CNT 4714: Enterprise Computing Summer 2014

Installing and Configuring Apache and PHP

Instructor: Dr. Mark Llewellyn

markl@cs.ucf.edu

HEC 236, 407-823-2790

http://www.cs.ucf.edu/courses/cnt4714/sum2014

Department of Electrical Engineering and Computer Science
Computer Science Division
University of Central Florida



Introduction to PHP

- PHP is officially known as PHP: Hypertext Preprocessor and is very rapidly becoming the most popular server-side scripting language for creating dynamic web pages.
- PHP was created in 1994 by Rasmus Lerdorf (who currently works for Linuxcare, Inc. as a senior open-source researcher) to track users at his Web site. Lerdorf originally called it Personal Home Page Tools in a package he released in 1995. It eventually became an Apache Software Foundation project.
- PHP2 featured built-in database support and form handling. In 1997, PHP3 was released and featured a new parser which substantially increased performance and led to an explosion in PHP use.



Introduction to PHP (cont.)

- PHP4 featured the Zend Engine and was considerably faster and more powerful than its predecessors and further enhanced the popularity of PHP.
- The current release is PHP 5.5.14. It was declared stable on June 27, 2014 and features the Zend Engine 2, which provides further increases in speed and functionality. You can download the latest version of PHP at www.php.net. For more details on the Zend Engine 2 see www.zend.com.
- Today more than 240 million web sites and more than 2.1 million web servers utilize PHP technology.



Introduction to PHP (cont.)

- The power of the Web resides not only in serving content to users, but also in responding to requests from users and generating Web pages with dynamic content.
- Interactivity between the user and the server has become a crucial part of Web functionality. While other languages can also perform these functions, PHP was written specifically for interacting with the Web.
- PHP code is embedded directly into HTML documents. This allows the document author to write HTML in a clear, concise manner, without having to use multiple print statements, as is necessary with other CGI-based languages.



Introduction to PHP (cont.)

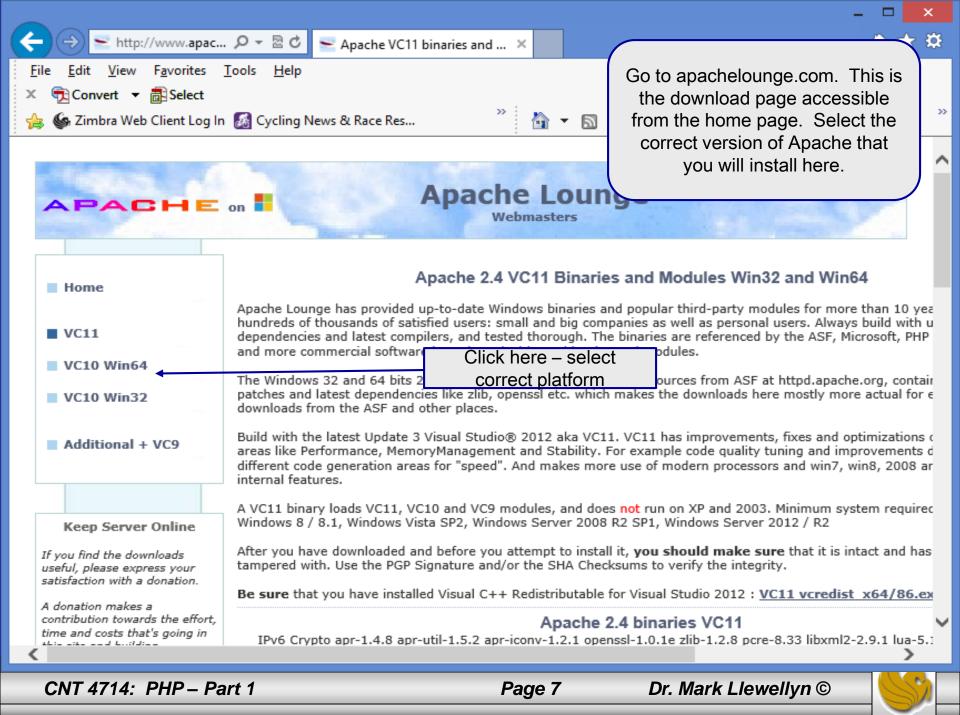
- PHP script file names usually end with .php, although a server can be configured to handle other file extensions.
- To run a PHP script, PHP must first be installed on your system.
- Although PHP can be used from the command line, a Web server is required to take full advantage of the scripting language. We will utilize the Apache HTTP Server available from www.apachelounge.com. (Note: this is not the same web site where you downloaded the Tomcat server you've already used.) The version that I am using is 2.4.6V10 which is not available directly from Apache. Apache's versions of the HTTP server utilize an older legacy version (VC6) of the Microsoft Visual C++ Studio compiler and are not compatible with current versions of PHP.
- Although there are several different packages that bundle PHP with MySQL and various HTTP servers, as IT majors you need to experience the set-up and integration of this type of software, so I will show you how to setup the Apache HTTP Server and integrate both PHP and MySQL into it.

