

Unit 1 Module 3: xAMP Stack

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Web Development with PHP

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What Is The xAMP Stack?

As previously discussed, the xAMP stack is the combination of:

- **A**pache
- **m**ySQL
- **P**HP

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The word “stack” is a computer science term for data layered one upon the other. The name implies that x (the operating system) is the lower layer, the next layer is Apache, the following layer is mySQL, and the last layer is PHP. This is mostly true. One cannot exist without the layer below it.

Operating Systems

The lowest layer of the stack is the operating system. The most common operating systems used are:

- “UNIX” ?
 - Linux¹
 - BSD
 - Solaris
- Mac OS X²
- Windows

No matter what the operating system, as long as the other components are installable, one can create an xAMP stack.

¹Linux is **technically** not UNIX. It's a UNIX clone.

²Actually, Mac OS X is more UNIX than Linux is.

Apache Web Server

The Apache web server is the most popular web server today, with a 55% market share. [1] The name Apache is derived from the myriad of “patches” needed to improve its predecessor, NCSA httpd to fix bugs and extend features. Within a year, it became the internet’s most popular web server. [2]

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The purpose of the Apache web server is to listen on the HTTP port (port 80) and receive and reply to HTTP commands such as, “give me the page `index.php`” or “Take this data and give it to the page `form_process.php`”.

Configuring Apache

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Definition

*To **include** a file is to read a file's contents and virtually put the contents in place as if it was in the original file in the first place. Including files is often done in computer science because it enhances scalability and maintainability.*

MySQL

MySQL is a **R**elational **D**atabase **M**anagement **S**ystem (RDBMS) is is “officially pronounced ‘My Ess Que Ell’ (not ‘my sequel’)”. [3] MySQL and PostgreSQL are the two most popular open source RDBMSes.

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MySQL’s configuration file is centered in the `my.cnf` file. MySQL’s configuration isn’t as granularly included as Apache’s `httpd.conf`. Most of MySQL’s configuration is done by connecting to the server and directly running SQL queries to affect the server configuration.

PHP

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PHP's main configuration file is in `php.ini`. PHP is highly extensible through the use of *extensions*. The most common reason for modifying `php.ini` is to enable or disable extensions.

Open Source

All the components of the xAMP stack, as well as some of the possible operating systems are open source.

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Quote of the Day

“When I released GNU Emacs and people started using it, they started sending me improvements in the mail. So I would get a message with a bug fix, and a message with a new feature, and another bug fix, and another new feature, and another... and another... until they were pouring in on me so fast that just taking advantage of all of the help people were giving me was a big job. Microsoft doesn’t have this problem.”
≈ Richard Stallman

Open Source

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Vitæ

Richard Stallman *is the founder of the GNU Project and Free Software Foundation. He also pioneered the “copyleft” movement to legally protect free software. He remains a visible (and somewhat controversial) figure in the software industry and dedicates his life to the free software movement.*

Works Cited



Netcraft Ltd.

January 2014 web server survey.

<http://news.netcraft.com/archives/2014/01/03/january-2014-web-server-survey.html>.



Apache Foundation.

About apache.

http://httpd.apache.org/ABOUT_APACHE.html.



Oracle Corporation.

What is mysql?

<http://dev.mysql.com/doc/refman/5.6/en/what-is-mysql.html>.