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# **phpservermon Documentation**

***Release 3.2.0***

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**Nov 22, 2018**



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Contents:



### 1.1 Summary

PHP Server Monitor is a script that checks whether your websites and servers are up and running. It comes with a web based user interface where you can manage your services and websites, and you can manage users for each server with a mobile number and email address.

### 1.2 Features

- Monitor services and websites (see below).
- Email, SMS, Pushover and Telegram notifications.
- View history graphs of uptime and latency.
- User authentication with 2 levels (administrator and regular user).
- Logs of connection errors, outgoing emails and text messages.
- Easy cronjob implementation to automatically check your servers.

#### 1.2.1 Servers

There are two different ways to monitor a server:

- Service

A connection will be made to the entered ip or domain, on the given port. This way you can check if certain services on your machine are still running. To check your IMAP service for example, enter port 143.
- Website

You can enter a link to a website, it will then use cURL to open the website and check the HTTP status code. If the HTTP status code is in the 4xx range, it means an error occurred and the website is not accessible to the

public. You can also set a regular expression to match for content on the page itself. If the regular expression returns no matches, the website is considered down. In both cases the script will return a “status offline”, and will start sending out notifications.

## 1.2.2 Notifications

Each server has its own settings regarding notification. You can choose for email, text message (SMS), Pushover.net and Telegram notifications. The following SMS gateways are currently available:

- Clickatell - <<https://www.clickatell.com>>
- Inetworx - <<https://www.inetworx.ch>>
- Messagebird - <<https://www.messagebird.com>>
- Mosms - <<https://www.mosms.com>>
- Smsglobal - <<https://smsglobal.com/>>
- SMSit - <<https://www.smsit.dk/>>
- Spryng - <<https://www.spryng.nl>>
- Textmarketer - <<https://www.textmarketer.co.uk>>
- FreeVoipDeal - <<https://www.freevoipdeal.com>>
- Nexmo - <<https://www.nexmo.com/>>
- OctoPush - <<https://www.octopush.com/>>
- FreeMobile (FR) - <<https://mobile.free.fr/>>
- Twilio - <<https://twilio.com>>
- CM Telecom - <<https://www.cm.com/>>
- GatewayAPI - <<https://gatewayapi.com/>>
- SolutionsInfini - <<https://solutionsinfini.com/>>
- Plivo - <<https://www.plivo.com/>>
- Callr - <<https://www.callr.com/>>

Please note: for these gateways you will need an account with sufficient credits.

## 1.3 Download

The latest version can be downloaded from <http://www.phpservermonitor.org/>.



## CHAPTER 2

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### Requirements

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- Web server
- MySQL database
- PHP 5.5.9+
- PHP cURL package
- PHP PDO mysql driver



### 3.1 Install

#### 3.1.1 Upload files

The first step is to upload your files to your webserver where you can reach them. You can rename the folder of the server monitor without any problems.

#### 3.1.2 Run install.php

You can now run the install.php script located in the root dir.

The install script will guide you through setting up your configuration file and create the required database tables. If for some reason you can not generate your configuration file, you can do it manually using the steps below. Rename the config.php.sample file to config.php, then open the config.php file with a plain text editor such as Notepad. In this file you need to change the database information, which is stored using php's define() function. To change these values correctly, only update the second parameter of the function:

```
define('PSM_DB_HOST', 'db_host');  
define('PSM_DB_NAME', 'db_name');  
define('PSM_DB_USER', 'db_user');  
define('PSM_DB_PASS', 'db_user_password');  
define('PSM_DB_PORT', 'most likely 3306, may also be empty');
```

For example: to change your username you should **ONLY** change the 'db\_user' part. Do **NOT** remove the quotes around your username as that will result in an error. After you have created the config.php, run the install.php again to create the database structure.

### 3.1.3 Configure your installation

Open the main page of the server monitor, by simply navigating to `index.php`. In the menu on the top find “Config”, it will open a page where you can change the necessary information for your tool.