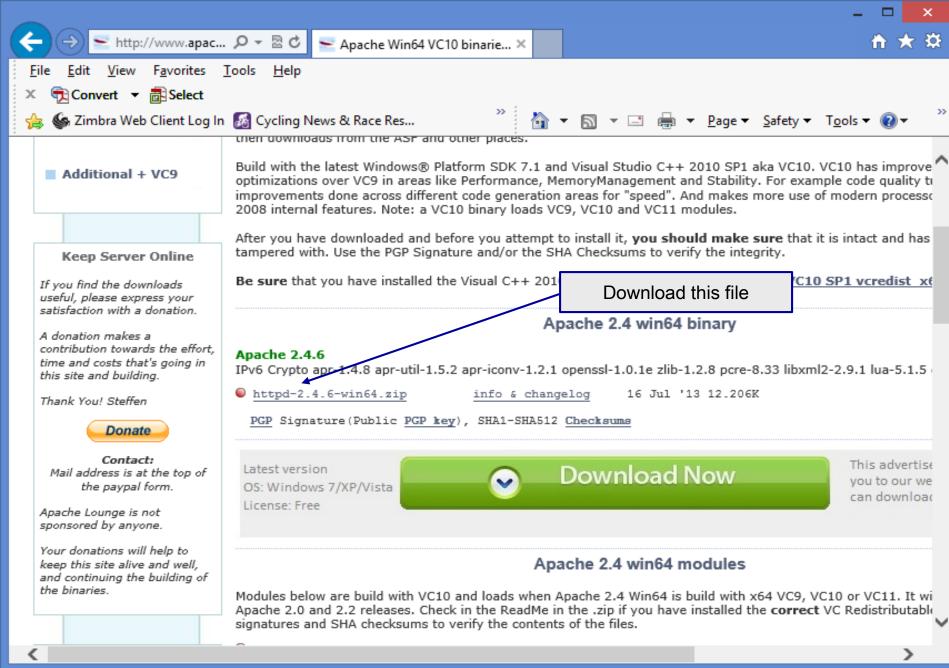


Installing Apache HTTP Server

- The version of the Apache HTTP server that I am illustrating is 2.4.6V10 (a 2.4.9V11 version is also now available and should also work fine, but I personally have not used this version yet) and it is available for download from www.apachelounge.com.
- There are several steps to go through in getting this server installed and configured to interpret PHP scripts. The remainder of these notes step you through this process.
- Note that I am doing the install on a 64-bit Windows machine running Windows 8. If you are installing on a different platform be sure to get the correct versions of all of the necessary files and check for compatibility.







15 July 2013

Apache Lounge Distribution

Apache 2.4.6 win64 VC11 update3

IPv6 and Crypto enabled, apr-1.4.8 apr-util-1.5.2 apr-iconv-1.2.1 openssl-1.0.1e zlib-1.2.8 pcre-8.33 libxml2-2.9.1 lua-5.1.5 expat-2.1.0

Original Home: httpd.apache.org

Win64 binary by: Steffen Mail: info@apachelounge.com

Home: www.apachelounge.com

Note that this is the README file from the Apache2.4.6VC11 version. The same holds true for the Apache2.4.6V10 version in that you need to install this Visual Studio update before going any further.

Build with Visual Studio® 2012 Update 3 (VC11) x64

- Be sure you have installed the Visual C++ Redistributable for Visual Studio 2012 Update 3. Download and install, if you not have it already, from:

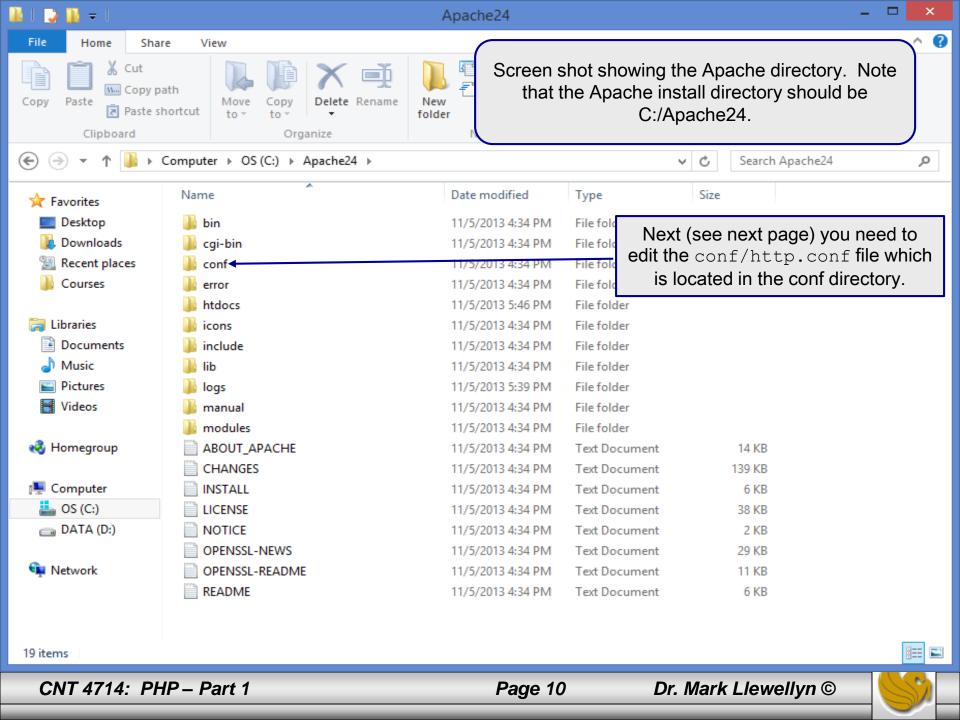
http://www.microsoft.com/en-us/download/details.aspx?id=30679

Loads 2.4 Win64 modules VC9 or VC10.

