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SWsoft, Inc.

# System Monitoring Module

## Administrator's Guide

Plesk 8.0

**PLESK**

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## CHAPTER 1

# Preface

## In This Chapter

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## Documentation Conventions

Before you start using this guide, it is important to understand the documentation conventions used in it.

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## Typographical Conventions

The following kinds of formatting in the text identify special information.

Formatting convention	Type of Information	Example
Special Bold	Items you must select, such as menu options, command buttons, or items in a list.	Go to the QoS tab.
	Titles of chapters, sections, and subsections.	Read the <b>Basic Administration</b> chapter.
<i>Italics</i>	Used to emphasize the importance of a point, to introduce a term or to designate a command line placeholder, which is to be replaced with a real name or value.	The system supports the so called <i>wildcard character</i> search.
Monospace	The names of commands, files and directories, and the commands you type.	The license file is located in the <code>httpdocs/common/license</code> directory.
Preformatted	On-screen computer output in your command-line sessions; source code in XML, C++, or other programming languages.	<pre># ls -al /files total 14470</pre>
CAPITALS	Names of keys on the keyboard.	SHIFT, CTRL, ALT

KEY+KEY	Key combinations for which the user must press and hold down one key and then press another.	CTRL+P, ALT+F4
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## Feedback

If you spot a typo in this guide, or if you have thought of a way to make this guide better, we would love to hear from you!

If you have a suggestion for improving the documentation (or any other relevant comments), try to be as specific as possible when formulating it. If you have found an error, please include the chapter/section/subsection name and some of the surrounding text so that we could find it easily.

Please submit a report by e-mail to [userdocs@swsoft.com](mailto:userdocs@swsoft.com).

# About the Module

The Watchdog module is a solution that ensures that your server is clean from malware, all services are up and running and there is enough free disk space on the server.

Watchdog can monitor the following services:

- Web server providing the control panel interface
- Web server providing WWW service to users' sites
- SMTP Server (QMail)
- IMAP/POP3 Server (Courier-IMAP)
- DNS Server (BIND)
- Tomcat
- ColdFusion
- MySQL
- PostgreSQL
- SpamAssassin
- Dr.Web antivirus

It can start, stop, and restart the services it monitors, and it can be configured to take actions depending on the stability of a service over some time period.

It can run other utilities and notify you when disk space usage has reached the limits you defined.

For the purpose of monitoring services and disk space usage Watchdog uses the monit utility. For information on the monit utility, visit the monit developers' Web site at <http://www.tildeslash.com/monit/>.

The Watchdog can scan the server file system for rootkits, backdoors, exploits, trojan horses and other malicious software on demand or on schedule. It can notify you by e-mail of scanning results and show reports through the control panel. It updates its security knowledge base through the Internet before each scan.

For the purpose of scanning the server for malware Watchdog uses the Rootkit Hunter utility. For information on Rootkit Hunter, visit the Rootkit Hunter developer's Web site at <http://www.rootkit.nl>.

# Setting Up and Starting Watchdog Services

After you install the Watchdog module, you should configure the settings common for all Watchdog services, and then switch on each specific type of service you need.

➤ *To configure Watchdog settings common for all services:*

- 1 Click the  Modules shortcut in the navigation pane.
- 2 Click the  Watchdog icon in the Modules group. A list of Plesk services will be displayed.
- 3 Click the Preferences icon in the Tools group.
- 4 Specify the following settings:
  - **Interface language.** Select the language in which Watchdog should show and send e-mail notices and alerts. By default, the language set for your Plesk administrator's account is selected.
  - **Automatically refresh pages.** Leave this option selected, if you wish to have the information presented on the screens automatically updated on each poll.
  - **Monitor all services started by administrator.** Leave this option selected if you wish the module to monitor all control panel services that you start. If you install a new system service later on, the module will automatically start looking after it. Deselect this check box, if you are going to shut down some of the control panel services and you do not want the module to bring them up automatically or bother you with any alert messages.
  - **Polling interval.** Specify the interval between service status queries in seconds.
  - **Store resource usage statistics.** Leave this option selected if you wish the system to keep reports on CPU and RAM usage for the amount of time you specify.
  - **Repeat security scanning.** Specify how often Watchdog should scan the server for malicious code.
  - **Send reports.** Specify how often Watchdog should send you consolidated reports on CPU and RAM load, monitored services, disk space partitions and security scanning results.
  - **Send e-mail to.** Specify the e-mail address where Watchdog should deliver alerts and reports. By default, the Plesk administrator's e-mail address is used.
  - **Send e-mail from.** E-mail address on behalf of which the reports and alerts should be sent. By default, this e-mail address is `watchdog@your-host-name`.
  - **SMTP server for sending alerts.** Specify local and/or remote SMTP servers that should be used for sending alert messages. You can specify several host names or IP addresses separated by commas. Leave the `localhost` entry to use your server's SMTP service.
- 5 Click **Apply** to submit the settings.