## 3.2 Upgrade

For a regular upgrade, follow these steps:

- Replace all files except(!) `config.php`
- Navigate to `install.php`
- Follow the steps
- Enjoy

### 3.2.1 From 2.0

The structure of the project has changed quite a bit since 2.0, but if you have not made any local changes the upgrade is quite easy. The best thing to do is to replace all your current files with the new release, except for the `config.inc.php` file. The config file has actually been renamed since 2.0, but if you keep it there while upgrading the install script will use it to prefill your database information. The rest of the steps are identical to a regular upgrade (see above), except that you can remove the old `config.inc.php` file afterwards.

### 3.2.2 From 2.1

One of the new features introduced in 3.0 is a user authentication system. Because the users in previous versions do not have a password, after upgrading you would not be able to login. For that reason the upgrade script will ask you to create a new account during the upgrade, which you can then use to change the password for the existing accounts. If, for whatever reason this does not work, the upgrade script automatically changes the username of all existing users to their email addresses, which you could use for the forgot password screen.

## 3.3 Installing from GitHub

If you have downloaded the source from GitHub (and not a pre-built package), the dependencies are not included. To be able to run an installation from the repo, you need to run the following command to install the dependencies:

```
php composer.phar install
```

## 3.4 Setting up a cronjob

In order to keep the server monitor up to date, the status updater has to run regularly. If you’re running this on a linux machine, the easiest way is to add a cronjob. If it is your own server or you have shell access and permission to open the crontab, locate the “crontab” file (usually in `/etc/crontab`, but depends on distro). Open the file (`vi /etc/crontab`), and add the following (change the paths to match your installation directories) to run it every 15 minutes:

```
*/15 * * * * root /usr/bin/php /var/www/html/phpservermon/cron/status.cron.php
```

As you can see, this line will run the status.cron.php script every 15 minutes. Change the line to suit your needs. If you do not have shell access, ask your web hosting provider to set it up for you.

Please note that some distros have user-specific crontabs (e.g. Debian). If that is the case, you need to omit the user part:

```
*/15 * * * * /usr/bin/php /var/www/html/phpservermon/cron/status.cron.php
```

The update script has been designed to prevent itself from running multiple times. It has a maximum timeout of 10 minutes. After that the script is assumed dead and the cronjob will run again. If you want to change the 10 minutes timeout, find the constant “PSM\_CRON\_TIMEOUT” in src/includes/psmconfig.inc.php. You can also provide it as an argument (in seconds!). The following example would change to timeout to 10 seconds:

```
php status.cron.php --timeout=10
```

By default, no URLs are generated for notifications created in the cronjob. To specify the base url to your monitor installation, use the “-uri” argument, like so:

```
php status.cron.php --uri="http://www.phpservermonitor.org/mymonitor/"
```

### 3.4.1 CPanel

If you're work with cPanel you can follow these steps:

1. Log into your cPanel account
2. Go to cron jobs
3. Add a new cronjob
  - Type `*/15` in the minute field
  - Type `*` in the other field
  - Type `php /home2/<Type here your cPanel username>/public_html/phpservermon/cron/status.cron.php` in the command field
4. Submit

### 3.4.2 Cronjob over web

To allow scheduled status updates over the web, the commandline check is extended with a check on allowed IP address(es).

In config.php add following line:

```
// PHP 7.0.0 and higher
define('PSM_CRON_ALLOW', array("xxx.xxx.xxx.xxx", "yyy.yyy.yyy.yyy", "zzz.zzz.zzz.zzz
↪"));
// lower versions
define('PSM_CRON_ALLOW', serialize(array("xxx.xxx.xxx.xxx", "yyy.yyy.yyy.yyy", "zzz.
↪zzz.zzz.zzz.zzz")));
```

After that, you can hit the url `http(s)://yourmonitor.com"/cron/status.cron.php` over the web from your allowed IP.