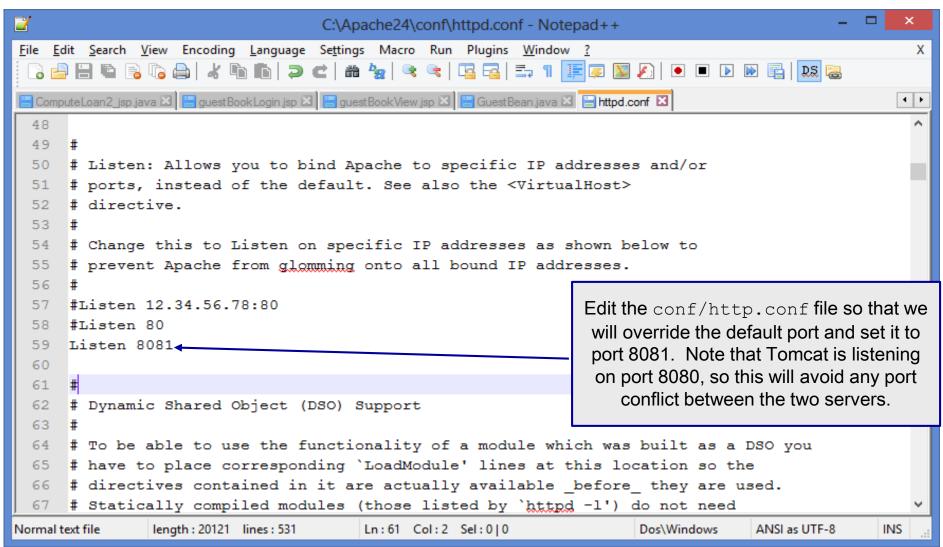
Minimum system required

Windows 7 SP1 Windows 8 / 8.1 Windows Server 2008 R2 SP1 Windows Server 2012 / R2 Windows Vista SP2

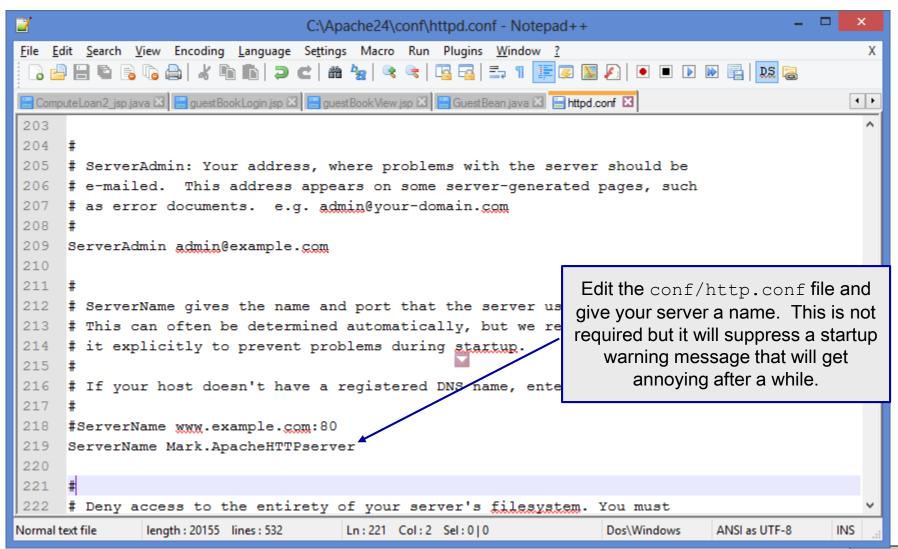
Use this link to download and install the latest Visual C++ Update



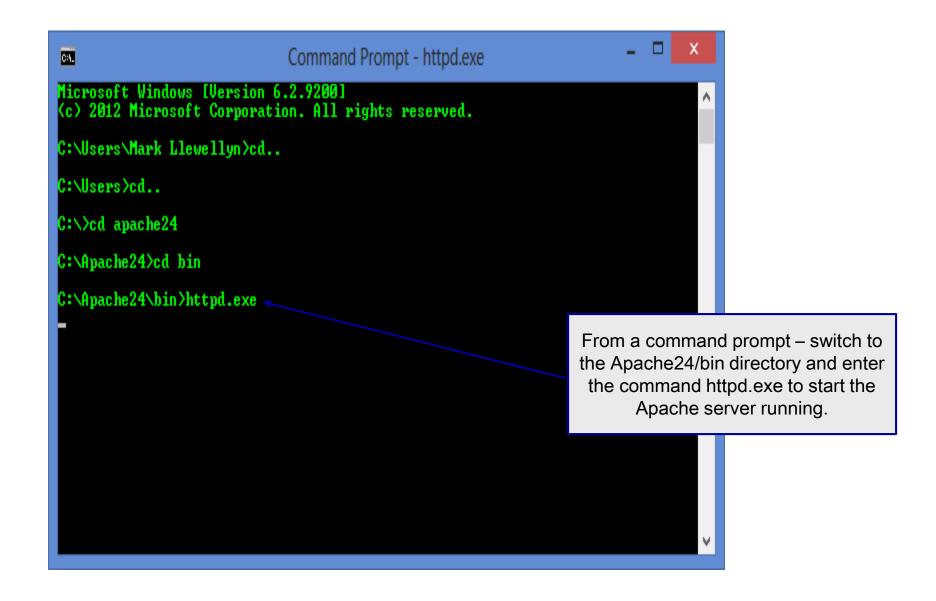
Installing And Configuring Apache (cont.)

