

# How to Install, Manage, and Customize a “Personal” Moodle on Your PC or Mac

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## Objectives

- Overview
- Install Moodle on Mac and PC (installer)
- Install Moodle on Mac and PC (scratch)
- php.ini settings
- Some initial Moodle settings
- Themes and settings
- Installing plugins
- Adding courses and users
- Adding custom CSS
- Install a second Moodle
- Backup and restore (Courses and Moodle)
- Fix opcache
- Upgrading your Moodle
- Migrating your Moodle
- Fix my.ini (my.cnf)
- Some hosted and VPS notes

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## Overview

- An “sandbox” experimental Moodle
  - **Not for production!**
  - For education and experimenting
- Notes about Rick’s computers:
  - PC – Windows 10 (new install and virtual)
  - Mac – Mojave (new install and virtual)

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## Can and Can’t Do

- Can
  - Experiment with many Moodle settings
  - Act as manager, teacher, student
  - Create courses and move to production
  - Create quizzes and move to production
  - Themes and CSS
  - Explore add-ins
- Can’t
  - Email related items
  - Have others log in (from the Internet)
  - Cron is limited

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## Moodle Installation

- Why use the Moodle.org installers?
  - Fast, they work, no “server” worries
- Why not?
  - PC install is not full AMP server
    - Missing phpMyAdmin
- Components
  - moodle application
  - moodledata folder
  - A database (MySQL or MariaDB)
- config.php
- phi.ini (php configuration file)
- my.cnf (database configuration file)

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## Install on Mac from Moodle.org

- Moodle installer for Mac (MAMP)
  1. Download and unpack
  2. Start MAMP server
    - Allow MAMP to run in security
    - Safari URL, type **localhost:8888/moodle/**
  3. Configure “your” profile

**Success!**

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## Install on a PC from Moodle.org

1. Turn off Windows Defender (faster unzipping)
  - Run `gpedit.msc`: computer admin templates, windows components, windows defender, turn off = enabled, **reboot**
2. Install required redistributable x86
3. Download and unpack Moodle for Windows
4. Start XAMPP server
  - Edge URL, type `localhost/`
5. Problems? – You might need to start Apache from the xampp-control app
6. Install Moodle
7. Configure “your” Moodle

**Success!**

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## What do we have?

- A working copy of Moodle
- A local “server” running
- Nothing in Moodle, **yet!**
  
- Stopping and starting your “server”
  
- Add to dock/toolbar
- Add shortcut to browser
- Make NOTES!!!!
  
- Stopping and starting your server

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## Reflection: What have we done?

- What’s where?
- Explore Moodle files
- Explore Moodle environment
- Explore `config.php` (text editor)
- Explore the database (phpMyAdmin)
  
- Keep notes of what you have done!

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## Explore Files

- PC
  - C:/moodle
  - Moodle folder
  - moodledata folder
  - mysql folder
  - `Config.php` inside moodle
  - Also: `version.php` file
- Mac
  - MAMP
  - `htdocs/moodle37`
  - `data/moodledata`
  - `Db/mysql57`
  - `Config.php` inside moodle37
  - Also: `version.php` file

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## Explore Moodle

- PC
  - Site Admin, server, environment
  - MariaDB 10.1.28
  - Php 7.1.10
  - Moodle 3.7, build (20190628?)
- Mac
  - Site Admin, server, environment
  - Mysql 5.7.23
  - Php 7.2.10
  - Moodle 3.7, build (20190520?)
  
- No `opcache`
- Not 64-bit!

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## PC and Mac Differences

- Slightly different install methods
- PC needs some extra support
  - 32-bit redistributable, zipping
  - Use the XAMPP control panel app, not start/stop apps
  
- Other differences
  - Mac contains phpMyAdmin, plus more
    - `localhost:8888/MAMP`

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## Conclusion

- PC version is not quite as robust
- Mac file structure seems better
- **Both work!**

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## Installing Another Moodle

- MAC has “user-friendly” tools, but PC does not
- What to do?
- PC – Install XAMPP and Moodle from scratch
- Mac – Install MAMP and Moodle from scratch

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## Install XAMPP and MAMP from Scratch

