

# JOOMLA! CERTIFICATION PREP PART 1



## Joomla! User Group Chicago North

May 10, 2017  
Presented by  
Danico Enterprises Inc.

Joomla! User Group Chicago North, [joomlachicagonorth.com](http://joomlachicagonorth.com), Danico Enterprises, Inc. are not affiliated with or endorsed by the Joomla Project or Open Source Matters. The Joomla! name and logo is used under a limited license granted by Open Source Matters, the trademark holder in the United States and other countries.

# Topics covered by the Joomla! Administrator Exam



image credit: [joomla.org](http://joomla.org)

JUGCN - Joomla! User Group Chicago North

2

- Joomla! Architecture
- Preparing and installing Joomla!
- Website Structure
- Managing and Editing Articles
- Managing Users and Access (ACL)
- Managing Menus
- Security and Maintenance
- Upgrading the System
- Managing Extensions
- Multilingual Sites

No PHP, CSS or FTP knowledge necessary.

# Part 1

## Architecture, Website Structure, Installation, and Security & Maintenance

This first session we'll discuss Joomla Architecture, Website Structure, Installation, Security and Maintenance.

Our discussion will center around Joomla 3. If you're still on 2.5, please upgrade, let us know if you need help.

# Joomla Administrator

As a website administrator you are responsible for the day-to-day operation and maintenance of the website

- Site backups
- User Maintenance
- Installation of Extensions
- Site Security

**Joomla Administrator Portal**

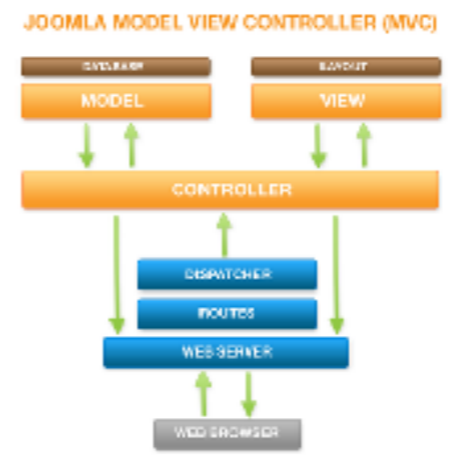
<https://docs.joomla.org/Portal:Administrators>

The first Joomla! certification exam is for Joomla Administrators. So, what is a Joomla Administrator?

“As a website administrator you are responsible for the day-to-day operation and maintenance of the website. Activities might include ensuring that the site is properly backed up; managing user access; possibly installing extensions. You will also have responsibility for maintaining the security of the website.” - joomla.org

# Joomla Architecture

- Based on PHP and MySQL
- Model View Controller (MVC)
- Virtually limitless extension possibilities



**Model-View-Controller**  
<https://docs.joomla.org/MVC>

JUGCN - Joomla! User Group Chicago North

“Joomla! is a dynamic Web application. Joomla! uses a database (MySQL) to store all of the content and information about your site, and it uses a programming language (PHP) to power its interactive functionality and dynamic Web pages.”

[https://docs.joomla.org/Planning\\_Your\\_Web\\_site](https://docs.joomla.org/Planning_Your_Web_site)

An over simplification of this architecture pattern is that the model satisfies the request, the view displays the output and the controller determines which model is needed.

Components encapsulate the data from the model which is typically from the the database. The view has the HTML and CSS that renders the information.

“Since Joomla is designed to be highly modular, the output from the component is generally only part of the complete web page that the user will ultimately see. Once the view has generated the output, the component hands control back to the Joomla framework which then loads and executes the template. The template combines the output from the component, and any modules that are active on the current page, so that it can be delivered to the browser as a single page”

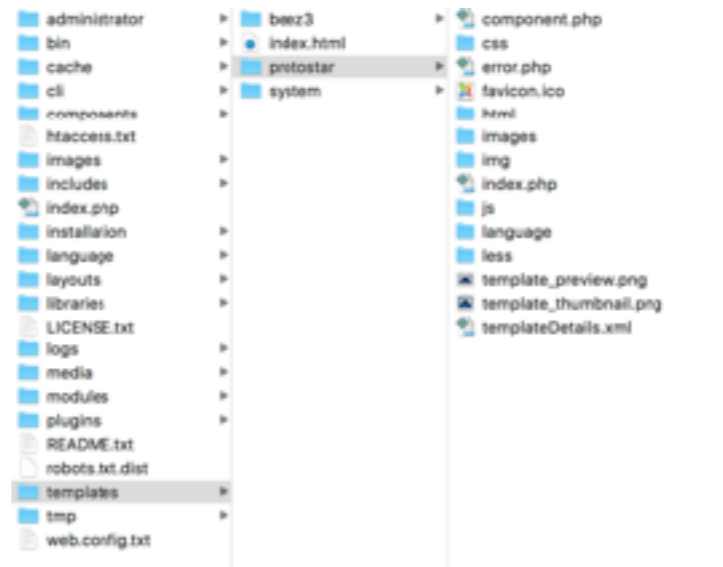
Because of the use of the MVC pattern, designing is much easier and allows for output overrides. Template overrides make customizing your site simpler.