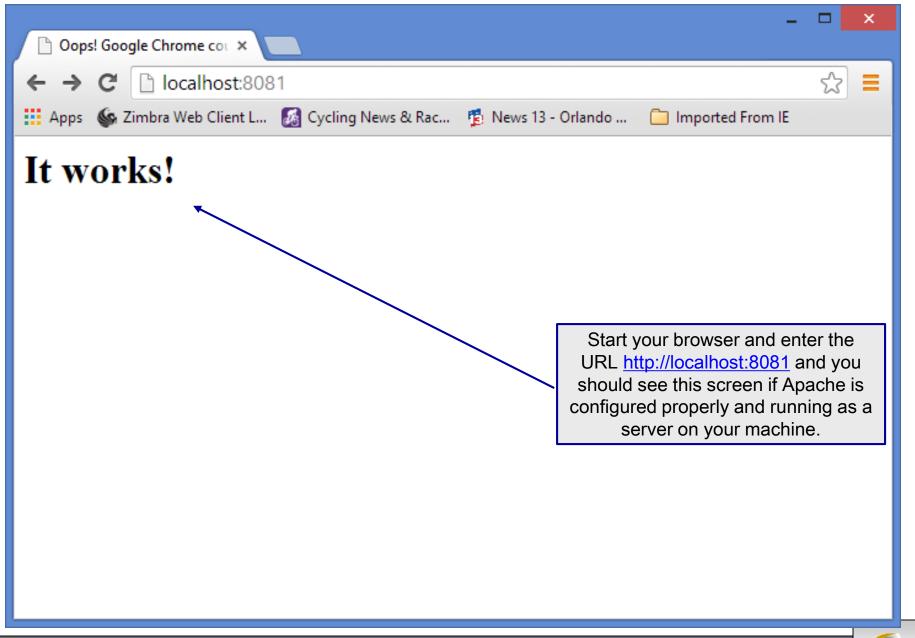


Installing And Configuring Apache (cont.)





