected e-mail	Move	C:\Users\Anton\Desktop\Acc...base64.eml
<input checked="" type="checkbox"/>	eicar.rar	Infected archive	Move	C:\Users\Anton\Desktop\Accept...eicar.rar
<input checked="" type="checkbox"/>	Mailbase	Infected e-mail	Move	C:\Users\Anton\Desktop\Accept...Mailbase
<input checked="" type="checkbox"/>	1.7z	Infected archive	Move	C:\Users\Anton\Desktop\Acceptanc...1.7z
<input checked="" type="checkbox"/>	hacktool.exe	Tool.HideApp	Move	C:\Users\Anton\Desktop\Ac...hacktool.exe
<input checked="" type="checkbox"/>	messages.tbb	Infected e-mail	Move	C:\Users\Anton\Desktop\A...messages.tbb

Hide additional information



To select an action

1. Where necessary, select a custom action from the drop-down list in the **Action** field. By default, **Scanner** selects a recommended action for the type of detected threat.
2. Click **Neutralize**. **Scanner** applies all selected actions to the selected threats.



Suspicious objects are moved to **Quarantine** and should be sent for analysis to the anti-virus laboratory of **Doctor Web**. To send the files, right-click anywhere in the **Quarantine** windows and select **Submit file to Doctor Web Laboratory**.

There are some limitations:

- For suspicious objects curing is impossible.
- For objects which are not files (boot sectors) moving and deletion are impossible.
- For files inside archives, installation packages or attachments, no actions are possible.

The detailed report on **Dr.Web Scanner** operation is stored in the dwscanner.log file that resides in the %USERPROFILE%\Doctor Web folder.





4.3. Scanner Settings



It is recommended for **Scanner** to be run by a user with administrator privileges because files to which unprivileged users have no access (including system folders) are not scanned.

Default program settings are optimal for most applications and they should not be modified, if there is no special need for it.

To configure Scanner

1. To open **Scanner** settings, click the **Settings**  icon on the toolbar. This opens the **Dr.Web Scanner settings** window which contains several tabs.
2. Make the necessary changes.
3. For more detailed information on the settings specified in each tab use the **Help**  button.
4. When editing is finished, click **OK** to save the changes made or **Cancel** to cancel the changes.

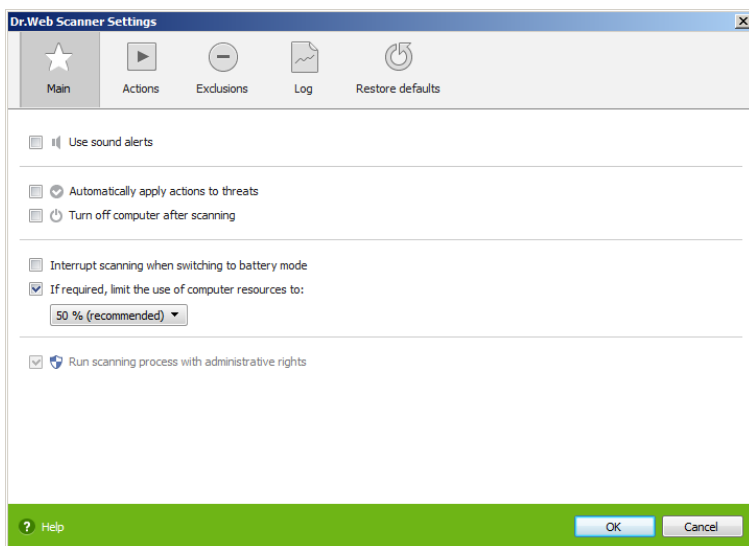


Main Page

On this tab you can set general parameters of **Scanner** operation.

You can enable sound notifications on particular events, set **Scanner** to apply recommended actions to detected threats automatically, and configure **Scanner** interaction with the operating system.

It is recommended to run **Scanner** under an account with administrative privileges. Otherwise, all folders and files that are not accessible to unprivileged user including system folder are not scanned. To run **Scanner** under an administrative account, select the **Run scanning process with administrative rights** checkbox.

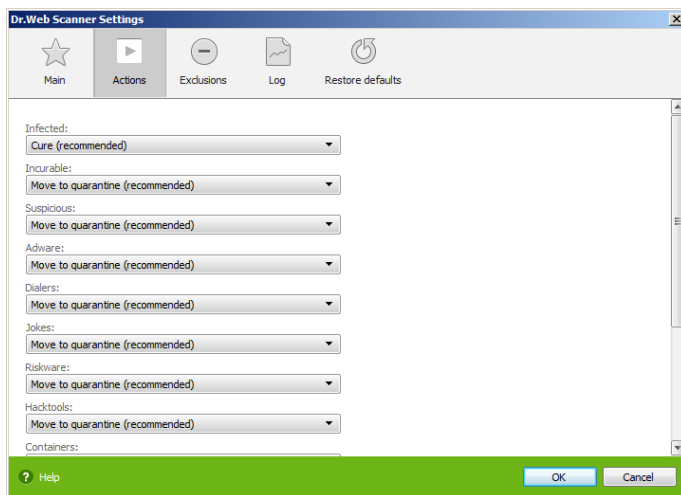




Actions Page

To set reaction on threat detection

1. Select the **Actions** tab in the **Scanner settings** window.



2. In the **Infected objects** drop-down list, select the program's action upon detection of an infected object.



The **Cure** action is the best in most cases.

3. Select the program's action upon detection of an incurable object in the **Incurable objects** drop-down list. The range of actions is the same as for infected objects, but the **Cure** action is not available.



The **Move to quarantine** action is the best in most cases.

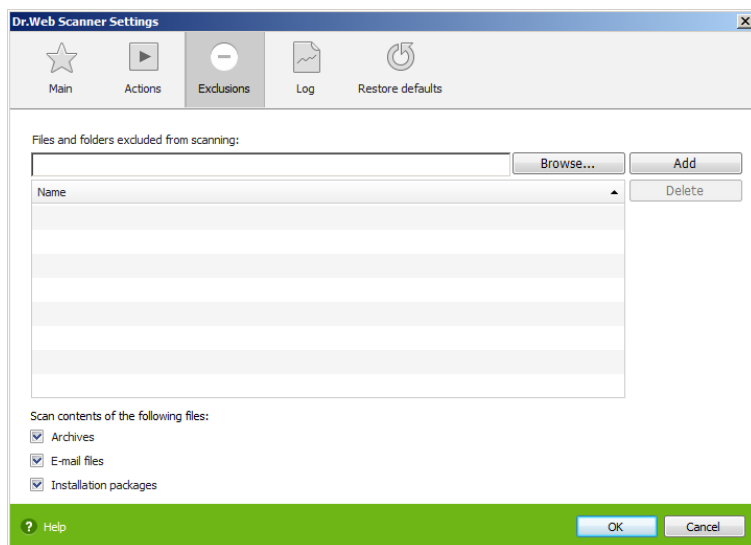
4. In the **Suspicious objects** drop-down list select the program's action upon detection of a suspicious object (fully similar to the previous paragraph).