# Website Structure

## File Structure

### Site Root - Templates - Protostar Template

- Template
- Components
- Modules
- Categories
- Articles
- Menus



JUGCN - Joomla! User Group Chicago North

When it comes to your website structure you have many parts that make up your website from your Template all the way down to your individual pieces of content.

The image here shows the directory structure of a clean Joomla 3.x install, the out-of-the-box templates and the contents of Protostar template directory, the default for Joomla.

You have components that are mini-applications. Out of the box, Joomla comes with banners, contacts, news feeds and tags. You can add other components such as an editor, the most common being JCE Editor.

You can extend the functionality with extensions and plug-ins.

“Modules are lightweight and flexible extensions used for page rendering.” <https://docs.joomla.org/Modules>

To display content using a module, you add them to a module position, the placeholders or layouts within a template. Joomla comes with a set of default modules and as you add extensions, they may come with modules as well.

Categories, articles and menus we will discuss at later meetings.

# Installing Joomla!

## Minimum Hosting Requirements

- PHP 5.3.10+ ([php.net](http://php.net))
- Database
  - MySQL 5.1+, SQL Server 10.50.1600.1, PostgreSQL 8.3.18+
- Web Server
  - Apache 2.x+, Nginx 1.0+, Microsoft IIS 7

### Installation Guide

[https://docs.joomla.org/J3.x:Installing\\_Joomla](https://docs.joomla.org/J3.x:Installing_Joomla)

Many hosting providers offer a 1-click setup of Joomla! From there using the Joomla built-in web installer, in a few minutes your Joomla site is ready to go.

If you're installing Joomla locally, on a dedicated server or shared server, these requirements apply.

But before that make sure your hosting company meets the hosting requirements. While your 3.7 site will run on PHP 5.3.10+ you will see a message in your control panel, reminding you the version that the is supported and when support will end. If your PHP version is set at 7+ this message goes away.

NOTE: Only Joomla 3.5 and later are compatible with PHP 7.

Check the installation guide for specifics about your version of Joomla.

If you're using a host like SiteGround, you can change your PHP version through your cPanel. Others you may need to contact support for assistance.

There are 3 supported databases: MySQL (many hosting companies, WAMP, MAMP), SQL Server (Azure, local windows machine) and PostgreSQL.

Joomla is not yet compatible with MySQL 6.x

Does any use PostgreSQL for their Joomla site?

There are 3 web servers that are supported: Apache (think MAMP/WAMP or hosting company), Nginx (hosting company) and Microsoft IIS (think Azure).

# Installing Joomla! cont.

## Installing with Joomla Tools



## Installing Joomla on your own:

- Download Joomla release package
- Create Database
- Move the package

There are 2 ways to get started with installing Joomla, using the Joomla Tools on your hosting account or manually.

Joomla Tools - clicking the Joomla Installer, you will be prompted to enter the location, select if sample data, the admin id and more.

On your own - you will need to:

- download the latest release package from [joomla.org](http://joomla.org)
- create the database, database user and database password
- upload the files to your server using your favorite FTP Client or move to the appropriate directory is creating locally

We're going to go over installing manually.



# Installing Joomla! cont.

## Suggested PHP.ini Settings

- memory\_limit
  - Minimum: 64M Recommended: 128M or better
- upload\_max\_filesize
  - Minimum: 20M
- post\_max\_size
  - Minimum: 20M
- max\_execution\_time
  - At Least 120 Recommended: 300

## PHP Information



Many hosting providers offer a 1-click setup of Joomla! From there using the Joomla built-in web installer, in a few minutes your Joomla site is ready to go.

If you're installing Joomla locally, on a dedicated server or shared server, these requirements apply.