You have specified the general settings, and now you can further customize and run the Watchdog services you need: monitoring of system services and monitoring of disk space usage require fine tuning before you can start them, however, regular security scanning requires no additional setup and therefore will start immediately after you have specified the general settings. By default, security scanning is started at 2 a.m. local time at the beginning of the specified time period.

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## Setting Up and Starting Monitoring of System Services

➤ *To specify what services should be monitored and to start monitoring:*

1 Click the  Modules icon in the navigation pane.

2 Click the  Watchdog icon in the Modules group.

All services controlled by Plesk will be listed on the Services tab.

An icon in the S (status) column shows whether a service is currently monitored by Watchdog and it indicates the status of a service returned by the last poll:

 - the service is not currently monitored.

 - you started monitoring but the service has not yet been polled for its status.

 - the service is monitored and Watchdog reports that the service is running.

 - the service is monitored and Watchdog reports that the service is down.

An icon in the M (Monitoring) column shows whether you set Watchdog to monitor the service and it also indicates whether the service was installed on the server and properly configured:

 - the service is not installed or configured.

 - you did not set Watchdog to monitor the service.

 - you set Watchdog to monitor the service.

3 Specify the services that should be monitored and specify monitoring preferences:

1. Click a service name.

2. Select the **Monitor the service** check box to set the Watchdog to monitor the service.

3. Select the **Save service statistics** check box if you wish Watchdog to keep the information on CPU and RAM resources used by the service, and present it in graphical reports (**Modules > Watchdog > Statistics**).

4. Select the **Stop monitoring the service if it frequently restarts** option, if you wish Watchdog to stop monitoring the service if it fails the specified number of times, and specify the failure ratio. Otherwise the Watchdog will bother you with alert messages each time it attempts to restart a non-responsive service. The default value of five failed attempts should be enough.
  5. Specify the time during which Watchdog will be waiting for response from the polled service in the **Connection timeout** box. Watchdog polls the service and then is waiting for response during the specified amount of time. If Watchdog receives no response, it restarts the service. If you host a great number of sites and e-mail accounts on your machine, you are recommended to set the **Connection timeout** for Qmail mail server to 120 seconds, and Apache Web server to 15 seconds, otherwise Watchdog will consider the busy services to be malfunctioning and will restart them.
  6. Review the commands that Watchdog uses to start and stop the service. It is recommended that you leave the prefilled values unchanged. You can write custom scripts that, for example, will clean up log files or send Short Message Services to your cell phone before actually starting the service, and specify the commands to run your scripts in the **To start the service, run the command** field.
  7. If you are using the default commands for running the services, leave the predefined value of 60 seconds in the **Service startup time** box. If you are running custom scripts, and they take more than 60 seconds to execute, specify the required time in the **Service startup time** box. When a script is executed but does not complete its work within the specified time frame, Watchdog terminates execution of that script.
  8. Click **OK** to submit the settings.
  9. Repeat this procedure to configure monitoring for all services you need. If you are satisfied with the default monitoring settings we have predefined for each service, you can set Watchdog to monitor the required services by simply clicking the respective  icons in the list of services.
- 4** Once you have specified all services you would like Watchdog to monitor, click the  **Enable** icon in the **Tools** group.

Now the services will be monitored in accordance with the settings you specified. If you decided to use the default settings, the following actions will be taken:

- All services will be automatically restarted in case of failure,
- Watchdog will stop monitoring all services failing 5 times out of 5 polls,
- Alert messages will be sent to the e-mail address specified in the Plesk administrator's account on any event.

➤ *To stop monitoring a specific service:*

- 1 Click the  Modules icon in the navigation pane.
- 2 Click the  Watchdog icon in the Modules group.
- 3 Click an icon  corresponding to the service you would like Watchdog to stop monitoring.

➤ *To stop monitoring all services:*

- 1 Click the  Modules icon in the navigation pane.
- 2 Click the  Watchdog icon in the Modules group.
- 3 Click the  Disable icon in the Tools group.

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**Important:** Performing this action affects the whole monitoring service, meaning that not only all system services, but all disk partitions (see page 11) will stop being monitored.

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## Setting Up and Starting Monitoring of Disk Space Usage

➤ *To configure and start monitoring disk space usage:*

- 1 Click the  Modules icon in the navigation pane.
- 2 Click the  Watchdog icon in the Modules group.
- 3 Click the Disks tab.

