

# CentOS Server - Moodle

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# Moodle Checklist

# Moodle Checklist

## Moodle Checklist

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# Prerequisite

Prerequisite

# PHP Settings

## Settings

1. Check and set these settings in your php.ini

```
memory_limit
=====

memory_limit = 128M

session.save_handler
=====

session.save_handler = files

file_uploads
=====

file_uploads = On

session.auto_start
=====

session.auto_start = 0

post_max_size and upload_max_filesize
=====

post_max_size = 500M
upload_max_filesize = 500M
```

## Restart Server

1. Restart the web server after setting the above settings

```
|systemctl restart httpd.service|
```

# PHP Extensions

## PHP Extensions

1. Install the below list of PHP extensions with the command below (a lot of these extensions are installed by default when installing PHP). See [Install PHP](#) on how to install PHP.

- The **iconv** extension
- The **mbstring** extension
- The **curl** extension
- The **openssl** extension
- The **tokenizer** extension
- The **xmlrpc** extension
- The **soap** extension
- The **ctype** extension
- The **zip** extension
- The **gd** extension
- The **simplexml** extension
- The **spl** extension
- The **pcre** extension
- The **dom** extension
- The **xml** extension
- The **intl** extension
- The **json** extension

```
yum install php-mbstring curl php-xmlrpc php-soap php-gd php-xml php-intl php-json
```

Prerequisite

# MySQL Settings

## MySQL settings

### Adding the configuration settings

1. Open my.cnf file

```
| vi /etc/my.cnf |
```

2. Add the below config settings to the end of the file

```
[client]
default-character-set = utf8mb4

[mysqld]
innodb_file_format = Barracuda
innodb_file_per_table = 1
innodb_large_prefix

character-set-server = utf8mb4
collation-server = utf8mb4_unicode_ci
skip-character-set-client-handshake

[mysql]
default-character-set = utf8mb4
```

### Restart the MySQL daemon

1. Restart the MySQL daemon after adding the configuration changes

```
systemctl restart mysqld
```

# MySQL Database

## Setting up the MySQL Database

1. Log into MySQL as root, providing the password at the prompt

```
|mysql -u root -p|
```

2. Create the database with the command below

```
|CREATE DATABASE moodle DEFAULT CHARACTER SET utf8mb4 COLLATE utf8mb4_unicode_ci;|
```

3. Create a user/password combination with appropriate permissions for the database (replace moodle, moodleuser and yourpassword with an appropriate database name, username and password)

```
|GRANT SELECT, INSERT, UPDATE, DELETE, CREATE, CREATE TEMPORARY TABLES, DROP, INDEX, ALTER ON moodle.* TO 'moodleuser'@'localhost' IDENTIFIED BY 'yourpassword';|
```

4. Flush the privileges

```
|flush privileges;|
```

5. Exit the database

```
|exit;|
```

# Folder Structure

## Creating a Moodle Folder Structure

### Moodle Data Folder

1. Navigate to /var/www

```
| cd /var/www |
```

2. Create Moodle datafolder, replacing "foldername" with an appropriate name

```
| mkdir moodledata- foldername |
```

3. Change the owner of the folder

```
| chown -R apache:apache moodledata- foldername |
```

### Moodle Installation Folder

1. Navigate to /var/www

```
| cd /var/www |
```

2. Create Moodle datafolder, replacing "foldername" with an appropriate name

```
| mkdir foldername |
```

# Virtual Host File

## Moodle Virtual Host File

1. Create a virtual host configuration file for Moodle, like the example below (replacing subdomain.domain.com with an appropriate name). For more information on how to do this, see [Apache Virtual Hosts](#)

```
<VirtualHost subdomain.domain.com: 80>
    ServerName subdomain.domain.com

    Redirect permanent / https://subdomain.domain.com

</VirtualHost>

<VirtualHost subdomain.domain.com: 443>
    ServerName subdomain.domain.com

    DocumentRoot "/var/www/subdomain.domain.com"
    <Directory "/var/www/subdomain.domain.com">

        Options Indexes FollowSymLinks MultiViews
        # AllowOverride controls what directives may be placed in .htaccess files.
        AllowOverride All

        # Controls who can get stuff from this server file
        Order allow,deny
        Allow from all

    </Directory>

    <IfModule mpm_peruser_module>
        ServerEnvironment apache apache
    </IfModule>
```