5. Similar actions should be specified for detection of objects containing Adware, Dialers, Jokes, Riskware and Hacktools.
6. The same way the automatic actions of the program upon detection of viruses or suspicious codes in file archives, installation packages and mailboxes, applied to these objects as a whole, are set up.
7. To cure some infected files it is necessary to reboot Windows. You can choose one of the following:
 - **Restart computer automatically.** It can lead to loss of unsaved data.
 - **Prompt restart**

Exclusions Page

On this tab, you can specify files and folders to be excluded from scanning.



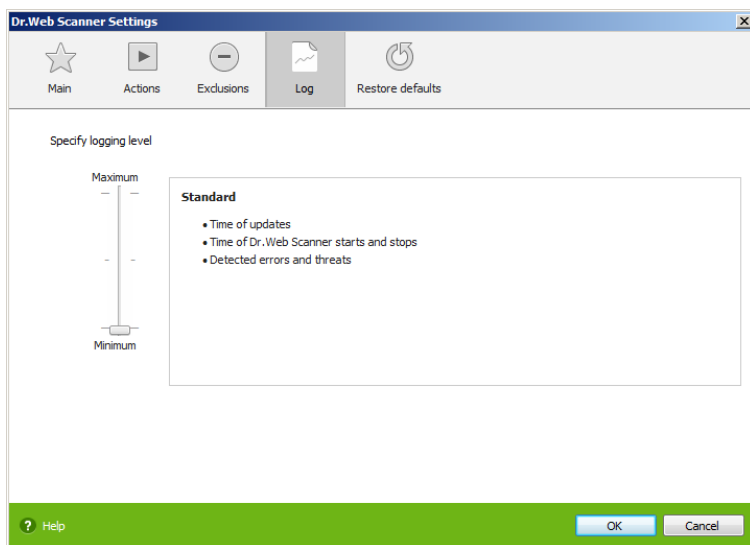


Here you can list names or masks for the files to be excluded from scanning. All files with the names which match the name or mask specified will be excluded from scanning (this option is appropriate for temporary files, swap files, etc).

You can also add archives, e-mail files, and installation packages to scanning.

Log Page

In the **Log** page you can set up the parameters of the log file.

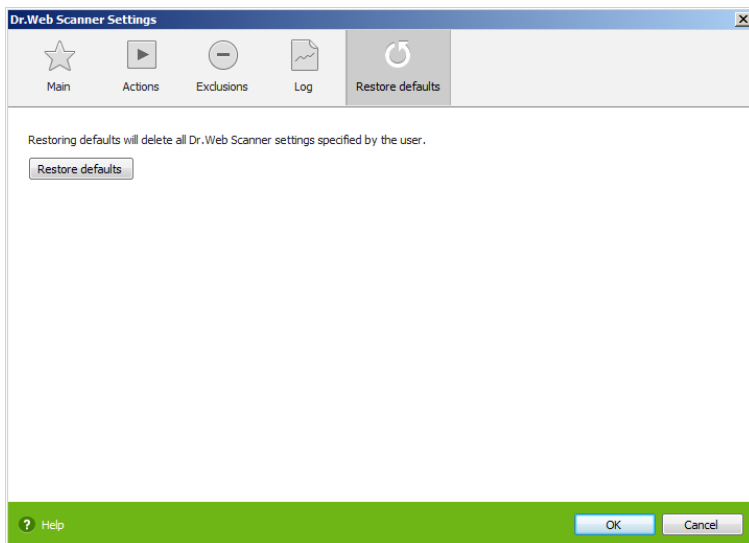


Most parameters set by default should be left unchanged. However, you can change the details of logging (by default, the information on infected or suspicious objects is always logged; the information on the scanned packed files and archives and on successful scanning of other files is omitted).



Restore defaults Page

On the **Restore defaults** page, you can restore the **Scanner** settings to their default values recommended by **Doctor Web**. For this, click **Restore defaults**.





4.4. Scanning in Command Line Mode

You can run **Scanner** in the command line mode, then you can specify settings of the current scanning session and list objects for scanning as additional parameters. This mode provides automatic activation of **Scanner** according to schedule. Automatic activation of the **Scanner** according to [schedule](#) is performed in this mode.

To run scanning from command line

Enter a command in the following format:

```
[ <path_to_program>] drweb32w [ <switches>] [ <objects>]
```

The list of objects for scanning can be empty or contain several elements separated with blanks.

The most commonly used examples of specifying the objects for scanning are given below:

- **/FAST** perform an express scan of the system (for more information on the express scan mode see [Scan Modes](#)).
- **/FULL** perform a full scan of all hard drives and removable data carriers (including boot sectors).
- **/LITE** perform a basic scan of random access memory, boot sectors of all disks.

Switches are command line parameters that specify program settings. If no switches are defined, scanning is performed with the settings specified earlier (or with the default settings if you have not changed them).

Each switch begins with a forward slash (/) character and is separated with a blank from other switches.



4.5. Console Scanner

Dr.Web Anti-virus for servers also includes **Console Scanner** that provides advanced settings.



Console Scanner moves suspicious files to **Quarantine**.

To run Console Scanner

Enter the following command:

```
[ <path_to_program>] dwscancl [ <switches>] [ <objects>]
```

The list of objects for scanning can be empty or contain several elements separated with blanks.

Switches are command line parameters that specify program settings. Several parameters are divided by spaces. For the full list of available switches, refer to [Appendix A](#).

Return codes:

- 0 – Scanning was completed successfully, infected objects were not found
- 1 – Scanning was completed successfully, infected objects were detected
- 10 – Invalid keys are specified
- 11 – Key file is not found or does not license **Console Scanner**
- 12 – **Scanning Engine** did not start
- 255 – Scanning was aborted by user



4.6. Automatic Launch of Scanning

During **Dr.Web Anti-virus for servers** installation an anti-virus scanning task is automatically created in the **Task Scheduler** (the task is disabled by default).

To view the parameters of the task, open **Control Panel** → **Administrative Tools** → **Task Scheduler**.

