# Installation Manual

Installing Chronos on a server is a straightforward procedure and only requires about 1 to 2 hours of time.

## System Requirements

To install Chronos, you will need an Internet-connected server running a PHP-capable web server and database software. The recommended tested requirements are listed below.

* Apache 2.4 or nginx 1.6
  + Configured to serve files from a “**public**” directory under the installation directory
* PHP 7.0
  + Required extensions: OpenSSL, PDO, Mbstring, Tokenizer
* MySQL 5.6

For this installation manual, an Ubuntu Linux 15.10 installation or Windows 10 installation are assume. Windows command will follow Linuxcommands. We will also assume the following paths:

* Installation path
  + Linux : **/var/www/chronos**
  + Windows : **C:/Websites/chronos**
* Document root of web server
  + Linux **/var/www/chronos/public**
  + Windows **C:/Websites/chronos/public**
* URL of website is **http://chronos.chrs.pw**
* Web server user is **www-data**
* MySQL database address is **localhost**

1. Please run the following commands to check your environment:

Linux and Windows: **php –version**

PHP 7.0.5-2+deb.sury.org~wily+1 (cli) ( NTS )

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Zend Engine v3.0.0, Copyright (c) 1998-2016 Zend Technologies

with Zend OPcache v7.0.6-dev, Copyright (c) 1999-2016, by Zend Technologies

Linux: **mysql -uroot -p -e "SELECT VERSION();"**

Windows: Use mysql workbench to run **"SELECT VERSION();"**

Enter password:

+-------------------------+

| VERSION() |

+-------------------------+

| 5.6.28-0ubuntu0.15.10.1 |

+-------------------------+

1. Ensure that your web server and PHP are enabled on your server by creating a sample “index.php” file in the document root and load the website in your web browser.
2. Linux: **cd /var/www/chronos/public**