But before that make sure your hosting company meets the hosting requirements. While your 3.7 site will run on PHP 5.3.10+ you will see a message in your control panel, reminding you the version that the is supported and when support will end. If your PHP version is set at 7+ this message goes away.

NOTE: Only Joomla 3.5 and later are compatible with PHP 7.

Check the installation guide for specifics about your version of Joomla.

If you're using a host like SiteGround, you can change your PHP version through your cPanel. Others you may need to contact support for assistance.

There are 3 supported databases: MySQL (many hosting companies, WAMP, MAMP), SQL Server (Azure, local windows machine) and PostgreSQL.

Joomla is not yet compatible with MySQL 6.x

Does any use PostgreSQL for their Joomla site?

There are 3 web servers that are supported: Apache (think MAMP/WAMP or hosting company), Nginx (hosting company) and Microsoft IIS (think Azure).

# Installing Joomla! cont.

Web Installer will launch the main configuration.

- Language
- Site Name
- Description (optional)
- Admin Email
- Admin Username
- Admin Password
- Confirm Admin Password
- Site Offline (yes/no)



The screenshot shows the Joomla! Main Configuration web installer interface. At the top, it says "Main Configuration" in orange. Below that is the Joomla! logo and a navigation bar with "Installation", "Database", and "Charset" tabs. A "Select Language" dropdown is set to "English (United States)" with a "Next" button. The main configuration section includes fields for "Site Name", "Admin Email", "Description", "Admin Username", "Admin Password", and "Confirm Admin Password". There are also checkboxes for "Site Offline" (Yes/No) and a "Next" button. The interface is clean and modern with a light blue and white color scheme.

After the files are in place go to your site url and the web installer will run. Most of the page is required, only the description is optional. It is recommended to be set as it is used by search engines - more on this later.

The site name can be changes if you change your mind. The admin username here is for the Super User. The default may be set as admin if installing manually. When using Joomla Tools from your hosting company, the user and password are set as the site is created.

# Installing Joomla! cont.

For this next part, you will need to create a database

- Database Type
- Hostname
- Username
- Password
- Database Name
- Table Prefix
- Old Database Process

## Database Configuration



The screenshot shows the Joomla! Database Configuration interface. It features a progress bar at the top with 'Configuration', 'Database', and 'Checklist' steps. The 'Database Configuration' section includes the following fields and instructions:

- Database Type:** A dropdown menu set to 'MySQL'. Below it, a note says 'This is probably MySQL'.
- Host Name:** A text input field containing 'localhost'. A note below says 'This is usually localhost'.
- Username:** A text input field. A note below says 'Either something as "root" or a username given by the host'.
- Password:** A text input field. A note below says 'For site security using a password for the database account is mandatory'.
- Database Name:** A text input field. A note below says 'Some hosts allow only a certain 20 names per site. Use table prefix in this case for Joomla! sites'.
- Table Prefix:** A text input field. A note below says 'Choose a table prefix or use the randomly generated. Only three or four characters long, containing alphanumeric characters, and don't use an underscore. Make sure that the prefix chosen is not used by other tables'.

At the bottom, there are 'Save' and 'Cancel' buttons. A note at the very bottom says 'Any existing tables from former Joomla! installations will be replaced'.

You remember that for Joomla! to run you need a database. To create a database, you can create using the MySQL Database Wizard on your hosting company or using phpMyAdmin using WAMP/MAMP.

For help, see: [https://docs.joomla.org/Special:MyLanguage/Creating\\_a\\_Database\\_for\\_Joomla!](https://docs.joomla.org/Special:MyLanguage/Creating_a_Database_for_Joomla!)

The database type is MySQL or MySQLi (most commonly used)

The hostname is where your database is located. Typically this is localhost on your local and hosting company, except for companies like GoDaddy and NetworkSolutions, you will need to get specifics from them on what this value is.

The database, username and password are what you set. This information is stored in the configuration.php file.

# Installing Joomla! cont.

## Quick Start

- Sample Data
- Email Configuration

## Overview



What you do at this step is up to you. Some template companies use this step as their QuickStart, InspireTheme for example.

When selecting to email configuration, if set to 'Yes' you will have the option to include password, by default it is off for security purposes.