In the task list select the **Dr.Web Daily scan** task. You can enable the task, adjust trigger time and set required parameters.

On the **General** tab you can review general information and security options on a certain task. On the **Triggers** and **Conditions** tabs various conditions for task launching are specified. To review event log, select the **History** tab.

You can also create your own anti-virus scanning tasks. Please refer to the Help system and Windows documentation for more details on the system scheduler operation.



5. SpIDer Guard

SpIDer Guard is an anti-virus monitor that resides in main memory, checks files and memory on the fly, and detects virus-like activity.

By default, **SpIDer Guard** is loaded automatically at every Windows startup and cannot be unloaded during the current Windows session.



Only the user with administrator rights can temporarily disable **SpIDer Guard**.

By default, **SpIDer Guard** performs on-access scanning of files that are being created or changed on the HDD and all files that are opened on removable media. It scans these files in the same way as the **Scanner** but with "milder" options. Besides, **SpIDer Guard** constantly monitors running processes for virus-like activity and, if they are detected, blocks these processes.

By default, upon detection of infected objects **SpIDer Guard** supplied with **Dr.Web Anti-virus for servers** acts according to actions set on the [Actions tab](#).

You can set the program's reaction to virus events by adjusting the corresponding settings. A user can control it with the help of the **Statistics** window and the log file.

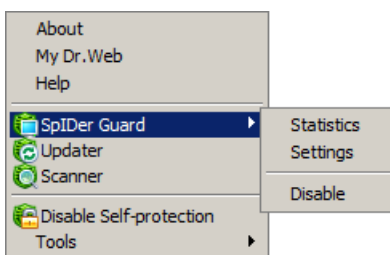


Incompatibility between **Dr.Web Anti-virus for servers** and **MS Exchange Server** is possible. If any problems occur, add MS Exchange Server databases and transaction log in the list of **SpIDer Guard** exceptions.



5.1. Managing SpIDer Guard

Main tools for setting and managing in **SpIDer Guard** reside in its menu.



The **Statistics** menu item allows to open the **Statistics** window, where the information on the operation of **SpIDer Guard** during the current session is displayed (the number of scanned, infected or suspicious objects, virus-like activities and actions taken).

The **Settings** menu item opens **SpIDer Guard** settings window (for details, see [SpIDer Guard Settings](#)).

The **Disable** item allows to temporary disable program functions (for users with administrator rights only).

5.2. SpIDer Guard Settings

The main adjustable parameters of **SpIDer Guard** are in the **Settings** panel. To receive help on parameters specified on a page, select that page and click **Help**.

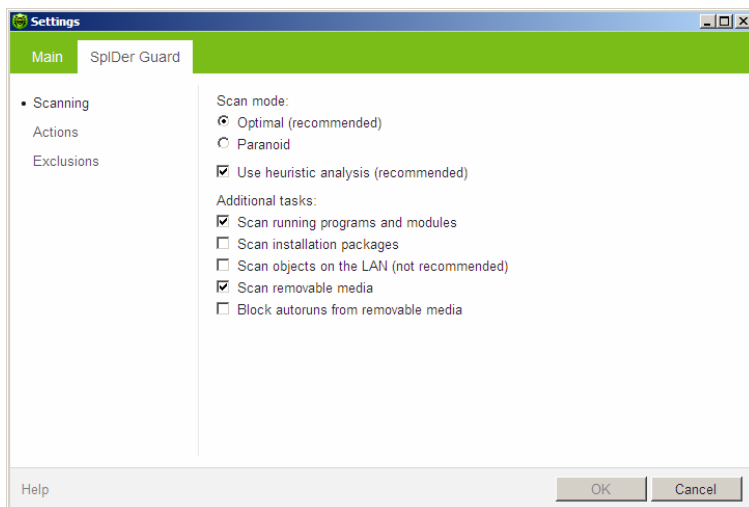
When you finish editing the parameters click **OK** to save changes or **Cancel** to cancel the changes made.

Some of the most frequently changed settings of the program are described below.



Scanning Page

By default, **SpIDer Guard** is set in **Optimal** mode to scan files that are being executed, created or changed on the hard drives and all files that are opened on removable media.



In **Paranoid** mode **SpIDer Guard** scans files that are being opened, created or changed on the hard drives, on removable media and network drives.

Selecting the **Use heuristic analysis** checkbox enables the heuristic analyser mode (a method of virus detection based on the analysis of actions specific for viruses).



Certain external devices (e.g. mobile drives with USB interface) can be identified by the system as hard drives. That is why such devices should be used with utmost care and checked for viruses by the **Scanner** when connected to a computer.

Disabled scanning of archives, even if **SpIDer Guard** is constantly active, means that viruses can still easily penetrate a PC but their detection will be postponed. When the infected archive is unpacked (or an infected message is opened), an attempt to write the infected object on the hard drive will be taken and **SpIDer Guard** will inevitably detect it.

In **Additional tasks** group, you can configure **SpIDer Guard** parameters to check the following objects:

- Executables of running processes regardless of their location
- Installation files
- Files on network drives
- Files and boot sectors on removable devices

These parameters are applied in any scan mode.

Also you can select **Block autoruns from removable media** check box to disable autoplay option for portable data storages such as CD/DVD, flash memory etc. This option helps to protect your computer from viruses transmitted via removable media.



If any problem occurs during installation with autorun option, it is recommended to remove **Block autoruns from removable media** check box.



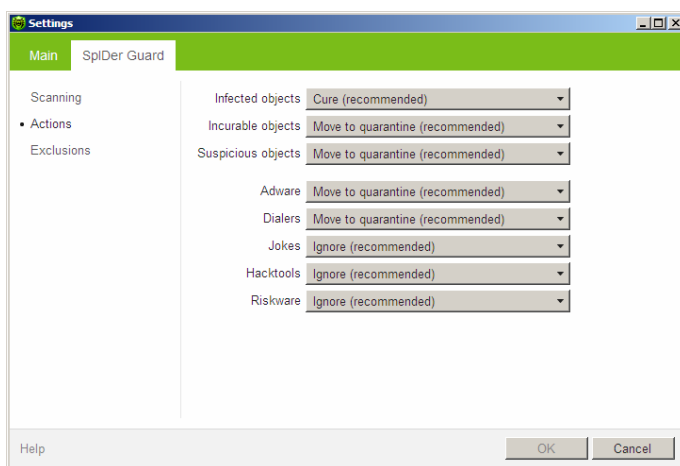
Actions Page

On this page, you can adjust **SpIDer Guard** reaction to infected objects.