- A bit more technical
- XAMPP – Download and install 64-bit latest
  - C:\xampp
- MAMP
  - First rename MAMP, like MAMP-1
  - Download and install MAMP
- Localhost/dashboard (PC)
- Localhost:8888/ (Mac)

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## Install Moodle (from scratch)

- Download & unpack moodle
- Move moodle to the correct folder
  - htdocs
- Create a database
  - utf8mb4\_unicode\_ci, user=root,
  - PC - no password
  - Mac – password = root
- Create a moodledata folder, full rights
- Start moodle install (make sure server is running)
  - Localhost/moodle (PC)
  - Localhost:8888/moodle (Mac)

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## Install Moodle (from scratch)

- Database
  - PC = MariaDB
  - MAC = mysql
- PC – All kinds of errors
  - intl, xmlrpc, soap, opcache
- MAC – some warnings
  - xmlrpc, opcache, database

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## Fixing php (on PC)

- Find and edit php.ini
  - Use amp dashboard, phpinfo
- Turn on intl, xmlrpc, soap
- Add my favorites:
  - upload\_max\_filesize = 128M
  - post\_max\_size = 128M
  - memory\_limit = 384M
  - max\_input\_time to 600
  - max\_execution\_time to 300
  - max\_input\_vars = 5000;
- Restart server

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## Where are we?

- We are good in good shape
  - More flexible server running
  - Moodle running

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## Some Moodle Settings

- Site admin | Notification
- Turn off guest access
- Advanced features | Enable RSS feeds = YES
- Location | Location settings | Default country = United States
- Courses | Course settings (several settings)
- Plugins | Activity Modules | Activity Module | URL | Available display options: Add New Windows
- Plugins | Text editors
- Development | Purge caches

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## Theme Settings

- Appearance
- Try Classic, then back to Boost
- Try making some changes in Boost

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## Moodle Plugins

- Collapsed Topics
- Checklist
- Configurable Reports

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## Some Moodle setup

- Course categories
- Add a student
- Add a course, manually
- Add a course, via moodle
  
- Use multiple browser tabs, and windows

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## Custom CSS

- Where to add CSS
- Adding CSS versus modifying code
  
- Examples
  
- How to explore
  - Using Firefox

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## Installing a Second Moodle

- Database = moodle2, moodle 371
- Moodledata = moodledata2, moodledata371
- Moodle = moodle2, moodle371

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## Backup

- Course
  - Move to MoodleCloud
- Mac (using Terminal)
  - `/Applications/MAMP/Library/bin/mysqldump -uroot -p --opt -r20180801-moodledb.sql moodle`
  - `/Applications/MAMP/Library/bin/mysql -uroot -p moodle?? <20180801-moodledb.sql`
- PC (Windows-R, cmd This is DOS!)
  - `C:/xampp/mysql/bin/mysqldump -uroot -p --opt -r20180801-moodledb.sql moodle`
  - `C:/xampp/mysql/bin/mysql -uroot -p moodle?? <2014-12-06-moodledb.sql`

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## Fix opcache (PC)

- Edit `php.ini`, add the following at the bottom

```
[opcache]
opcache.enable = 1
opcache.memory_consumption = 128
opcache.max_accelerated_files = 10000
opcache.revalidate_freq = 60
; Required for Moodle
opcache.use_cwd = 1
opcache.validate_timestamps = 1
opcache.save_comments = 1
opcache.enable_file_override = 0

zend_extension="c:\xampp\php\ext\php_opcache.dll"
```

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## Fix opcache (Mac)

- Stop server
- Enable opcache from MAMP preferences
- Start server
  
- Done!

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## Upgrading Moodle

- Important: `config.php`
  - Copy this file
- Replace old moodle with new
- Install `plugins`
  - This is the most troublesome step
- Move `config.php` into position
- Do something in moodle

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## Migrating Moodle

- New  $\geq$  Old
- Same add-ins
  
- Clear new database and restore
- Clear moodledata and restore

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## Improve my.ini (my.cnf)

- Add in my.ini

```
[mysqld]
innodb_file_format = Barracuda
innodb_file_per_table = 1
innodb_large_prefix
```

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## My VPS (Production) Install

- Moodle is the same
- Worry about server settings
- Email
- Cron
- https

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