Windows : **C:/Websites/Chronos**

1. Linux or Windows: **echo "<?php phpinfo(); ?>" > index.php**

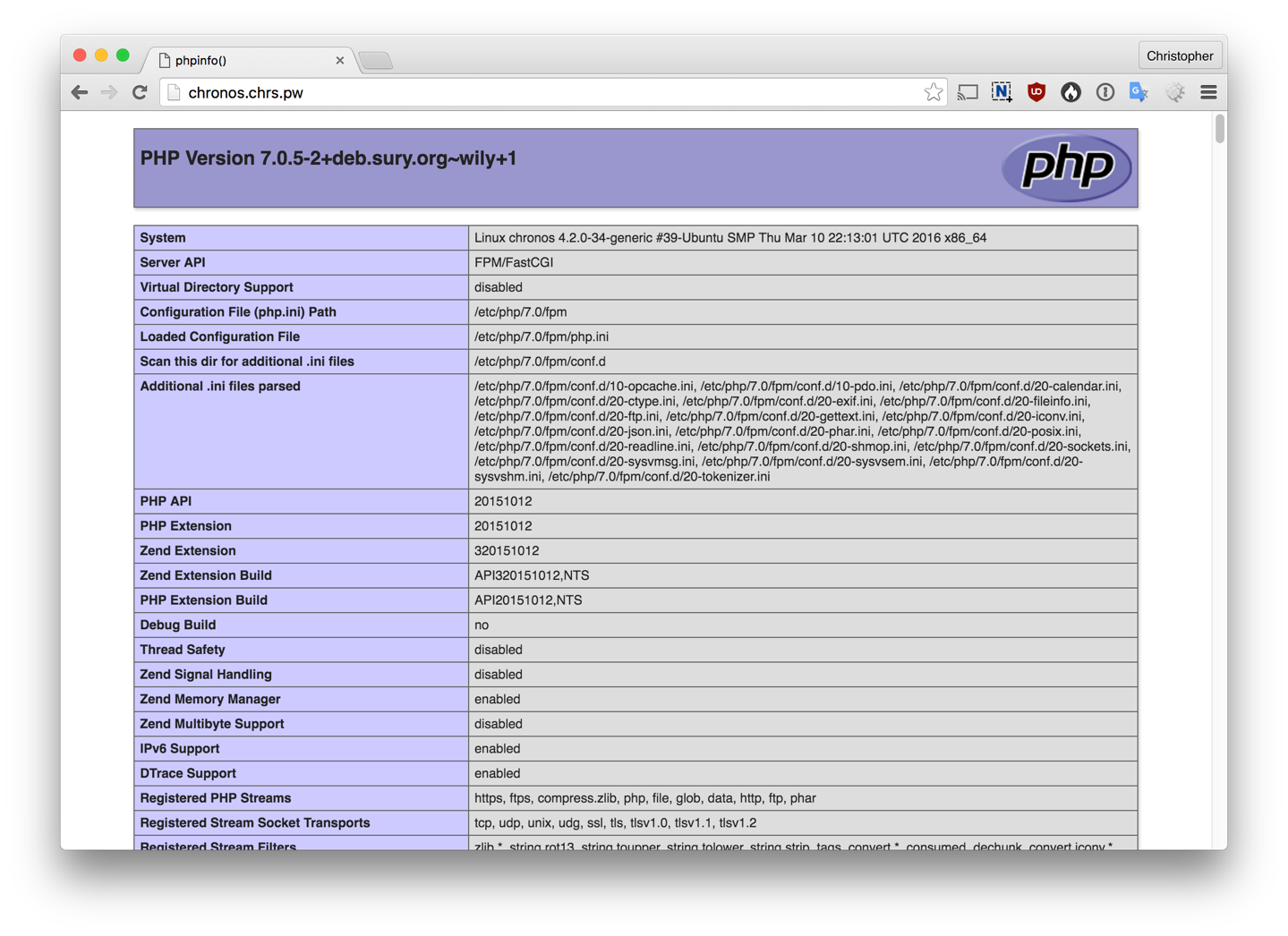


Figure 24: PHP test file output

## Downloading Chronos

Obtain a Chronos release by downloading it from the official repository, and extract it into your installation directory.

**Linux**

1. Change your directory to the installation path:

Linux **cd /var/www/chronos**

1. Download the Chronos release:

Linux **wget \**

[**https://github.com/Shmeve/soen343-emu/releases/download/v0.0.1/chronos.tar.gz**](https://github.com/Shmeve/soen343-emu/releases/download/v0.0.1/chronos.tar.gz)

1. Extract the Chronos system files to the installation path:

Linux **tar --strip-components=1 -zxvf chronos.tar.gz**

**Windows**

1. Download the file from: [**https://getcomposer.org/download/\**](https://getcomposer.org/download/\)
2. Run the Installer

## Setting up the Database

After extracting the Chronos system files, it is necessary to create a database and a user for Chronos.

1. Log into your MySQL database as an administrative user, and issue the following commands (For windows run all mysql commands as a script in Mysql Workbench):

dev:~$ **mysql -uroot -p**

Enter password:

Welcome to the MySQL monitor. Commands end with ; or \g.

Your MySQL connection id is 3

Server version: 5.6.28-0ubuntu0.15.10.1 (Ubuntu)

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> **CREATE DATABASE chronos;**

Query OK, 1 row affected (0.00 sec)

mysql> **CREATE USER 'chronos'@'localhost' IDENTIFIED BY 'password';**

Query OK, 0 rows affected (0.00 sec)

mysql> **GRANT ALL PRIVILEGES ON chronos.\* TO 'chronos'@'localhost';**

Query OK, 0 rows affected (0.00 sec)

mysql> **FLUSH PRIVILEGES;**

Query OK, 0 rows affected (0.00 sec)

This has created a database “**chronos**” and a user “**chronos**” with password “**password**” with privileges on that database, ready for use with Chronos.

Now, you must configure Chronos with this database information.

1. First, copy the example “.env.example” configuration file:

Windows and Linux **cp .env.example .env**

1. Edit the “.env” file and change the DB variables to match the appropriate values:

DB\_HOST=localhost

DB\_DATABASE=**chronos**

DB\_USERNAME=**chronos**

DB\_PASSWORD=**chronos**

## Install Chronos

Most of the Chronos installation is done via Composer, PHP’s package manager. An install script is included to accelerate the process, which will create all necessary database tables and install all dependencies.

1. Execute install.sh (Linux) or install.bat(windows):

Linux **./install.sh**

Windows **install.bat**

All settings correct for using Composer

Downloading 1.2.0...

Composer successfully installed to: /var/www/chronos/composer.phar

Use it: php composer.phar

Application is now down.

Loading composer repositories with package information

Installing dependencies from lock file

- Installing symfony/finder (v3.1.7)

Loading from cache

[…]

Generating autoload files

> php artisan clear-compiled

> php artisan optimize

Generating optimized class loader

Compiling common classes

Migration table created successfully.

Migrated: 2016\_11\_16\_000000\_create\_users\_table

Migrated: 2016\_11\_17\_045934\_create\_rooms\_table

Migrated: 2016\_11\_17\_051557\_create\_reservations\_table

Generating optimized class loader

Compiling common classes

Application cache cleared!

Application is now live.