</VirtualHost>

# SSL Certificate

## Obtaining a Certificate

1. Run the command below (replacing example.com with the actual domain details)

```
|certbot --apache -d example.com|
```

2. Follow the prompts of the application
3. At the option, "Please choose whether or not to redirect HTTP traffic to HTTPS, removing HTTP access," choose 1. Https redirection is configured in the domains conf file

```
Please choose whether or not to redirect HTTP traffic to HTTPS, removing HTTP access.
```

```
- - - - -
```

```
1: No redirect - Make no further changes to the webserver configuration.
```

```
2: Redirect - Make all requests redirect to secure HTTPS access. Choose this for  
new sites, or if you're confident your site works on HTTPS. You can undo this  
change by editing your web server's configuration.
```

```
- - - - -
```

```
Select the appropriate number [1-2] then [enter] (press 'c' to cancel):1
```

For more information, see [Let's Encrypt Certificates](#)

# Installation

# Installing Moodle

Remember to configure DNS in Xneelo console if required

## Downloading Moodle

1. Go on this page and select the installation which suits your needs
2. Navigate to /tmp folder and download the Moodle package with wget (replacing `https://link-to-moodle-package.com` with the appropriate download link for Moodle)

```
cd /tmp  
wget https://link-to-moodle-package.com
```

3. Untar the downloaded package (replacing moodle-package.tar.gz with the appropriate name of the downloaded package)

```
tar -zxvf moodle-package.tar.gz
```

4. Move the uncompressed Moodle folder to /var/www (replacing moodle-folder with the name of the uncompressed folder)

```
mv moodle-folder /var/www
```

5. Change the owner of the folder and all the files

```
chown -R /var/www/moodle-folder
```

## Moodle Web Installation

1. Open your browser, you should get a page similar to this when you open the URL of the website. Select the language and click Next

---

# Installation

Language

## Choose a language

Please choose a language for the installation. This language will also be used as the default language for the site, though it may be changed later.

Language

English (en)



Next »



2. At the next screen change the Moodle data directory to the appropriate directory

Installation - Moodle 3.4

myblog.com/install.php

Certificate error

Confirm paths

**Web address**

The full address where Moodle will be accessed i.e. the address that users will enter into the address bar of their browser to access Moodle.

It is not possible to access Moodle using multiple addresses. If your site is accessible via multiple addresses then choose the easiest one and set up a permanent redirect for each of the other addresses.

If your site is accessible both from the Internet, and from an internal network (sometimes called an Intranet), then use the public address here.

If the current address is not correct, please change the URL in your browser's address bar and restart the installation.

**Moodle directory**

The full path to the directory containing the Moodle code.

**Data directory**

A directory where Moodle will store all file content uploaded by users.

This directory should be both readable and writeable by the web server user (usually 'www-data', 'nobody', or 'apache').

It must not be directly accessible over the web.

If the directory does not currently exist, the installation process will attempt to create it.

**Web address**

https://www.myblog.com

**Moodle directory**

/var/www/html

**Data directory**

/var/www/moodledata

« Previous

Next »



3. Select the appropriate database driver

# Installation

Database

## Choose database driver

Moodle supports several types of database servers. Please contact server administrator if you do not know which type to use.

Type

Improved MySQL (native/mysqli)



« Previous

Next »



4. Enter the database details of the database that was created

# Installation

## Database

### Database settings

#### Improved MySQL (native/mysqli)

The database is where most of the Moodle settings and data are stored and must be configured here.

The database name, username, and password are required fields; table prefix is optional.

The database name may contain only alphanumeric characters, dollar (\$) and underscore (\_).