The **Cure**, **Ignore**, **Delete** and **Move to quarantine** actions are similar to those of the **Scanner**. All actions with files are described in [Appendix B. Computer Threats and Neutralization Methods](#) chapter.

To change the default actions in SpIDer Guard

1. In the **SpIDer Guard Settings** window select the **Actions** tab.



2. In the **Infected objects** drop-down list select the program's action upon detection of an infected object. **Cure** action is recommended.
3. In the **Incurable objects** drop-down list select the program's action upon detection of an incurable object. **Move to quarantine** action is recommended.
4. In the **Suspicious objects** drop-down list select the program's action upon detection of a suspicious object. **Move to quarantine** action is recommended.



5. In the **Adware** and **Dialers** drop-down lists select the program's action upon detection of dangerous files. **Move to quarantine** action is recommended.
6. The same procedure is used when setting the program's actions upon detection of objects containing jokes, riskware and hacktools. **Ignore** action is recommended.
7. Click **OK** to apply changes and close the **SpIDer Guard Settings** window.

Exclusions Page

On this page folders and files to be excluded from checking are specified.

In the **Exluded folders and files** field the list of folders and files to be excluded from scanning can be set. These can be the quarantine folder of the anti-virus, some program folders, temporary files (swap files), etc.

The list is empty by default. To add a file, folder or mask to the list type its name into the entry field and click **Add**. To enter an existing file name or folder, or edit the path in the field before adding it to the list you can click **Browse** to the right and select the object in a standard file browsing window.

To remove a file or folder from the list select it in the list and click **Remove**.



6. Automatic Updating

Anti-virus solutions of **Doctor Web** use **Dr.Web virus databases** to detect computer threats. These databases contain details and signatures for all virus threats known at the moment of the product release. However, modern virus threats are characterized by high-speed evolution and modification. Within several days and sometimes hours, new viruses and malicious programs emerge. To mitigate the risk of infection during the licensed period, **Doctor Web** provides you with regular updates to virus databases and product components, which are distributed via the Internet. With the updates, **Dr.Web Anti-virus for servers** receives information required to detect new viruses, block their spreading and sometimes cure infected files which were incurable before. From time to time, the updates also include enhancements to anti-virus algorithms and fix bugs in software and documentation.

Dr.Web Updater helps you download and install the updates during the licensed period.



6.1. Running Updates

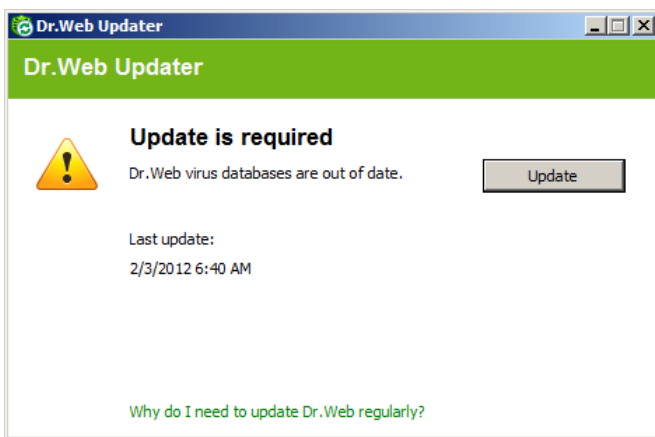
You can run **Updater** in one of the following ways:

- From the command line by running dwupsvr.exe file located in the **Dr.Web Anti-virus for servers** installation folder
- By selecting **Update** in the **SpIDer Agent** menu

On launching, **Updater** displays a window with information on relevance of **Dr.Web virus databases** and **Dr.Web Anti-virus for servers** components. If necessary, you can start an update process. Update parameters can be configured on the **Update** page of **Dr.Web Anti-virus for servers** [Main settings](#).



If launching **Dr.Web Updater** automatically, changes are logged into dwupdater.log file that is located in the %allusersprofile%\Application Data\Doctor Web\Logs\ folder (in Windows Server 2008, %allusersprofile%\Doctor Web\Logs\).





Update Procedure

Before starting an update, **Updater** checks if you have a [key file](#) registered (license or demo). If no key file is found, **Updater** suggests you to obtain a key file on the Internet through the user registration procedure.

If the key file is found, **Updater** checks its validity at **Doctor Web** servers (the file can be blocked, if discredited, i.e. its illegal distribution is uncovered). If your key file is blocked due to misuse, **Updater** displays an appropriate warning, terminates the update, and blocks Dr.Web components.

If the key is blocked, contact the dealer from which you purchased **Dr.Web Anti-virus for servers**.

After the key file is successfully verified, **Updater** downloads and installs all updated files automatically according to your version of **Dr.Web Anti-virus for servers**. If your subscription terms allow upgrade to newer software versions, **Updater** also downloads and installs a new version of **Dr.Web Anti-virus for servers** when released.

After an update of **Dr.Web Anti-virus for servers** executable files or libraries, a program restart may be required. In such cases, **Updater** displays an appropriate warning.



Scanner, SpIDer Guard start using the updated databases automatically.

When the **Updater** is launched in the command line mode, the command line parameters can be used (see [Appendix A](#)).



Appendices

Appendix A. Command Line Parameters

Additional command line parameters (switches) are used to set parameters for programs which can be launched by opening an executable file. This relates to **Scanner**, **Console Scanner** and to **Dr.Web Updater**. The switches can set the parameters unavailable in the configuration file and have a higher priority then the parameters which are specified in it.

Switches begin with the forward slash (/) character and are separated with blanks as other command line parameters.

Scanner and Console Scanner Parameters

/AA – apply actions to detected threats automatically. (Only for **Scanner**).

/AR – check archive files. Option is enabled by default.

/AC – check installation packages. Option is enabled by default.

/AFS – use forward slash to separate paths in archive. Option is disabled by default.

/ARC:<ratio> – maximum archive object compression. If the compression rate of the archive exceed the limit, **Console Scanner** neither unpacks, not scans the archive (unlimited).

/ARL:<leve/> – maximum archive level (unlimited).

/ARS:<size> – maximum archive size. If the archive size exceed the limit, **Scanner** neither unpacks, nor scans the archive (unlimited, KB).



/ART:*<size>* – minimum size of file inside archive beginning from which compression ratio check will be performed (unlimited, KB).

/ARX:*<size>* – maximum size of objects in archives that should be checked (unlimited, KB).

/BI – show virus bases info. Option is enabled by default.

/DR – recursive scan directory. Option is enabled by default.

/E:*<engines>* – maximum **Dr.Web** engines to use.