# Installing Joomla! cont.

Page is broken up into 4 sections

- Main Configuration
- Database Configuration
- Pre-Installation Check
- Recommended Settings

## Configuration Check

Section	Item	Value	Status
Main Configuration	Site Name	My Joomla!	OK
	Description	My Joomla!	OK
	Site Offset	0	OK
	Site Email	admin@myjoomla.com	OK
Database Configuration	Database Type	MySQL	OK
	Host Name	localhost	OK
	Database	joomla_db	OK
	Database Name	joomla_db	OK
Pre-Installation Check	PHP Version >= 5.3.1	5.4.10	OK
	MySQL Version >= 4.1	5.5.34	OK
	Apache/Ubuntu/MySQL	OK	OK
	PHP Extension: ctype	OK	OK
	PHP Extension: iconv	OK	OK
	PHP Extension: intl	OK	OK
	PHP Extension: json	OK	OK
	PHP Extension: openssl	OK	OK
	PHP Extension: zlib	OK	OK
	PHP Extension: gd	OK	OK
Recommended Settings	Safe Mode	Off	OK
	Display Errors	Off	OK
	PHP Uploads	Off	OK
	Image Conversion	Off	OK

This page will show your settings, what will be used to create your Joomla site. If any in the pre-installation section do not say 'No', Joomla will not install correctly.

Seeing a 'No' in the actual column in the recommended settings will not prevent the site from being created.

Click 'INSTALL' to create your new site.

# Installing Joomla! cont.

A great feature of Joomla ability to have multiple languages.

- Install Language(s)
- Set Default Language
- Finish

## Install Languages



There are some extra steps available, such as installing language packages for your site.

Click the checkbox to left of the language(s) that you wish to install. It is recommended that install no more than 3 at a time to avoid timeouts.

Languages can be installed later through the extension manager

When choosing the default language you will be asked if you want to activate the multilingual feature

The default language will be set for the administrator (backend) and site (frontend)

More information on the multilingual feature at another time

# Installing Joomla! cont.

You now have a new Joomla Site! There is one last step.  
REMOVE INSTALLATION FOLDER

## Success Page

Congratulations! Joomla! is now installed.

PLEASE REMEMBER TO COMPLETELY REMOVE THE INSTALLATION FOLDER  
You will not be able to proceed beyond this point until the installation directory has been removed. This is a security feature of Joomla!

Remove installation folder

## Success Page with language

Site Administrator

### Administration Login Details

Email Administrator

Username Administrator

Joomla has set en-GB as your default ADMINISTRATOR language.

Joomla has set en-US as your default SITE language.

Congratulations! Joomla! is now installed.

PLEASE REMEMBER TO COMPLETELY REMOVE THE INSTALLATION FOLDER  
You will not be able to proceed beyond this point until the installation directory has been removed. This is a security feature of Joomla!

Remove installation folder

Site Administrator

Everything goes well? You will see a Success Page like either of these  
You MUST remove the installation folder to start using your site.

# Security & Maintenance

Securing your site is one of the most important tasks you'll have as a Joomla Administrator

- Choice a good hosting provider
- Keep software current
- Use strong passwords
- Monitor constantly
- Backup regularly

## Security and Performance FAQs

[https://docs.joomla.org/Security\\_and\\_Performance\\_FAQs](https://docs.joomla.org/Security_and_Performance_FAQs)

There are many things you can do as a Joomla site administrator to help keep your site secure. There are some quick hits such as:

- not choosing a hosting company based on price but based on their services, performances and customer service
- keeping the site software and extensions current with the latest patches
- creating and enforcing strong passwords, you can do this by setting the setting the Password Options, we'll talk more about this in Part 3 when we discuss User Management
- monitor your site constantly and fix any cracks you see when you see them. You can use tools like Watchful.li, myJoomla, Sucuri and others can help you do this with alerts, etc.
- things happen, backups help make them less painful. Backup your site on a regular basis, or when doing major updates. Test your backup, if you can't restore from it, it isn't really a backup. Saving the backups outside of your main directory helps if you can't access your server. Services such as AWS and Dropbox work for this and are options when using extensions like AkeebaBackup.



# Joomla! Video Training

<https://community.joomla.org/joomla-training.html>

To recap, we've taken a look at the Joomla architecture, the Through their partnership with OStraining, Joomla offers video training

**Part 2 - June 14th**  
Upgrading System, Language Management,  
Content Management, and Menu management

The next session will cover how to upgrade the system, how to set the language and do language overrides, content management and menu management

**Thank you**

Questions?

Contact us at: [info@joomlachicagonorth.com](mailto:info@joomlachicagonorth.com)