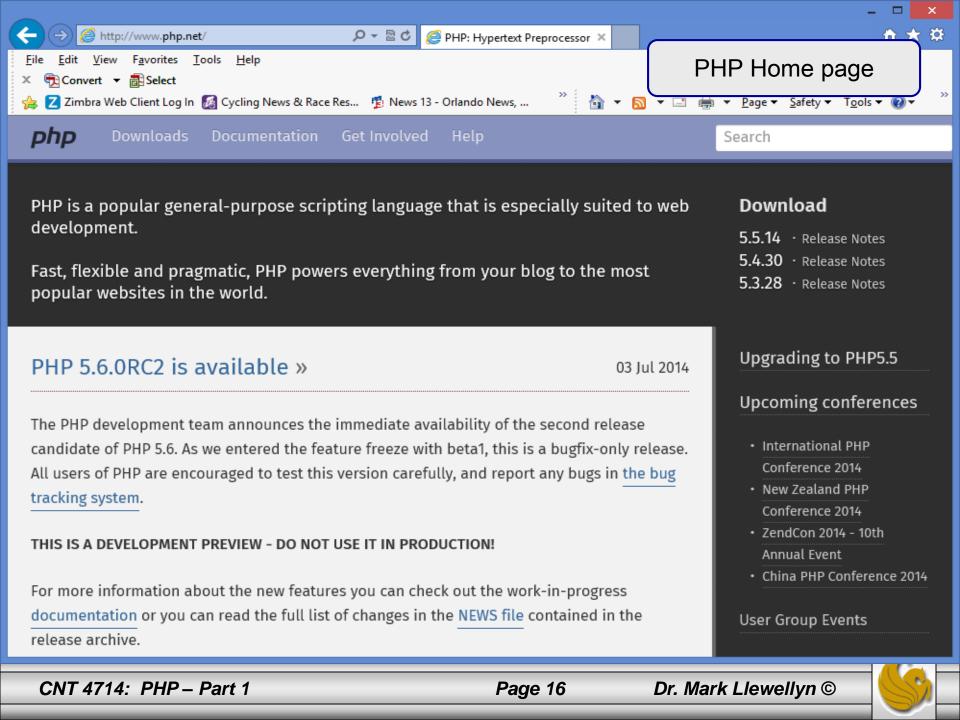


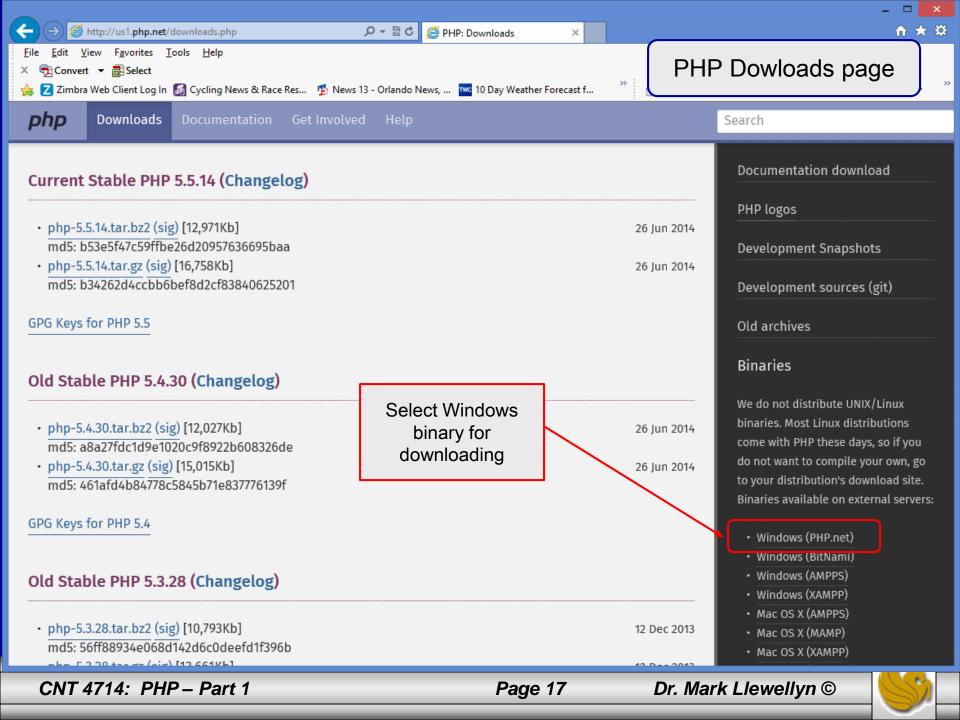


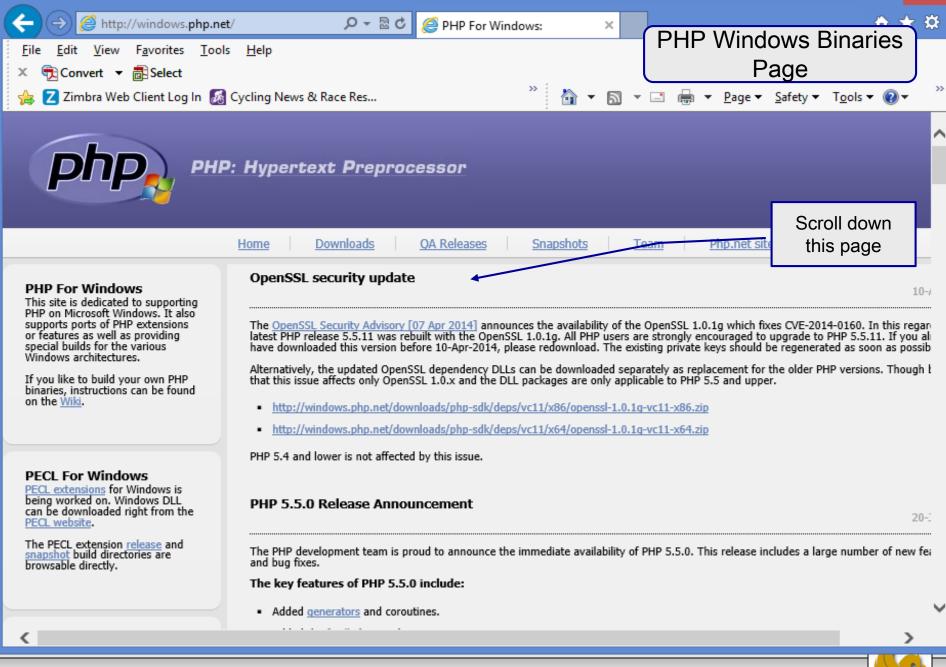
Installing and Configuring PHP

- The current stable version of PHP (PHP 5.5.14 can be downloaded from www.php.net.
- Note that since we are using Apache 2.4.6V10 HTTP Server that we will need to be sure and install the correct version of PHP which will be 5.5.x (I'm illustrating with 5.5.5), older versions of PHP will not work properly with the newer versions of Apache. There is a way to make Apache work with older PHP scripts, but for now, we are not interested in having our server exhibit this capability.
- Newer versions of PHP are built using VC9 or VC11 (Visual Studio 2008 or 2012 versions).
- Click on the downloads link at the top of the PHP home page and select the proper format for your machine. (See next page.)
- Then download PHP to your machine and install it using the instructions beginning on page 17.

CNT 4714: PHP – Part 1 Page 15 Dr. Mark Liewellyn ©





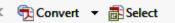




PHP For Windows:



View Favorites Tools Help





Read This!

 \times

Page ▼ Safety ▼ Tools ▼ 🔞 ▼



>>

PHP. Apache

Please use the Apache builds provided by Apache Lounge. They also provide VC11 builds of Apache for x86 and x64. We use their binaries to build the Apache SAPIs.

If you are using PHP with Apache 1 or Apache2 from apache.org (not recommended) you need to use the older VC6 versions of PHP compiled with the legacy Visual Studio 6 compiler. Do NOT use VC9+ versions of PHP with the apache.org binaries.

With Apache you have to use the Thread Safe (TS) versions of PHP.

VC9 and VC11

More recent versions of PHP are built with VC9 or VC11 (Visual Studio 2008 and 2012 compiler respectively) and include improvements in performance and stability.

The VC9 builds require you to have the Visual C++ Redistributable for Visual Studio 2008 SP1 x86 or x64 installed.

The VC11 builds require to have the Visual C++ Redistributable for Visual Studio 2012 x86 or x64 installed.

TS and NTS

TS refers to multithread capable builds. NTS refers to single thread binaries involves interaction with a multithreaded SAPI and PHP

Added support for non-scalar Iterator keys

D - 20 c

- Added support for list() constructs in foreach statements.
- Added the Zend OPcache extension for opcode caching.
- The GD library has been upgraded to version 2.1 adding new functions and improving existing functionality.
- A lot more improvements and fixes.

Changes that affect compatibility:

- PHP logo GUIDs have been removed.
- Windows XP and 2003 support dropped.
- Case insensitivity is no longer locale specific. All case insensitive matching for function, class and constant names is now performed ir locale independent manner according to ASCII rules.

For users upgrading from PHP 5.4, a migration quide is available detailing the changes between 5.4 and 5.5.0.

For a full list of changes in PHP 5.5.0, see the ChangeLog.

PHP 5.4.0 Release Announcement

The PHP development team is proud to announce the immediate availability of PHP 5.4.0. This release is a major leap forward in the 5.x s which includes a large number of new features and bug fixes.