If the database currently does not exist, and the user you specify has permission, Moodle will attempt to create a new database with the correct permissions and settings.

|                   |                                        |
|-------------------|----------------------------------------|
| Database host     | <input type="text" value="localhost"/> |
| Database name     | <input type="text" value="moodle"/>    |
| Database user     | <input type="text"/>                   |
| Database password | <input type="password"/>               |
| Tables prefix     | <input type="text" value="mdl_"/>      |
| Database port     | <input type="text"/>                   |
| Unix socket       | <input type="text"/>                   |

5. Now click and wait, after some seconds you should see the conditions, that you should accept

# Installation

## Moodle - Modular Object-Oriented Dynamic Learning Environment

### Copyright notice

Copyright (C) 1999 onwards Martin Dougiamas (<http://moodle.com>)

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See the Moodle License information page for full details:  
<http://docs.moodle.org/dev/License>

#### Confirm

Have you read these conditions and understood them?

Continue

Cancel

6. Moodle will perform some system checks to test that everything is working fine

|               |                |                                                    |    |
|---------------|----------------|----------------------------------------------------|----|
| php_extension | iconv          | ❗ must be installed and enabled                    | OK |
| php_extension | mbstring       | ❗ should be installed and enabled for best results | OK |
| php_extension | curl           | ❗ must be installed and enabled                    | OK |
| php_extension | openssl        | ❗ should be installed and enabled for best results | OK |
| php_extension | tokenizer      | ❗ should be installed and enabled for best results | OK |
| php_extension | xmlrpc         | ❗ should be installed and enabled for best results | OK |
| php_extension | soap           | ❗ should be installed and enabled for best results | OK |
| php_extension | ctype          | ❗ must be installed and enabled                    | OK |
| php_extension | zip            | ❗ must be installed and enabled                    | OK |
| php_extension | zlib           | ❗ must be installed and enabled                    | OK |
| php_extension | gd             | ❗ must be installed and enabled                    | OK |
| php_extension | simplexml      | ❗ must be installed and enabled                    | OK |
| php_extension | spl            | ❗ must be installed and enabled                    | OK |
| php_extension | pcre           | ❗ must be installed and enabled                    | OK |
| php_extension | dom            | ❗ must be installed and enabled                    | OK |
| php_extension | xml            | ❗ must be installed and enabled                    | OK |
| php_extension | xmlreader      | ❗ must be installed and enabled                    | OK |
| php_extension | intl           | ❗ should be installed and enabled for best results | OK |
| php_extension | json           | ❗ must be installed and enabled                    | OK |
| php_extension | hash           | ❗ must be installed and enabled                    | OK |
| php_setting   | memory_limit   | ❗ recommended setting detected                     | OK |
| php_setting   | file_uploads   | ❗ recommended setting detected                     | OK |
| php_setting   | opcache.enable | ❗ recommended setting detected                     | OK |

Your server environment meets all minimum requirements.



Continue

7. Click Continue and other checks will come up....

Success

tinymce\_spellchecker

Success

tinymce\_wrap

Success

logstore\_database

Success

logstore\_legacy

Success

logstore\_standard

Success

Continue

8. Click continue fill the data of admin user (Name, First, user password..)

## ▼ General

Username 

Choose an authentication method  Manual accounts

The password must have at least 8 characters, at least 1 digit(s), at least 1 lower case letter(s), at least 1 upper case letter(s), at least 1 non-alphanumeric character(s) such as as \*, -, or #

New password     

Passwords must have at least 1 non-alphanumeric character(s) such as as \*, -, or #.

☐ Force password change 

First name 

Surname 

Email address 

Email display  

City/town

Select a country  

Timezone  

Description 

9. Finally you will land on the Administrator page

The screenshot shows a web application interface for an administrator. At the top, there is a navigation bar with a hamburger menu icon, a blue button labeled 'LoI', and a user profile section showing 'Admin User' with a dropdown arrow. Below the navigation bar, the page is divided into a left sidebar and a main content area. The sidebar contains a 'Dashboard' section with links to 'Site home', 'Calendar', and 'Private files', and a 'Site administration' section. The main content area features a header for 'Admin User' with a 'Customise this page' button. Below this, the 'COURSE OVERVIEW' section states 'No course information to show.' To the right, there are three stacked widgets: 'PRIVATE FILES' (showing 'No files available' and a link to 'Manage private files...'), 'ONLINE USERS' (showing '(last 5 minutes: 1)' and the user 'Admin User'), and 'LATEST BADGES' (showing 'You have no badges to display'). At the bottom right is a 'CALENDAR' widget for 'April 2017', displaying a week view with days from Monday to Sunday.