All connected (mounted) devices will be listed.

An icon in the **S** (status) column shows whether a hard disk partition or storage device is currently monitored by Watchdog and it indicates the current disk space usage rate:

-  - the disk drive or partition is not currently monitored.
-  - you started monitoring but the disk or partition has not yet been checked.
-  - the disk drive or partition is monitored and Watchdog reports that disk space usage has not reached the threshold you defined.
-  - the disk drive or partition is monitored and Watchdog reports that disk space usage has reached the threshold you defined and soon there will be no free space left on that disk or partition.

An icon in the **M** (monitoring) column shows whether you set Watchdog to monitor disk space usage on a storage device or disk partition:

-  - you did not set Watchdog to monitor the disk space or partition.
-  - you set Watchdog to monitor the disk space or partition.

The **Device** and **Mount point** columns show information on storage device and the partition mount point. The **Mount point** column shows hyphen (-) if a partition is no longer connected to the file system: when the partition is reconnected to the system, Watchdog will resume monitoring it.

The **Disk space usage rate** column shows the amount of disk space that can be used without drawing your attention. You can specify the amount of disk space either in percentage from total amount or in measurement units: gigabytes, megabytes or kilobytes. When the specified amount is reached, Watchdog will notify you and run the command you defined. A hyphen (-) in this column shows that the partition or device is not monitored.

The **Files number rate** column shows the amount of files or directories that can be stored on the file system without drawing your attention. The number of files or directories is limited not only by disk space, but also by the file system capacity. You can specify either the exact number of files and directories (if you know it) or a percent from the total amount. Watchdog will notify you when the specified amount is reached. A hyphen (-) in this column shows that the partition or device is not monitored.

The **Command** column shows the command that Watchdog will run when the disk space threshold is reached.

- 4 Specify the hard drive partitions that should be monitored and specify monitoring preferences:

1. Click a partition or device name.
  2. Specify the amount of disk space that can be used without drawing your attention. When this threshold is reached, Watchdog will send you an alert and run the command you specified. We would recommend leaving the 80 % value selected.
  3. Specify the number of files and directories that can be created on the server without drawing your attention. When this threshold is reached, Watchdog will send you an alert. We would recommend leaving the 80 % value selected. You can specify the exact number of files, if you know the total capacity of your file system: to find it out, log in as root to the server and run the command `dumpe2fs <device name>` from shell.
  4. Specify the command that Watchdog will run when the specified disk space threshold is reached. This can be a command to run a disk space cleaning utility like a `tmpwatch` on RedHat Linux systems.
  5. Click OK.
  6. Repeat the procedure to configure monitoring for all the partitions you need.
- 5 Once you have specified all partitions you would like Watchdog to monitor, click the  Enable icon in the Tools group.

➤ *To stop monitoring a specific partition:*

- 1 Click the  Modules icon in the navigation pane.
- 2 Click the  Watchdog icon in the Modules group.
- 3 Click the Disks tab.
- 4 Click an icon  corresponding to the partition you would like Watchdog to stop monitoring.

➤ *To stop monitoring all partitions:*

- 1 Click the  Modules icon in the navigation pane.
- 2 Click the  Watchdog icon in the Modules group.
- 3 Click the Disks tab.
- 4 Click the  Disable icon in the Tools group.

---

**Important:** Performing this action affects the whole monitoring service, meaning that not only all disk partitions, but all system services (see page 8) will stop being monitored.

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## Setting Up and Starting Security Scanning

➤ *To set up and start regular security scanning:*

- 1 Click the  Modules icon in the navigation pane.
- 2 Click the  Watchdog icon in the Modules group.
- 3 Click the Preferences tab.
- 4 Specify how often Watchdog should scan the server for malicious code in the Repeat security scanning drop-down box.
- 5 Click Apply.

Security scanning will start immediately and will repeat in accordance with the settings you defined. By default, security scanning is started at 2 a.m. local time.

➤ *To run on demand scanning:*

- 1 Click the  Modules icon in the navigation pane.
- 2 Click the  Watchdog icon in the Modules group.
- 3 Click the Security tab.
- 4 Click the  Start icon in the Tools group.

Watchdog will update its knowledge base and start scanning. Upon completion, a detailed report will be presented on the screen.

➤ *To switch off regular security scanning:*

- 1 Click the  Modules icon in the navigation pane.
- 2 Click the  Watchdog icon in the Modules group.
- 3 Click the Preferences tab.
- 4 Select the disabled value from the Repeat security scanning drop-down box.
- 5 Click Apply.

# Viewing Status of System Services

➤ *To view the status of Plesk managed services:*

- Click **Server > Service Management**. A list of Plesk services will show. From that screen you can manage services and view their status.

