

# **Jacob Aylward**

Apache Server

An Instillation Guide For Installing a(n) Apache Server  
on Windows Virtual Machine With PHP & MySQL.

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## Links:

### Apache:

Apache HTTP Server 2.2.29 (httpd)

<http://mirror.symnds.com/software/Apache//httpd/binaries/win32/>

Download File: httpd-2.2.25-win32-x86-no\_ssl.msi

### PHP:

<http://windows.php.net/download>

VC11 x86 Thread Safe (2014-Sep-17 01:40:20) Zip [18.63MB]

sha1: cdde461c95a8a47a0febc7ada7ba5c7c5d6f682b

<http://windows.php.net/downloads/releases/php-5.5.17-Win32-VC11-x86.zip>

### MySQL:

<http://dev.mysql.com/downloads/mysql/>

Windows (x86, 32-bit), MSI 5.6.21

5.6.21MD5: cdf7ebabeed9ab66c271f4dc653e231f

<http://cdn.mysql.com/Downloads/MySQLInstaller/mysql-installer-web-community-5.6.21.0.msi>

### VirtualBox:

VirtualBox 4.3.16 for Windows hosts

<https://www.virtualbox.org/wiki/Downloads>

### FileZilla:

FileZilla Client:

<https://filezilla-project.org/download.php?type=client>

FileZilla Server:

<https://filezilla-project.org/download.php?type=server>

## Setting-up VirtualBox:

### Step 1 Setting up the Virtual Machine



Install the latest version of VirtualBox on your Host device: [VirtualBox](#)

Open the Windows 7 Open-Virtualization-Format (.ova) in Oracle VirtualBox.

Navigate through the, “Create New Virtual Machine Wizard”.

Set ‘Hard Drive file type’ to VDI (VirtualBox Disk Image).

During the ‘Set-Up Wizard’, set the memory size to something appropriate. (4000MB)

### Step 2 Set up WebServer

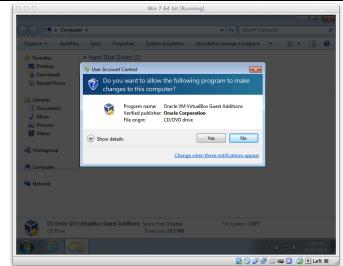


In the ‘Windows 7 Enterprise Setup’ Window Customize the Machine Name to ‘WebServer’.

While going through the ‘Window 7 Enterprise Setup’ make sure to turn off the Windows Update tool.

Set VirtualBox image file to Dynamically allocated, so the host hard drive will grow to the size specified as it becomes filled with data.

### Step 3 Granting Guest Additions Host+D

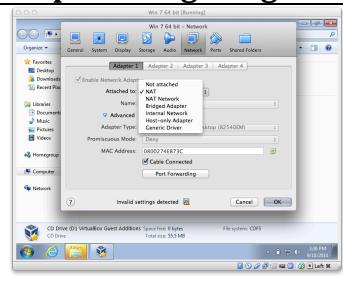


Once the set-up window is finished navigate to **C:Devices\Install Guest Additions** or hold down **Host+D**.

Go through the instillation process and finish by rebooting the windows machine.

Guest Additions will allow for your Virtual Machine to Automatically resize the Window resolution display.

### Step 4 Configuring Network Settings



In the Oracle VirtualBox Window Navigate to your Machines Network Settings.

In the Network Settings:

**Enable Network Adapter**  
**Attached to: Bridged Adapter**

Change the Media-Access-Control-Address (MAC) by selecting the green recycle button to the right of the Network Window.

### Step 5 Restarting Windows



Restart the Windows normally so that the Guest Additions can be installed.

Once the Machine has finished restarting, power it off again fully by selecting **Power off the machine** so that you can create a machine clone.