The key features of PHP 5.4.0 include:

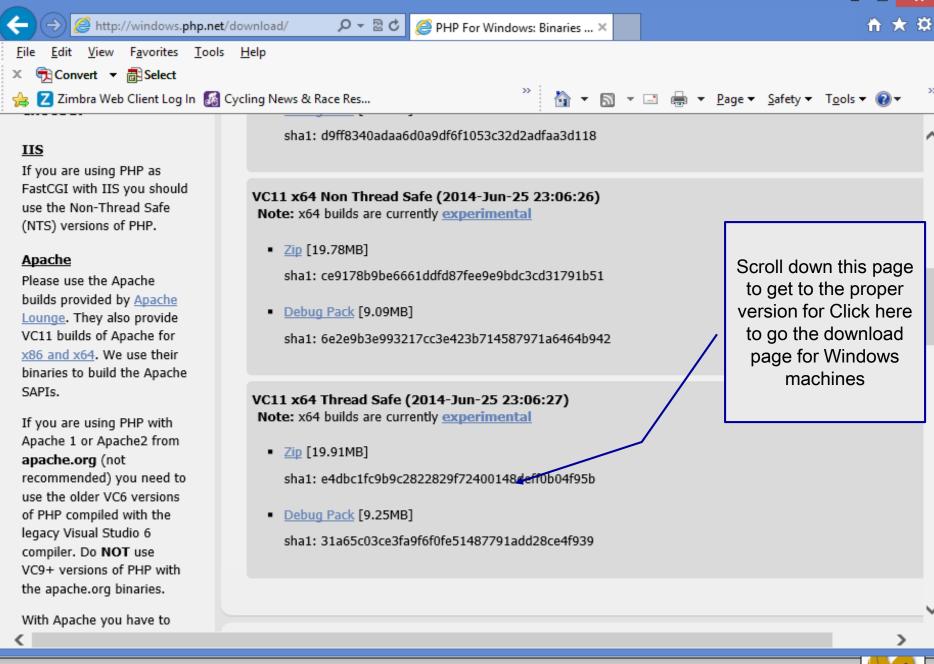
- New language syntax including <u>Traits</u>, <u>shortened array syntax</u> and <u>more</u>
- Improved performance and reduced memory consumption
- Support for multibyte languages now available in all builds of PHP at the flip of a runtime switch

Page 19

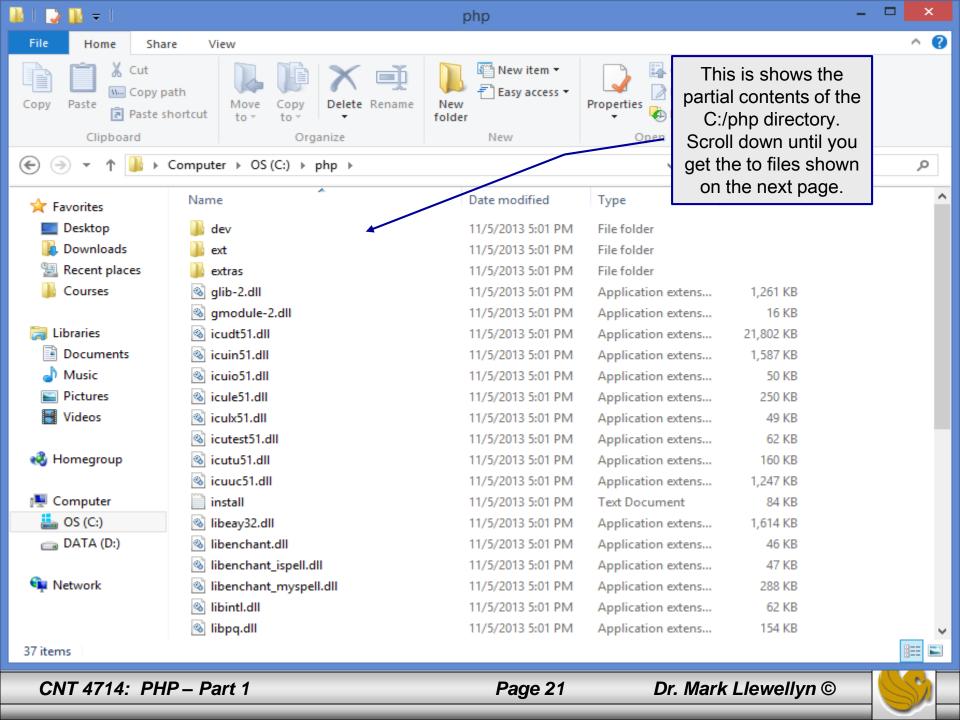
- Built-in webserver in CLI mode to simplify development workflows and testing
- Cleaner code base thanks to the removal of multiple deprecated language features