*OR*

- Click **Modules > Watchdog**. A list of Plesk services will show. From that screen you can view service statuses and manage monitoring preferences.

The following information is displayed:

An icon in the **S** (status) column shows whether a service is currently monitored by Watchdog and it indicates the status of a service returned by the last poll:

-  - the service is not currently monitored.
-  - you started monitoring but the service has not yet been polled for its status.
-  - the service is monitored and Watchdog reports that the service is running.
-  - the service is monitored and Watchdog reports that the service is down.

An icon in the **M** (Monitoring) column shows whether you set Watchdog to monitor the service and it also indicates whether the service was installed on the server and properly configured:

-  - the service is not installed or configured.
-  - you did not set Watchdog to monitor the service.
-  - you set Watchdog to monitor the service.

# Viewing Status of Hard Disk Drives and Connected Storage Devices

➤ *To view the status of hard disk drives and other connected storage devices:*

- 1 Click the  Modules icon in the navigation pane.
- 2 Click the  Watchdog icon in the Modules group.
- 3 Click the Disks tab.

All connected (mounted) devices will be listed.

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**Note:** Watchdog might not detect properly some mounted devices.

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An icon in the S (status) column shows whether a hard disk partition or storage device is currently monitored by Watchdog and it indicates the current disk space usage rate:

-  - the disk drive or partition is not currently monitored.
-  - you started monitoring but the disk or partition has not yet been checked.
-  - the disk drive or partition is monitored and Watchdog reports that disk space usage has not reached the threshold you defined.
-  - the disk drive or partition is monitored and Watchdog reports that disk space usage has reached the threshold you defined and soon there will be no free space left on that disk or partition.

An icon in the M (monitoring) column shows whether you set Watchdog to monitor disk space usage on a storage device or disk partition:

-  - you did not set Watchdog to monitor the disk space or partition.
-  - you set Watchdog to monitor the disk space or partition.

The **Device** and **Mount point** columns show information on storage device and the partition mount point. The **Mount point** column shows hyphen (-) if a partition is no longer connected to the file system: when the partition is reconnected to the system, Watchdog will resume monitoring it.

The **Disk space usage rate** column shows the amount of disk space that can be used without drawing your attention. You can specify the amount of disk space either in percentage from total amount or in measurement units: gigabytes, megabytes or kilobytes. When the specified amount is reached, Watchdog will notify you and run the command you defined. A hyphen (-) in this column shows that the partition or device is not monitored.

The **Files number rate** column shows the amount of files or directories that can be stored on the file system without drawing your attention. The number of files or directories is limited not only by disk space, but also by the file system capacity. You can specify either the exact number of files and directories (if you know it) or a percent from the total amount. Watchdog will notify you when the specified amount is reached. A hyphen (-) in this column shows that the partition or device is not monitored.

The **Command** column shows the command that Watchdog will run when the disk space threshold is reached.

## CHAPTER 2

# Viewing CPU and RAM Usage Statistics

➤ *To view the statistics on CPU and RAM usage by system services:*

- 1 Click the  Modules icon in the navigation pane.
- 2 Click the  Watchdog icon in the Modules group.
- 3 Click the **Statistics** tab.
- 4 In the **Statistics presentation preferences** group, select the period and system services for which you would like to view statistics.
- 5 Click **Apply**.

CPU and RAM usage diagrams will be presented on the screen. The CPU Usage diagram will show the total load for all CPUs your server may have.

## CHAPTER 3

# Viewing Server Scanning Reports

➤ *To view the report for the last system scan:*

- 1 Click the  Modules icon in the navigation pane.
- 2 Click the  Watchdog icon in the Modules group.
- 3 Click the Security tab.

A detailed report will be presented on the screen. If you wish to run a new scan, click the



Start icon in the Tools group.

## Troubleshooting

**Issue:** When I stop Plesk service, it starts automatically, and the module does not seem to work properly.

**Resolution:** Make sure you did not remove the Plesk event handlers that are required for the proper work of the module:

```
Service started lowest (0) psaadm /usr/local/psa/admin/bin/php
/usr/local/psa/admin/bin/modules/watchdog/wd --monit-
service=<new_service> --plesk-name
Service stopped lowest (0) psaadm /usr/local/psa/admin/bin/php
/usr/local/psa/admin/bin/modules/watchdog/wd --unmonit-
service=<new_service>
--plesk-name
```

**Note:** If you use Debian Linux or Ubuntu Linux, the path to Watchdog's system files is `/opt/psa/admin/modules/watchdog/`.

**Issue:** No alerts are delivered.

**Resolution:** Please check if the outgoing SMTP server settings you specified are correct.