/FAST – perform an express scan of the system (for more information on the express scan mode see [Scan Modes](#)). (Only for **Scanner**).

/FL:*<path>* – scan files listed in the specified file.

/FM:*<masks>* – scan files matching the specified masks. By default all files are scanned.

/FR:*<regex>* – scan files matched expression. By default all files are scanned.

/FULL – perform a full scan of all hard drives and removable data carriers (including boot sectors). (Only for **Scanner**).

/H or **/?** – show this message. (Only for **Console Scanner**).

/HA – use heuristic analysis. Option is enabled by default.

/KEY:*<keyfile>* – use 'keyfile' as activation key (by default drweb32. key or other suitable from C:\Program Files\DrWeb\).

/LITE – perform a basic scan of random access memory, boot sectors of all disks. **Scanner** also runs a check on rootkits. (Only for **Scanner**).

/LN – resolve shell links. Option is disabled by default.



/LS – use LocalSystem account rights. Option is disabled by default.

/MA – test e-mail like files. Option is enabled by default.

/MC:<limit> – set maximum cure attempts number to 'limit' (unlimited by default).

/NB – don't backup curing/deleting files. Option is disabled by default.

/NI[:X] – nice mode 0-100, low resource usage (unlimited, %).

/NOREBOOT – cancel reboot and shutting down after scanning. (Only for **Scanner**).

/NT – test NTFS streams. Option is enabled by default.

/OK – show OK for clean files. Option is disabled by default.

/P:<prio> – test priority:

- 0 – the lowest,
- L – low,
- N – general. Priority by default,
- H – the highest,
- M – maximal.

/PAL:<level> – maximum pack level. Value is 1000 by default.

/RA:<file.log> – add report into file.log. No report by default.

/RP:<file.log> – write report into file.log. No report by default.

/RPC:<secs> – **Dr.Web Scanning Engine** connection timeout. Timeout is 30 seconds by default. (Only for **Console Scanner**).

/RPCD – use dynamic RPC identification. (Only for **Console Scanner**).

/RPCE – use dynamic RPC endpoint. (Only for **Console Scanner**).



/RPCE:<name> – use specified RPC endpoint. (Only for **Console Scanner**).

/RPCH:<name> – use specified host name for remote call. (Only for **Console Scanner**).

/RPCP:<name> – use specified RPC protocol. Possible protocols: lpc, np, tcp. (Only for **Console Scanner**).

/QL – list quarantined files on all disks. (Only for **Console Scanner**).

/QL:<drive> – list quarantined files on drive 'drive' (letter). (Only for **Console Scanner**).

/QR[:<d>[:<p>]] – delete quarantined files on drive 'd' (letter) older than 'p' days (number). Unspecified 'd' – all drives, unspecified 'p' – 0 days. (Only for **Console Scanner**).

/QNA – double quote file names always.

/QUIT – **Scanner** checks the objects specified in the command line (files, disks, directories) and then automatically terminates. (Only for **Scanner**).

/REP – go follow repase points. Option is disabled by default.

/SCC – show content of compound objects. Option is disabled by default.

/SCN – show name of installation package. Option is disabled by default.

/SPN – show packer name. Option is disabled by default.

/SLS – show log on screen. Option is enabled by default. (Only for **Console Scanner**).

/SPS – show progress on screen. Option is enabled by default. (Only for **Console Scanner**).



/SST – show file scan time. Option is disabled by default.

/TB – test boot sectors. Option is disabled by default.

/TM – test processes in memory. Option is disabled by default.

/TR – test system restore points directories. Option is disabled by default.

/W:<sec> – maximum time to scan (unlimited, sec).

/WCL – drwebwcl compatible output. (Only for **Console Scanner**).

/X:S[:R] – set power state shutDown/Reboot/Suspend/Hibernate with reason 'R' (for shutdown/reboot).

Action for different objects (*C* - cure, *Q* - move to quarantine, *D* - delete, *I* - ignore, *R* - inform. *R* is only for **Console Scanner**. *R* is set by default for all objects in **Console Scanner**):

/AAD:X – action for adware (*R*, possible DQIR).

/AAR:X – action for infected archive files (*R*, possible DQIR).

/ACN:X – action for infected installation packages (*R*, possible DQIR).

/ADL:X – action for dialers (*R*, possible DQIR).

/AHT:X – action for hacktools (*R*, possible DQIR).

/AIC:X – action for incurable files (*R*, possible DQR).

/AIN:X – action for infected files (*R*, possible CDQR).

/AJK:X – action for jokes (*R*, possible DQIR).

/AML:X – action for infected e-mail files (*R*, possible QIR).

/ARW:X – action for riskware (*R*, possible DQIR).

/ASU:X – action for suspicious files (*R*, possible DQIR).

Several parameters can have modifiers that clearly enable or disable options specified by these keys. For example:

/AC- option is clearly disabled,

/AC, /AC+ option is clearly enabled.



These modifiers can be useful if option was enabled or disabled by default or was set in configuration file earlier. Keys with modifiers are listed below:

/AR, /AC, /AFS, /BI, /DR, /HA, /LN, /LS, /MA, /NB, /NT, /OK, /QNA, /REP, /SCC, /SCN, /SPN, /SLS, /SPS, /SST, /TB, /TM, /TR, /WCL.

For **/FL** parameter "-" modifier directs to scan paths listed in specified file and then delete this file.

For **/ARC, /ARL, /ARS, /ART, /ARX, /NI[:X], /PAL, /RPC** and **/W** parameters "0" value means that there is no limit.

Example of using command line parameters with **Console Scanner**:

```
[<path_to_file>]dwscancl /AR- /AIN: C /AIC: Q C: \
```

scan all files on disk C:, excluding those in archives; cure the infected files and move to quarantine those that cannot be cured. To run **Scanner** the same way, type the `dwscanner` command name instead of `dwscancl`.



Dr.Web Updater Command Line Parameters

Common options:

Parameter	Description
-h [--help]	Show this message.
-v [--verbosity] arg	Log level. Can be one of following: error, info, debug.
-d [--data-dir] arg	Directory where repository and settings are located.
--log-dir arg	Directory for storing log file.
--log-file arg (=dwupdater.log)	Log file name.
-r [--repo-dir] arg	Repository directory, (<data_dir>/repo by default).
-t [--trace]	Enable backtrace.
-c [--command] arg (=update)	Command to execute: getversions, getcomponents, getrevisions, init, update, uninstall, exec and keyupdate.
-z [--zone] arg	List of zones that should be used instead of specified in configuration file.

init command parameters:

Parameter	Description
-s [--version] arg	Version name.
-p [--product] arg	Product name.
-a [--path] arg	Product directory path. This directory will be used as default directory for all components included in product. Dr.Web Updater will search for a key file in this directory.
-n [--component] arg	Component name and installation folder. <Name>, <install path>.
-u [--user] arg	Username for proxy server.