## 3.5 Troubleshooting

If you have problems setting up or accessing your monitor and do not know why, enable debug mode to turn on error reporting. To enable debug mode, add the following line to your config.php file:

```
define('PSM_DEBUG', true);
```

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### Frequently Asked Questions

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## 4.1 Users

### 4.1.1 What are the differences between the user levels?

There are 2 user levels available: regular user and administrator.

Administrators:

- Manage servers.
- Manage users.
- Edit global configuration.

Regular users:

- View the status of their assigned servers.
- View the history and logs of their assigned servers.
- Run the updater on their assigned servers.

## 4.2 Servers

### 4.2.1 What is the difference between a service and a website?

For websites, the monitor attempts to open a regular web page, just like you do in your browser. It will attempt to retrieve its contents, and also check the HTTP status code (for example “404 not found” will cause an error). You can then even add a check to make sure the content of the website includes a certain string or matches a certain regular expression. Please note, it only retrieves the contents and does not execute any Javascript. Your search pattern will not work if it depends on Javascript being executed.

For services, the monitor only attempts to connect to the IP address and specified port to check whether the server is listening on that port. For example, if you are running a webserver it will usually listen on port 80 for incoming connections. So if the monitor is able to connect to the server on port 80, you know the webserver is running and accepting connections. It does not, however, mean that your website is available to your users, because it might have PHP errors or database problems. This can be monitored using the website type with a pattern search as described above.

## 4.2.2 Are requests made by the monitor included in my website statistics?

There are two different ways to gather statistics. One way is to include a piece of Javascript in your HTML, e.g. for Google Analytics and Piwik. The other way is to parse the access logs created by your webserver software, which does not require any changes to your code, and is done by tools like Awstats.

When using tools such as Google Analytics, the monitor requests will not show up in your statistics, because the monitor does not execute any Javascript. Tools that parse your raw access logs like Awstats, will include the requests made by the monitor. To make sure these requests can be identified, the monitor uses a custom user agent, which you can usually filter out. The user agent of the monitor looks like:

```
Mozilla/5.0 (compatible; phpservermon/3.0.1; +http://www.phpservermonitor.org)
```

## 4.2.3 What is the log retention period?

The monitor uses 2 different tables in the database to store history information regarding servers. The first one is called the “uptime” table. This one keeps full track of the past 7 days, so that detailed information is available (e.g. which checks failed/passed etc). This allows the monitor to create a detailed graph on the server info page. In order to prevent the uptime table growing beyond reasonable, after a week the uptime records are archived to a different table. Archiving means that per day only one record is stored with averages. This still allows some basic statistics, although they are not as detailed as the uptime records.

The retention period tells the monitor how long to keep records in the archive table.

## 4.3 Configuration

### 4.3.1 How can I change the text of the email / SMS?

Go to the folder “src/lang”, open the language file that corresponds to the selected language (default is English (“en\_US.lang.php”). Scroll all the way to the bottom until you spot this line:

```
'notifications' => array(
```

After that you will see the lines that hold the notification messages. For example:

```
'off_sms' => 'Server \'%LABEL%\'' is DOWN: ip=%IP%, port=%PORT%. Error=%ERROR%',
```

The first part of this line, ‘off\_sms’, is the name of the notification. You should not change this. The second part is the actual message. There are a few variables you can use in your message:

- %LABEL% - The name of the server
- %IP% - The ip of the server
- %PORT% - The port of the server
- %ERROR% - This one only works for the off\_\* messages and contains the error returned by the monitor



## 4.4 Notifications

### 4.4.1 How do I setup Telegram?

A few steps are required to get Telegram notifications working. You need to be an administrator for this part.

1. Go to @botfather (<https://t.me/BotFather>) and type /start .
2. Type /newbot and give your bot an unique name.
3. Save the API token.

### 4.4.2 How do I sent Telegram notifications to a person?

1. Go to @cid\_bot ([https://t.me/cid\\_bot](https://t.me/cid_bot)) and start.
2. Save your chat id.
3. Press the activation button.
4. Go to your chat with the bot and press start of type /start.