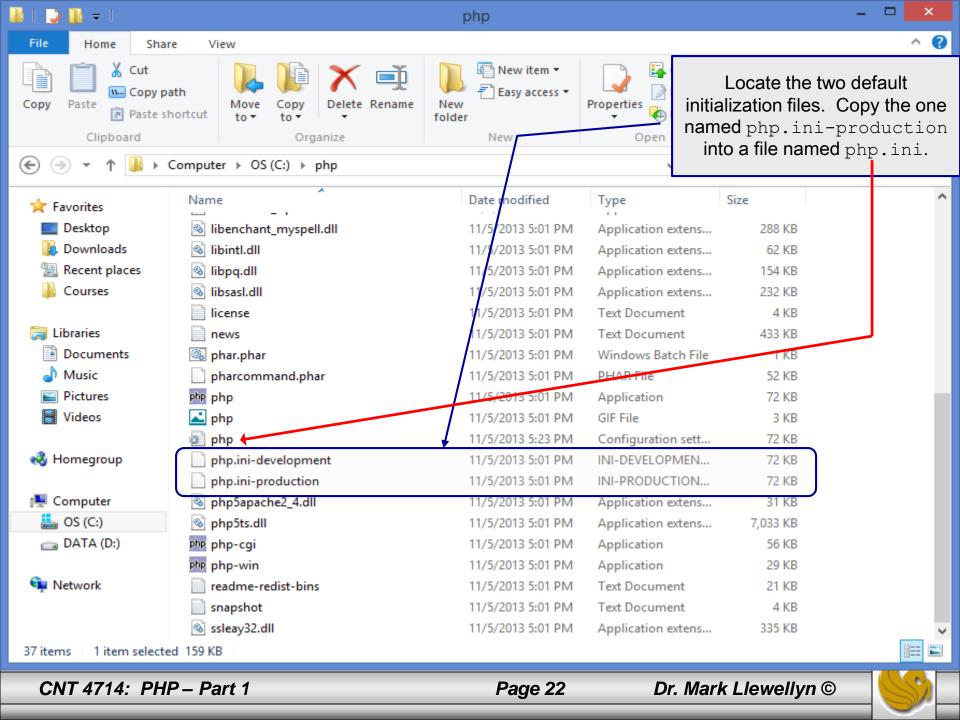


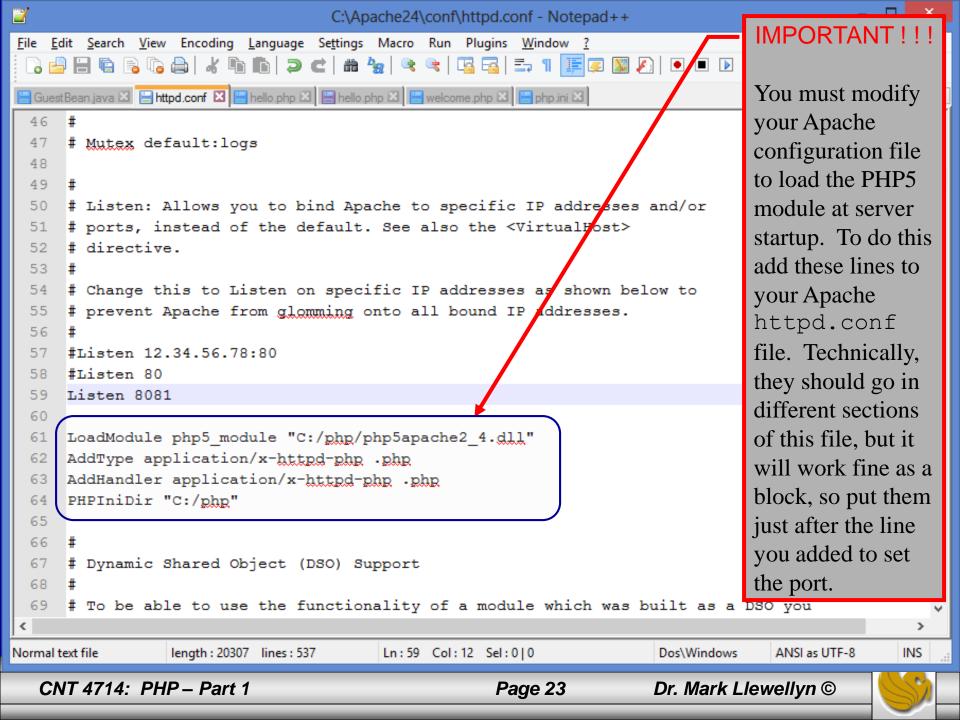
1-1



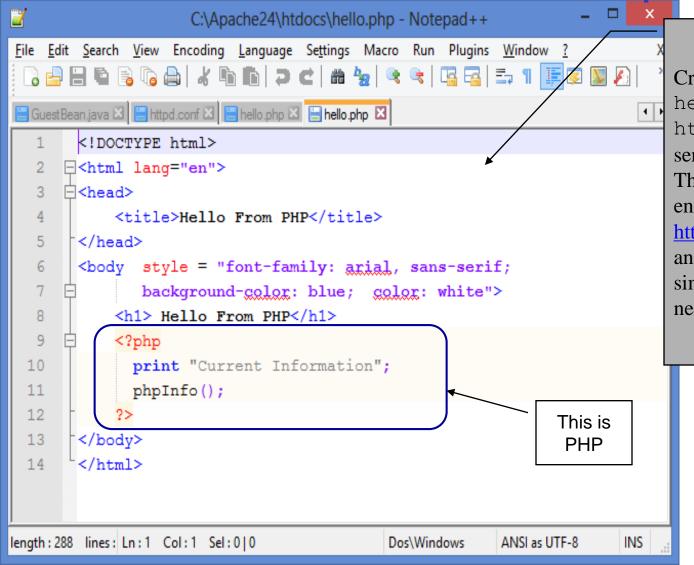








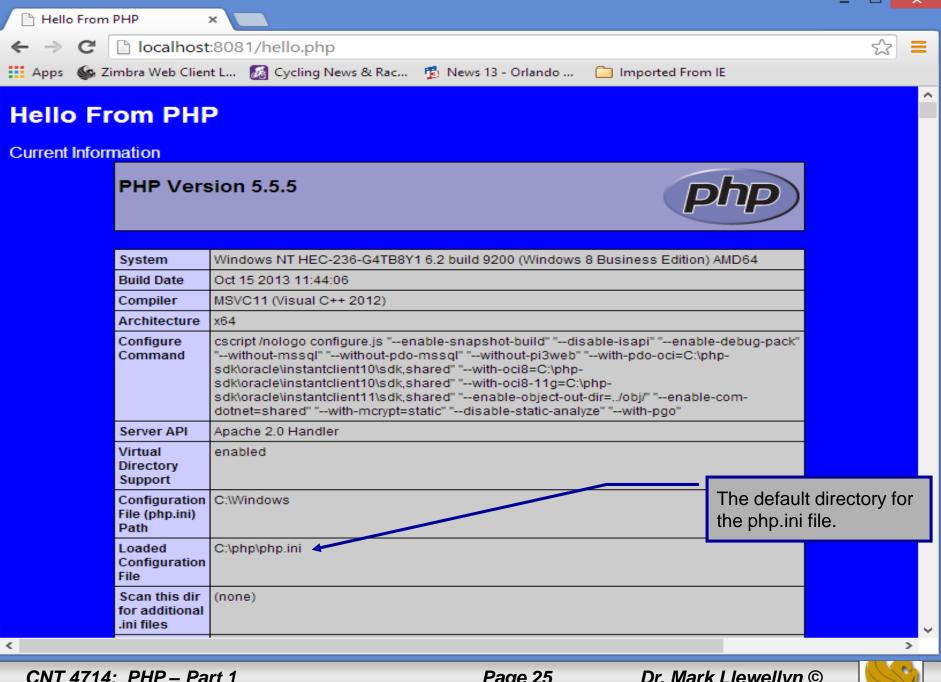
A PHP Test Example



Create this file named hello.php and save it to the htdocs folder in the Apache server directory.

Then start your browser and enter the URL:

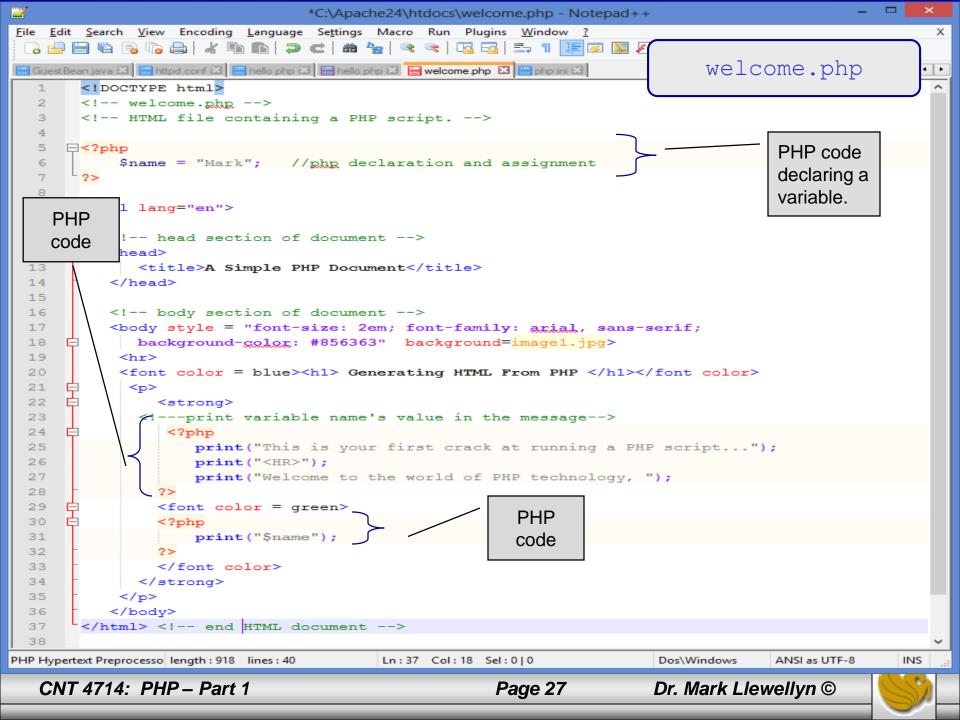
http://localhost:8081/hello.php and you should see output similar to that shown on the next slide.

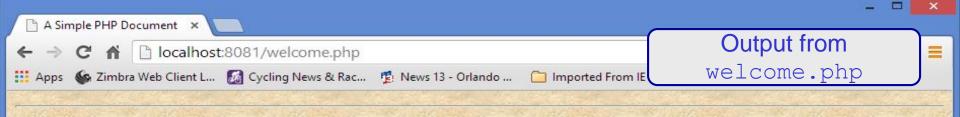


A Second PHP Example

- The following two pages illustrate another simple PHP "hello world" program.
- In PHP, code is inserted between the scripting delimiters <?php and ?>. PHP code can be placed anywhere in HTML markup, as long as the code is enclosed in these scripting delimiters.
- Place all of your HTML and PHP files inside the htdocs directory of the Apache server directory.







Generating HTML From PHP

This is your first crack at running a PHP script...

Welcome to the world of PHP technology, Mark



Viewing Client/Server Environment Variables

- Knowledge of a client's execution environment is useful to system administrators who want to provide client-specific information.
- Environment variables contain information about a script's environment, such as the client's web browser, the HTTP host and the HTTP connection.
 - The table on the next page summarizes some of the superglobal arrays defined by PHP.
- The HTML document on page 27 displays the values of the server's environment variables in a table. PHP stores the server variables and their values in the \$_SERVER array. Iterating through the array allows one to view all of the server's environment variables.

CNT 4714: PHP – Part 1 Page 29 Di

Some Superglobal Environment Arrays

Variable Name	Description
\$_SERVER	Data about the currently running server.
\$_ENV	Data about the client's environment.
\$_GET	Data posted to the server by the get method.
\$_POST	Data posted to the server by the post method.
\$_COOKIE	Data contained in cookies on the client's computer.
\$GLOBALS	Array containing all global variables.