Parameter	Description
-k [--password] arg	Password for proxy server.
-g [--proxy] arg	Proxy-server for updating. <i><Address></i> : <i><port></i>
-e [--exclude] arg	Component name that will be excluded from product during installation.

update command parameters:

Parameter	Description
-p [--product] arg	Product name. If specified, only this product will be updated. If nothing is specified, all products will be updated. If components are specified, only these components will be updated.
-n [--component] arg	Components that should be updated to specified version. <i><Name></i> , <i><target revision></i> .
-x [--selfrestart] arg (=yes)	Reboot after updating of Dr.Web Updater . Default value is <i>yes</i> . If value is set to <i>no</i> , reboot required notification will appear
--geo-update	Attempt to get list of IP-addresses from update.drweb.com before updating.
--type arg (=normal)	One of the following: <ul style="list-style-type: none">• reset-all – reset revision to 0 for all components• reset-failed – reset revision to 0 for failed components• normal-failed – try to update all components including failed from current revision to newest or specified• update-revision – try to update all components of current revision to newest if exists• normal – update all components



Parameter	Description
-g [--proxy] arg	Proxy-server for updating. <i><Address></i> : <i><port></i>
-u [--user] arg	Username for proxy server.
-k [--password] arg	Password for proxy server.
--param arg	Pass additional parameters to the script. <i><Name></i> : <i><value></i> .
-l [--progress-to-console]	Print information about downloading and script execution to console.

exec command parameters:

Parameter	Description
-s [--script] arg	Execute this script.
-f [--func] arg	If specified execute this function in the script.
-p [--param] arg	Pass additional parameters to the script. <i><Name></i> : <i><value></i> .
-l [--progress-to-console]	Print information about script execution to console.

getcomponents command parameters:

Parameter	Description
-s [--version] arg	Version name.
-p [--product] arg	Specify product to get the list of components that belong to this product. If product is not specified, all components of this version will be listed.

getrevisions command parameters:

Parameter	Description
-s [--version] arg	Version name.
-n [--component] arg	Component name.

**uninstall command parameters:**

Parameter	Description
-n [--component] arg	Name of the component that should be uninstalled.
-l [--progress-to-console]	Print information about command execution to console.
--param arg	Pass additional parameters to the script. <Name>: <value> .
-e [--add-to-exclude]	Components to be deleted. Updating of this components will not be performed.

keyupdate command parameters:

Parameter	Description
-m [--md5] arg	MD5 hash of previous key file.
-o [--output] arg	Output file name to store new key.
-b [--backup]	Backup of old key file if exists.
-g [--proxy] arg	Proxy-server for updating. <Address>: <port>
-u [--user] arg	Username for proxy server.
-k [--password] arg	Password for proxy server.
-l [--progress-to-console]	Print information about downloading to console.

download command parameters:

Parameter	Description
--zones arg	Zone description file.
--key-dir arg	Directory where key file is located.
-l [--progress-to-console]	Print information about command execution to console.
-g [--proxy] arg	Proxy-server for updating. <Address>: <port>



Parameter	Description
-u [--user] arg	Username for proxy server.
-k [--password] arg	Password for proxy server.
-s [--version] arg	Version name.
-p [--product] arg	Product name.



Appendix B. Computer Threats and Neutralization Methods

With the development of computer technologies and network solutions malicious programs (malware) of different kinds, meant to strafe users, become more and more widespread. Their development began together with computer science and facilities of protection against them progressed alongside. Nevertheless, there is still no common classification for all possible threats due to their unpredictable development character and constant improvement of applicable technologies.

Malicious programs can be distributed through the Internet, local area networks, e-mail and portable data mediums. Some of them rely on the user's carelessness and lack of experience and can be run in completely automatic mode. Others are tools controlled by a computer cracker and they can harm even the most secure systems.

This chapter describes all of the most common and widespread types of malware, against which products of **Doctor Web** are aimed.

Classification of Computer Threats

Computer viruses

This type of malicious programs is characterized by the ability to implement its code into the executable code of other programs. Such implementation is called infection. In most cases the infected file becomes a virus carrier itself and the implemented code does not necessarily match the original. Most viruses are intended to damage or destroy data on the system. Viruses which infect files of the operating system (usually executable files and dynamic libraries) and activate upon launching of the infected file are called file viruses.



Some viruses infect boot records of diskettes and partitions or master boot records of fixed disks. Such viruses are called boot viruses. They take very little memory and remain ready to continue performing their tasks until a system roll-out, restart or shut-down occurs.

Macroviruses are viruses which infect documents used by the Microsoft Office and some other applications which allow macro commands (usually written in Visual Basic). Macro commands are a type of implemented programs (macros) written in a fully functional programming language. For instance, in Microsoft Word macros can automatically initiate upon opening (closing, saving, etc.) a document.

A virus which has the ability to activate and perform the tasks assigned by the virus writer only when the computer reaches a certain state (e.g. a certain date and time) is called a memory-resident virus.

Most viruses have some kind of protection against detection. Protection methods are being constantly improved and ways to overcome them are developed.

Encrypted viruses, for instance, cipher their code upon every infection to hamper their detection in a file, boot sector or memory. All copies of such viruses contain only a small common code fragment (the decryption procedure), which can be used as a virus signature.

Polymorphic viruses also encrypt their code, but besides that they generate a special decryption procedure which is different in every copy of the virus. This means that such viruses do not have byte signatures.

Stealth viruses perform certain actions to disguise their activity and thus conceal their presence in an infected object. Such viruses gather the characteristics of a program before infecting it and then plant these "dummy" characteristics which mislead the scanner searching for modified files.



Viruses can also be classified according to the programming language in which they are written (in most cases it is assembler, high-level programming languages, scripting languages, etc.) or according to the affected operating systems.

Computer worms

Worms have become a lot more widespread than viruses and other malicious programs recently. Like viruses they are able to reproduce themselves and spread their copies but they do not infect other programs. A worm infiltrates the computer from the worldwide or local network (usually via an attachment to an e-mail) and distributes its functional copies to other computers in the network. It can begin distributing itself either upon a user's action or in an automatic mode, choosing which computers to attack.

