

**Parallels<sup>®</sup> Plesk Panel**

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**Parallels Plesk Panel 9.0 for Linux/Unix  
System Monitoring Module  
Administrator's Guide**

# Copyright Notice

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# Preface

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## Typographical Conventions

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

Formatting convention	Type of Information	Example
<b>Special Bold</b>	Items you must select, such as menu options, command buttons, or items in a list.	Go to the <b>QoS</b> 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 style sheet selectors, files and directories, and CSS fragments.	The license file is called <code>license.key</code> .

<b>Preformatted Bold</b>	What you type, contrasted with on-screen computer output.	Unix/Linux: <b># cd /root/rpms/php</b> Windows: <b>&gt;cd %myfolder%</b>
Preformatted	On-screen computer output in your command-line sessions; source code in XML, C++, or other programming languages.	Unix/Linux: <b># ls -al /files</b> total 14470 Windows: <b>&gt;ping localhost</b> Reply from 127.0.0.1: bytes=32 time<1ms TTL=128

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## Feedback

## About the Module

If you have found a mistake in this guide, or if you have suggestions or ideas on how to improve this guide, please send your feedback using the online form at <http://www.parallels.com/en/support/usersdoc/>. Please include in your report the guide's title, chapter and section titles, and the fragment of text in which you have found an error.

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 > **Watchdog**. A list of Parallels Plesk Panel services will be displayed.
- 2 Click the **Preferences** icon in the **Tools** group.
- 3 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 Parallels Plesk Panel 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 the Parallels Plesk 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 Parallels Plesk 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 Parallels Plesk Panel 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 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. If your Parallels Plesk Panel server is not running SMTP service, be sure to specify another remote mail server, otherwise, Watchdog will not be able to send you alerts.

**4** 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 Go to **Modules > Watchdog**.

All services controlled by Parallels Plesk Panel 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.

 - the service is no longer monitored by Watchdog because this service was unstable.

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.


## 2 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.
- 3** 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 Parallels Plesk Panel administrator's account on any event.

➤ **To stop monitoring a specific service:**

- 1** Go to **Modules > Watchdog**.
- 2** Click a  icon corresponding to the service you would like Watchdog to stop monitoring.

➤ *To stop monitoring all services:*

**1** Go to **Modules > Watchdog**.

**2** 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 12) 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 Go to **Modules > Watchdog > 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.

2 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.
- 3** 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** Go to **Modules > Watchdog > the Disks** tab.
- 2** Click an icon  corresponding to the partition you would like Watchdog to stop monitoring.

➤ ***To stop monitoring all partitions:***

- 1** Go to **Modules > Watchdog > the Disks** tab.
- 2** 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 disk partitions, but all system services (see page 9) will stop being monitored.

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## Setting Up and Starting Security Scanning

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

- 1 Go to **Modules > Watchdog > the Preferences** tab.
- 2 Specify how often Watchdog should scan the server for malicious code in the **Repeat security scanning** drop-down box.
- 3 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 Go to **Modules > Watchdog > the Security** tab.
- 2 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 Go to **Modules > Watchdog > the Preferences** tab.
- 2 Select the **disabled** value from the **Repeat security scanning** drop-down box.
- 3 Click **Apply**.

## Viewing Status of System Services

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






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

OR




- Click **Modules > Watchdog**. A list of Parallels Plesk Panel 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.
-  - the service is no longer monitored by Watchdog because this service was unstable.

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 Go to **Modules > Watchdog > the Disks tab.**
- 2 View all connected (mounted) devices 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.

# Viewing CPU and RAM Usage Statistics

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

- 1 Go to **Modules > Watchdog > the Statistics** tab.
- 2 In the **Statistics presentation preferences** group, select the period and system services for which you would like to view statistics.
- 3 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.

# Viewing Server Scanning Reports

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

- 1 Go to **Modules > Watchdog > the Security** tab.
- 2 View the 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 Parallels Plesk Panel service, it starts automatically, and the module does not seem to work properly.

*Resolution:* Make sure you did not remove the Parallels Plesk Panel 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/`.

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*Issue:* No alerts are delivered.

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