Dashboard

- Site home
- Calendar
- Private files

Site administration

Admin User

Customise this page

COURSE OVERVIEW

No course information to show.

PRIVATE FILES

No files available

[Manage private files...](#)

ONLINE USERS

(last 5 minutes: 1)

[Admin User](#)

LATEST BADGES

You have no badges to display

CALENDAR

◀ April 2017 ▶

| Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|-----|-----|-----|-----|-----|-----|-----|
|     |     |     |     |     |     |     |

# Adding plugins

## Installing Plugins

1. Navigate to the Moodle plugins website (<https://moodle.org/plugins/>)
2. Search for the plugin
3. Download the latest version of the plugin, preferably matching the production version of Moodle
4. Login to your Moodle site as an admin and go to Administration > Site administration > Plugins > Install plugins
5. Upload the ZIP file. You should only be prompted to add extra details (in the Show more section) if your plugin is not automatically detected

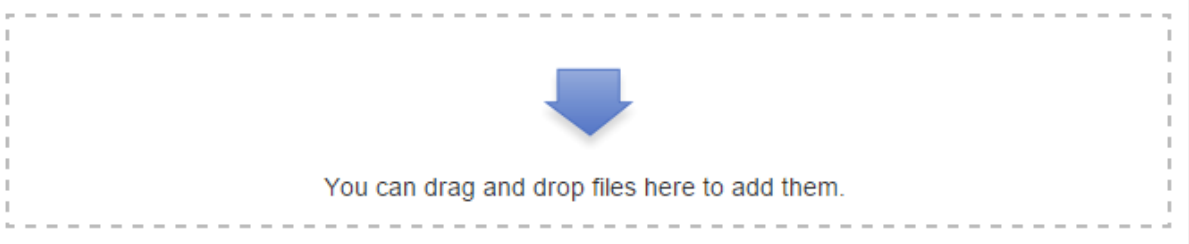
### Plugin installer

Install plugins from the Moodle plugins directory ?

▼ Install plugin from ZIP file ?

**ZIP package\*** ?  

Choose a file...



[Show more...](#)

Install plugin from the ZIP file

6. If your target directory is not writeable, you will see a warning message
7. Check the plugin validation report

## Installing available updates

```
Debugging output enabled
Downloading mod_poster ...
<- https://moodle.org/plugins/download.php/9578/mod_poster_moodle30_2015102600.zip
-> /home/mudrd8mz/www/mdk/m30/moodledata/temp/core_plugin/code_manager/distfiles/a54c0f905679e723074a076b7e5bced8.zip ... OK
Validating mod_poster ... OK
[OK] Name of the plugin to be installed [poster] ⓘ
[OK] Plugin version [2015102600]
[OK] Required Moodle version [2014051200]
[OK] Full component name [mod_poster]
[OK] Declared maturity level [MATURITY_STABLE] ⓘ
[OK] Plugin release [v4]
[Debug] Found language file [poster]
[OK] Write access check [/home/mudrd8mz/www/mdk/m30/moodle/mod]
[Warning] Target location already exists and will be removed [/home/mudrd8mz/www/mdk/m30/moodle/mod/poster] ⓘ
[OK] Write access check [/home/mudrd8mz/www/mdk/m30/moodle/mod/poster]

Validation successful, installation can continue
```

[Cancel](#)

8. Follow the prompts to complete

# Post Installation

# Cron (automatic tasks) setup

## Setting Moodle up for run tasks automatically

1. Login to server as root
2. Open crontab

```
crontab -e
```

3. Add the below line to crontab (replacing moodlefolder with the actual Moodle folder)

```
*/5 * * * * /usr/bin/php /var/www/moodlefolder/admin/cli/cron.php >/dev/null
```

The above example will run the command every 5 min