Worms do not necessarily consist of only one file (the worm's body). Many of them have an infectious part (the shellcode), which loads into the main memory (RAM) and then downloads the worm's body as an executable file via the network. If only the shellcode is present in the system, the worm can be rid of by simply restarting the system (at which the RAM is erased and reset). However, if the worm's body infiltrates the computer, then only an anti-virus program can cope with it.

Worms have the ability to cripple entire networks even if they do not bear any payload (i.e. do not cause any direct damage) due to their intensive distribution.



Trojan horses (Trojans)

This type of malicious program cannot reproduce or infect other programs. A Trojan substitutes a high-usage program and performs its functions (or imitates the programs operation). At the same time it performs some malicious actions in the system (damages or deletes data, sends confidential information, etc.) or makes it possible for another person to access the computer without permission, e.g. to harm the computer of a third party.

A Trojan's masking and malicious facilities are similar to those of a virus and it can even be a component of a virus. However, most Trojans are distributed as separate executable files (through file-exchange servers, removable data carriers or e-mail attachments), which are launched by a user or a system task.

Rootkits

It is a type of malicious program used to intercept system functions of an operating system in order to conceal itself. Besides, a rootkit can conceal tasks of other programs, registry keys, folders and files. It can be distributed either as an independent program or a component of another malicious program. A rootkit is basically a set of utilities, which a cracker installs on a system to which she had just gained access.

There are two kinds of rootkits according to the mode of operation: User Mode Rootkits (UMR) which operate in user mode (intercept functions of the user mode libraries) and Kernel Mode Rootkits (KMR) which operate in kernel mode (intercept functions on the level of the system kernel, which makes it harder to detect).



Hacktools

Hacktools are programs designed to assist the intruder with hacking. The most common among them are port scanners which detect vulnerabilities in firewalls and other components of the computer's protection system. Besides hackers, such tools are used by administrators to check the security of their networks. Occasionally, common software which can be used for hacking and various programs that use social engineering techniques are designated as among hacktools as well.

Spyware

This type of malicious programs is designed to perform monitoring of the system and send the gathered information to a third party – creator of the program or some other person concerned. Among those who may be concerned are: distributors of spam and advertisements, scam-agencies, marketing agencies, criminal organizations, industrial espionage agents, etc.

Spyware is secretly loaded to your system together with some other software or when browsing certain HTML-pages and advertising windows. It then installs itself without the user's permission. Unstable browser operation and decrease in system performance are common side effects of spyware presence.

Adware

Usually this term is referred to a program code implemented into freeware programs which perform forced display of advertisements to a user. However, sometimes such codes can be distributed via other malicious programs and show advertisements in internet-browsers. Many adware programs operate with data collected by spyware.



Joke programs

Like adware, this type of malicious programs does not deal any direct damage to the system. Joke programs usually just generate message boxes about errors that never occurred and threaten to perform actions which will lead to data loss. Their purpose is to frighten or annoy a user.

Dialers

These are special programs which are designed to scan a range of telephone numbers and find those where a modem answers. These numbers are then used to mark up the price of telephoning facilities or to connect the user to expensive telephone services.

All the above programs are considered malicious because they pose a threat to the user's data or his right of confidentiality. Programs that do not conceal their presence, distribute spam and different traffic analyzers are usually not considered malicious, although they can become a threat under certain circumstances.

Among other programs there is also a class of riskware programs. These were not intended as malicious, but can potentially be a threat to the system's security due to their certain features. Riskware programs are not only those which can accidentally damage or delete data, but also ones which can be used by crackers or some malicious programs to do harm to the system. Among such programs are various remote chat and administrative tools, FTP-servers, etc.



Below is a list of various hacker attacks and internet fraud:

- **Brute force attack** – performed by a special Trojan horse program, which uses its inbuilt password dictionary or generates random symbol strings in order to figure out the network access password by trial-and-error.
- **DoS-attack** (denial of service) or **DDoS-attack** (distributed denial of service) – a type of network attack, which verges on terrorism. It is carried out via a huge number of service requests sent to a server. When a certain number of requests is received (depending on the server's hardware capabilities) the server becomes unable to cope with them and a denial of service occurs. DDoS-attacks are carried out from many different IP-addresses at the same time, unlike DoS-attacks, when requests are sent from one IP-address.
- **Mail bombs** – a simple network attack, when a big e-mail (or thousands of small ones) is sent to a computer or a company's mail server, which leads to a system breakdown. There is a special method of protection against such attacks used in the **Dr.Web** products for mail servers.
- **Sniffing** – a type of network attack also called "passive tapping of network". It is unauthorized monitoring of data and traffic flow performed by a packet sniffer – a special type of non-malicious program, which intercepts all the network packets of the monitored domain.
- **Spoofing** – a type of network attack, when access to the network is gained by fraudulent imitation of connection.
- **Phishing** – an Internet-fraud technique, which is used for stealing personal confidential data such as access passwords, bank and identification cards data, etc. Fictitious letters supposedly from legitimate organizations are sent to potential victims via spam mailing or mail worms. In these letters victims are offered to visit phony web sites of such organizations and confirm the passwords, PIN-codes and other personal information, which is then used for stealing money from the victim's account and for other crimes.
- **Vishing** – a type of Phishing technique, in which war dialers or VoIP is used instead of e-mails.



Actions Applied to Threats

There are many methods of neutralizing computer threats. Products of **Doctor Web** combine these methods for the most reliable protection of computers and networks using flexible user-friendly settings and a comprehensive approach to security assurance. The main actions for neutralizing malicious programs are:

Cure – an action applied to viruses, worms and trojans. It implies deletion of malicious code from infected files or deletion of a malicious program's functional copies as well as the recovery of affected objects (i.e. return of the object's structure and operability to the state which was before the infection) if it is possible. Not all malicious programs can be cured. However, products of **Doctor Web** are based on more effective curing and file recovery algorithms compared to other anti-virus manufacturers.

Move to quarantine – an action when the malicious object is moved to a special folder and isolated from the rest of the system. This action is preferable in cases when curing is impossible and for all suspicious objects. It is recommended to send copies of such files to the virus laboratory of **Doctor Web** for analysis.

Delete – the most effective action for neutralizing computer threats. It can be applied to any type of malicious objects. Note, that deletion will sometimes be applied to certain files for which curing was selected. This will happen if the file contains only malicious code and no useful information. E.g. curing of a computer worm implies deletion of all its functional copies.

Block, rename – these actions can also be used for neutralizing malicious programs. However, fully operable copies of these programs remain in the file system. In case of the Block action all access attempts to or from the file are blocked. The Rename action means that the extension of the file is renamed which makes it inoperative.