### 4.4.3 How do I sent Telegram notifications to a group?

1. Add @cid\_bot ([https://t.me/cid\\_bot](https://t.me/cid_bot)) to the group.
2. Save the chat id (including the -).
3. Remove @cid\_bot from the group.
4. Add your bot to the group.

### 4.4.4 How do I sent Telegram notifications to a channel?

1. Create a public channel.
2. Add the bot as an administator to the channel.
3. Save chat id as: @channelname.

### 4.4.5 What is the username of my bot?

1. Go to profile on the monitor.
2. Press activate.
3. A button will appear, this will direct you to your Telegram bot.



The code is available from <https://github.com/phpservermon/phpservermon>. There is a master branch, which is stable and always reflects the latest release. The develop branch is used for ongoing development and should not be considered stable. If you would like to contribute a patch or feature, please fork the develop branch and send a pull request.

## 5.1 Languages

The server monitor uses language files, which are stored in the directory “src/lang”. The name of the language file consists of the language code (ISO 639-1) and the country code (ISO 3166-1), separated by an underscore. The extension is “.lang.php”.

### 5.1.1 Locales

Each language file should contain a ‘locale’ key which can be used for formatting dates and times. This ‘locale’ key must include the locales for different server environments:

- Linux / OS X: same as filename (language code and country code separated by underscore)
- Windows: <http://msdn.microsoft.com/en-US/library/39cwe7zf%28v=vs.80%29.aspx>

For more information, see <http://www.php.net/manual/en/function.setlocale.php>

For display purposes, the language file should also provide the text direction (ltr / rtl) and language subtag. Unfortunately they do not match 1:1 with the locales used for the server. Valid language subtags can be found on <http://www.iana.org/assignments/language-subtag-registry/language-subtag-registry>.

### 5.1.2 Adding a new language

To add a new language, follow these steps:

- Create a new file in the directory “src/lang” named “{locale}.lang.php”.

- Copy the contents of the file “en\_US.lang.php” to your new file.
- Your new language should now be available on the config page.
- Translate :-)
- Please send a pull request on github (<https://github.com/phpservermon/phpservermon>) so it can be included in the next release :-)

## 5.2 Getting started

### 5.2.1 Vagrant

If you are not familiar with Vagrant, have a look at <https://www.vagrantup.com/> for more information (it is awesome). To ease development, a Vagrantfile has been included along with a full provisioning profile generated using PuPHPet (<https://puphpet.com>). The Vagrantfile is configured to set up a CentOS 6.5 box with PHP 5.6 and MySQL installed, with a local port forward on port 8080. To set up the development environment, make sure you have Vagrant and VirtualBox (<https://www.virtualbox.org/>) installed, then run:

```
vagrant up
```

The initial setup may take some time as the virtual machine needs to be provisioned. After that, you can access your development environment by navigating to <http://localhost:8080/psm/> or <http://192.158.56.101/psm/>. The config.php file has been created automatically, but the first time you do need to run through the install wizard.

### 5.2.2 Code

All code related to phpservermon lives in the “psm” namespace, which can be found under “src/psm”.

The Router (<https://github.com/phpservermon/phpservermon/blob/develop/src/psm/Router.class.php>) is used to load the modules. All modules are registered inside the Router class with a unique ID (see getModules()), and can either be loaded manually (\$router->run('mod')), or if no module is given it will attempt to discover the module from the \$\_GET['mod'] var. If no valid module or controller is found, it will fall back to the default module.

The module var may exist of 2 parts, separated by an underscore. The first part is the ID of the module, and the second part is the ID of the controller registered in the module. If no controller ID is found, it will attempt to load the controller with the same ID as the module.

Examples

```
$router->run('config'); // module ID "config" and controller ID also "config" (same_  
↳as $router->run('config_config'))  
$router->run('server_status'); // module ID "server" and controller ID "status"
```

If the user is not logged in and login is required, it will automatically load the user login controller without throwing an error.