Appendix C. Naming of Viruses

Specialists of the **Dr.Web Virus Laboratory** give names to all collected samples of computer threats. These names are formed according to certain principles and reflect a threat's design, classes of vulnerable objects, distribution environment (OS and applications) and some other features. Knowing these principles may be useful for understanding software and organizational vulnerabilities of the protected system. In certain cases this classification is conventional, as some viruses can possess several features at the same time. Besides, it should not be considered exhaustive, as new types of viruses constantly appear and the classification is made more precise. The full and constantly updated version of this classification is available at the [Dr.Web web site](#).

The full name of a virus consists of several elements, separated with full stops. Some elements at the beginning of the full name (prefixes) and at the end of it (suffixes) are standard for the accepted classification. Below is a list of all prefixes and suffixes used in **Dr.Web** divided into groups.

Prefixes

Affected operating systems

The prefixes listed below are used for naming viruses infecting executable files of certain OS's:

- Win – 16-bit Windows 3.1 programs
- Win95 – 32-bit Windows 95/98/Me programs
- WinNT – 32-bit Windows NT/2000/XP/Vista programs
- Win32 – 32-bit Windows 95/98/Me and NT/2000/XP/Vista programs
- Win32.NET – programs in Microsoft .NET Framework operating system
- OS2 – OS/2 programs



- Unix – programs in various Unix-based systems
- Linux – Linux programs
- FreeBSD – FreeBSD programs
- SunOS – SunOS (Solaris) programs
- Symbian – Symbian OS (mobile OS) programs

Note that some viruses can infect programs of one system even if they are designed to operate in another system.

Macrovirus prefixes

The list of prefixes for viruses which infect MS Office objects (the language of the macros infected by such type of virus is specified):

- WM – Word Basic (MS Word 6.0-7.0)
- XM – VBA3 (MS Excel 5.0-7.0)
- W97M – VBA5 (MS Word 8.0), VBA6 (MS Word 9.0)
- X97M – VBA5 (MS Excel 8.0), VBA6 (MS Excel 9.0)
- A97M – databases of MS Access'97/2000
- PP97M – MS PowerPoint presentations
- O97M – VBA5 (MS Office'97), VBA6 (MS Office 2000); this virus infects files of more than one component of MS Office

Development languages

The HLL group is used to name viruses written in high level programming languages, such as C, C++, Pascal, Basic and others.

- HLLW – worms
- HLLM – mail worms
- HLLO – viruses overwriting the code of the victim program,
- HLLP – parasitic viruses
- HLLC – companion viruses

The following prefix also refers to development language:

- Java – viruses designed for the Java virtual machine



Script-viruses

Prefixes of viruses written in different scrip languages:

- VBS – Visual Basic Script
- JS – Java Script
- Wscript – Visual Basic Script and/or Java Script
- Perl – Perl
- PHP – PHP
- BAT – MS-DOS command interpreter

Trojan horses

- Trojan – a general name for different Trojan horses (Trojans). In many cases the prefixes of this group are used with the Trojan prefix.
- PWS – password stealing Trojan
- Backdoor – Trojan with RAT-function (Remote Administration Tool – a utility for remote administration)
- IRC – Trojan which uses Internet Relay Chat channels
- DownLoader – Trojan which secretly downloads different malicious programs from the Internet
- MulDrop – Trojan which secretly downloads different viruses contained in its body
- Proxy – Trojan which allows a third party user to work anonymously in the Internet via the infected computer
- StartPage (synonym: Seeker) – Trojan which makes unauthorized replacement of the browser's home page address (start page)
- Click – Trojan which redirects a user's browser to a certain web site (or sites)
- KeyLogger – a spyware Trojan which logs key strokes; it may send collected data to a malefactor
- AVKill – terminates or deletes anti-virus programs, firewalls, etc.



- KillFiles, KillDisk, DiskEraser – deletes certain files (all files on drives, files in certain directories, files by certain mask, etc.)
- DelWin – deletes files vital for the operation of Windows OS
- FormatC – formats drive C
- FormatAll – formats all drives
- KillMBR – corrupts or deletes master boot records (MBR)
- KillCMOS – corrupts or deletes CMOS memory

Tools for network attacks

- Nuke – tools for attacking certain known vulnerabilities of operating systems leading to abnormal shutdowns of the attacked system
- DDoS – agent program for performing a DDoS-attack (Distributed Denial Of Service)
- FDoS (synonym: Flooder) – programs for performing malicious actions in the Internet which use the idea of DDoS-attacks; in contrast to DDoS, when several agents on different computers are used simultaneously to attack one victim system, an FDoS-program operates as an independent "self-sufficient" program (Flooder Denial of Service)

Malicious programs

- Adware – an advertising program
- Dialer – a dialer program (redirecting modem calls to predefined paid numbers or paid resources)
- Joke – a joke program
- Program – a potentially dangerous program (riskware)
- Tool – a program used for hacking (hacktool)

Miscellaneous

- Exploit – a tool exploiting known vulnerabilities of an O S or application to implant malicious code or perform unauthorized actions.



- Generic – this prefix is used after another prefix describing the environment or the development method to name a typical representative of this type of viruses. Such virus does not possess any characteristic features (such as text strings, special effects, etc.) which could be used to assign it some specific name.
- Silly – this prefix was used to name simple featureless viruses the with different modifiers in the past.

Suffixes

Suffixes are used to name some specific virus objects:

- Origin – this suffix is added to names of objects detected using the *Origins Tracing* algorithm.
- generator – an object which is not a virus, but a virus generator.
- based – a virus which is developed with the help of the specified generator or a modified virus. In both cases the names of this type are generic and can define hundreds and sometimes even thousands of viruses.
- dropper – an object which is not a virus, but an installer of the given virus.



Appendix D. Technical Support

Support is available to customers who have purchased a commercial version of **Dr.Web** products. Visit **Doctor Web** technical support website at <http://support.drweb.com/>.

If you encounter any issues installing or using company products, take advantage of the following **Doctor Web** support options:

- Download and review the latest manuals and guides at <http://download.drweb.com/doc>
- Read the frequently asked questions at <http://support.drweb.com/>
- Browse **Dr.Web** official forum at <http://forum.drweb.com/>

If you have not found solution for the problem, you can request direct assistance from **Doctor Web** technical support by filling in the web-form in the corresponding section of the support site at <http://support.drweb.com/>.

For regional office information, visit the official **Doctor Web** website at <http://company.drweb.com/contacts/moscow>