### 6.1 Credits

The following people have contributed to the development of PHP Server Monitor:

- Pepijn Over - <https://github.com/dopeh>
  - Creator
- Samuel Denis-D'Ortun - <https://github.com/sadortun>
  - Project developer
- Tim Zandbergen - <https://github.com/TimZ99>
  - Project developer & maintainer
- Jérôme Cabanis - <https://github.com/Abawell>
  - History graphs
  - Date localization
  - Mobile compatibility
  - Various fixes and improvements
- Ward Pieters - <https://github.com/WardPieters>
  - GatewayAPI, Plivo, Callr and SolutionsInfini SMS Gateway
  - Other SMS Gateways rewritten
- Perri Vardy-Mason - <https://github.com/VeoPVM>
  - Textmarketer SMS gateway
  - Various fixes and improvements
- Luiz Alberto S. Ribeiro - <https://github.com/madeinnordeste>
  - Bootstrap implementation

- Portuguese Brazilian translation
- Michael Greenhill - <https://github.com/doctorjbeam>
  - Status page
- Andreas Ek - <https://github.com/EkAndreas>
  - Mosms SMS gateway
- Paul Feakins
  - Website pattern / regular expression search
- nerdalertdk - <https://github.com/nerdalertdk>
  - Smsit SMS gateway
- Victor Macko - <https://github.com/victormacko>
  - SMSGlobal SMS gateway
- Julien Lebouteiller - <https://github.com/Halvra>
  - Custom time-out per server
- Mathias Lange - <https://github.com/remmedia>
  - Pushover.net support
- Alexander Moore - <http://www.famfamfam.com>
  - Icon
- Michiel van der Wulp - <https://github.com/mvdw>
  - FreeVoipDeal SMS gateway
- Luis Rodriguez - <https://github.com/lrrp>
  - Nexmo SMS gateway

## 6.2 Translators

The following people have contributed to the translation of PHP Server Monitor:

- Bulgarian
  - Plamen Vasilev - <https://github.com/PVasileff>
- Chinese
  - manhere - <https://github.com/manhere>
- Czech
  - Simon Berka - <https://github.com/berkas1>
- Danish
  - nerdalertdk
- Estonian
  - Richard A. - <https://github.com/ItsRichardRaz>
- Finnish

- Sami Nieminen - <https://github.com/celeroncool>
- French
  - David Ribeiro
  - Jérôme Cabanis
- German
  - Brunbaur Herbert
  - Jean Pierre Kolb - <https://github.com/JPKCom>
- Italian
  - Marco Gargani
- Japanese
  - Vus520 - <https://github.com/vus520>
  - Rht0910 - <https://github.com/rht0910>
- Korean
  - Ik-Jun
- Persian
  - Javad Evazzadeh Kakroudi - <https://github.com/evazzadeh>
- Polish
  - Arkadiusz Klenczar - <https://github.com/aklenczar>
- Portuguese (Brazil)
  - Luiz Alberto S. Ribeiro
- Russian
  - Roman Beylin - <https://github.com/roman-beylin>
  - Yuriy Lyutov - <https://github.com/delysh>
  - Alexell - <https://github.com/Alexell>
- Spanish
  - Klemens Häckel - <http://clickdimension.wordpress.com>
  - Luis Rodriguez - <https://github.com/ldrrp>
  - Mauro Vietri - <https://github.com/Esselans>
- Swedish
  - Andlil - <https://github.com/andlil>
- Turkish
  - Haydar Kulekci - <https://github.com/hkulekci>

## 6.3 Vendors

The following libraries are being used by PHP Server Monitor:

- jqPlot - <http://www.jqplot.com>
- Twitter Bootstrap - <http://getbootstrap.com>
- Bootstrap Multiselect - <https://github.com/davidstutz/bootstrap-multiselect>
- PHP Mailer - <https://github.com/PHPMailer/PHPMailer>
- php-pushover - <https://github.com/kryap/php-pushover>
- Twig - <http://twig.sensiolabs.org>



## CHAPTER 7

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### Copyright

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## CHAPTER 8

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### Indices and tables

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- `modindex`
- `search`