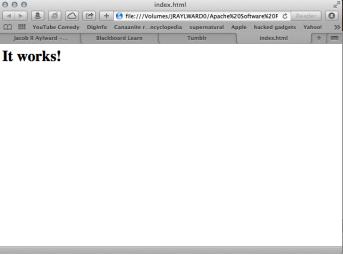
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<b>Step 6 Create Clone</b>	
	<p>In the VirtualBox Window right-click your WebServer Virtual Machine and select clone.</p> <p>Make sure while navigating through the set-up Window you select on the linked-clone option. Linked-clone can fully operate without the source VM.</p> <p>Make sure to set the VirtualBox image file to Dynamically allocated.</p>
<b>Step 7 Run Clone</b>	
	<p>Go through the 'Windows 7 Enterprise Setup' window and set the windows machine name to 'Client'.</p> <p>Make sure to turn off the Windows Update tool during the 'Windows 7 Enterprise Setup'.</p>
<b>Step 8 Check IPv4 Address using ipconfig</b>	
	<p>Open the command window on both machines by typing <b>CMD</b> in the start window.</p> <p>Once the Command prompt window is up on both machines type the following: <b>ipconfig</b></p> <p>Make sure the IP4V Addresses are different on both machines, if not turn off the machine and redo step 4.</p>
<b>Step 9 Set up HTTP Rule</b>	
	<p>On both machines navigate to <b>firewall&gt;Advanced options</b> select <b>new Inbound rule</b> in the upper right corner of the window.</p> <p>Add a(n) Hypertext Transfer Protocol (HTTP) rule, by creating an inbound rule for port 80.</p>
<b>Step 10 Set up FTP Rule</b>	
	<p>On both machines navigate to <b>firewall&gt;Advanced options</b> select <b>new Inbound rule</b> in the upper right corner of the window.</p> <p>Add a(n) File Transfer Protocol (FTP) rule, by creating an inbound rule for port 21.</p>

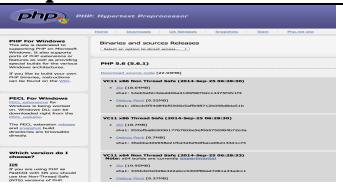
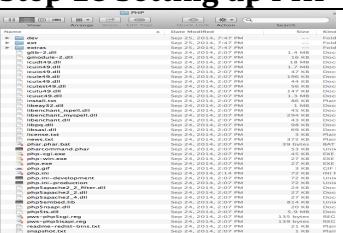
## Setting-up Apache Server:

<b>Step 11 Download Apache</b>	
<a href="http://httpd.apache.org/download.cgi">Download - The Apache HTTP Server Project</a> <a href="http://httpd.apache.org/download.cgi">http://httpd.apache.org/download.cgi</a> Apache HTTP Server Downloading the Apache HTTP Server. Use the links below to download the Apache HTTP Server from one of our mirrors. You must verify the integrity of the ... Archive · Mirrors · Announcement · Released	Download Apache version HTTP Server 2.2.29 on your WebServer device: <a href="#">Apache</a> Extract the Apache folder and place it in your Webservers C drive (C:). Rename the Folder to ' <b>Apache</b> '.
<b>Step 12 Download FileZilla Client</b> 	Download the FileZilla Client and install it on the Client Machine: <a href="#">FileZilla</a> Once FileZilla is downloaded on your Client Machine move on to step 13.
<b>Step 13 Download FileZilla Server</b> 	Download the FileZilla Server and install it on the WebServer Machine: <a href="#">FileZilla</a> Once FileZilla is downloaded on your Client Machine move on to step 14.
<b>Step 14 Setting up FileZilla on Server</b> 	
In the WebServer machine set the DNS to localhost or <b>127.0.0.1</b> . Change FTP settings to active in the Settings Window. In Settings add user and password to a set folder path that you connect to the htdocs folder within the apache 2.2 folder.	
<b>Step 15 Setting up FileZilla on Client</b> 	
In the FileZilla Client add a computer or quick connect by typing your server information in the gui.	

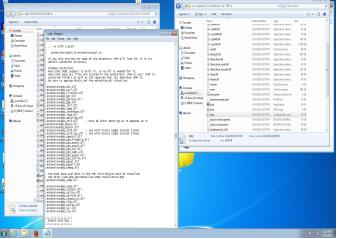
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Step 16 Testing apache Server	
	To test your apache server open your WebServers Internet Browser and type in the URL: <b>http://localhost/</b>

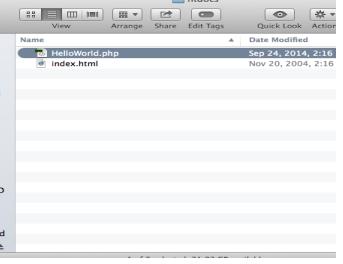
## Setting-up PHP On Apache Server:

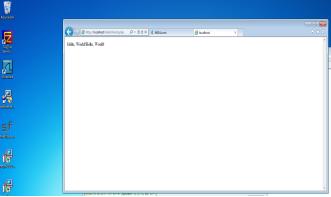
Step 17 Download PHP	
	Download PHP version VC11 x86 Thread Safe (2014-Sep-17 01:40:20) on your WebServer device: <a href="#">PHP</a>
	Extract the PHP folder and place it in your Webservers C drive (C:).
	Rename the Folder 'PHP'.
Step 18 Setting up PHP	
	Open the folder PHP in your C drive(C:). Duplicate the File named: <b>php.ini-development</b> and rename the new file to: <b>php.ini</b> Inside the php configuration file navigate to the line: ' <b>Error_reporting = E_all   E_Strict</b> ' and change it to: ' <b>Error_reporting = E_ALL &amp; ~ E_NOTICE</b> ' Inside the same file under the line: ' <b>; extension_dir = ext</b> ' write ' <b>Extension_dir = C:\PHP\ext</b> '

## Step 19 Changing Apache Config File

	In the Apache folder add to the config file: <b>httpd.conf</b> the following lines: <b>AddType application/x-httpd-php .php</b> <b>LoadModule php5_module</b> <b>"C:/PHP/php5apache2_2.dll"</b> <b># configure the path to php.ini</b> <b>PHPIniDir "C:/PHP"</b>
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## Step 20 create a .php file

	Create a .php file named ' <b>HelloWorld</b> ' with the following code: <pre>&lt;?php Print "Hello, World!"; ?&gt; &lt;?php Echo "Hello, World!"; ?&gt;</pre> Place this .php file in the htdoc folder located in your Apache Server.
Step 21 Testing	

	To test if .php is working on your apache server open your WebServer Internet Browser and type in the URL: <b>http://localhost/HelloWorld.php</b>
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### Setting-up MySQL On Apache Server:

#### Step 22 Download MySQL



Download MySQL Windows (x86, 32-bit) MSI 5.6.21:  
[MySQL](#)

Extract the MySQL file and place it in the WebServers C Drive (C:).

Rename the folder **mysql**.

#### Step 24 Configuring MySQL Server Starter

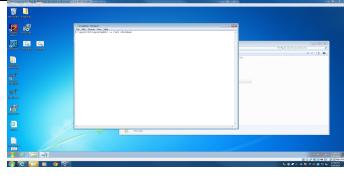


Create a .bat file named: **mysqlstart.bat**

With the Following code:

**C:\mysql\bin\mysqld --console**

#### Step 25 Configuring MySQL Stop Server

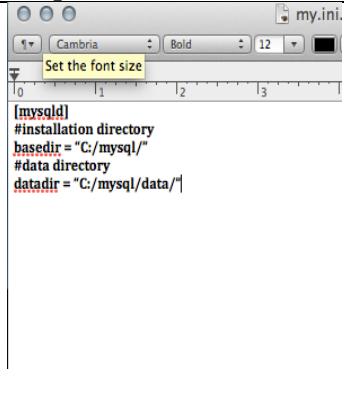


Create a .bat file named: **mysqlstop.bat**

With the Following code:

**C:\mysql\bin\mysqladmin -u root shutdown**

#### Step 26 Create Admin



Create a file named: **my.ini** in the mysql folder.

With the following code:

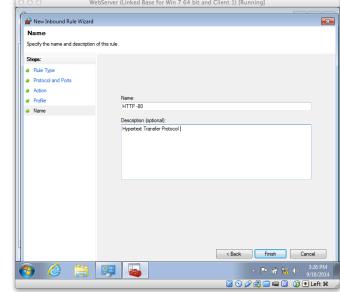
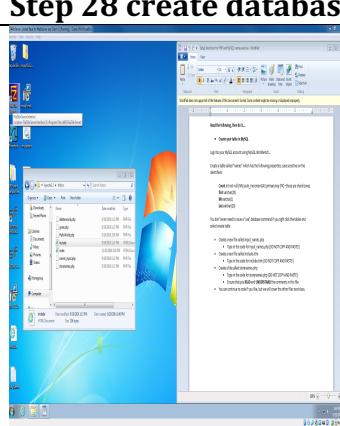
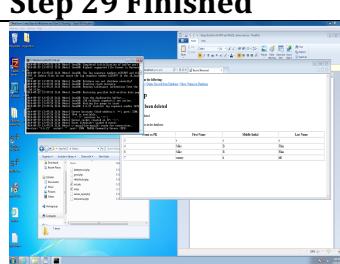
**[mysqld]**  
**#installation directory**  
**basedir = "C:/mysql/"**  
**#data directory**  
**datadir = "C:/mysql/data/"**

Open **mysqld** command prompt.

Open **mysql** command prompt with the following code:  
**UPDATE mysql.user SET user='newuser' WHERE user='root';**  
**FLUSH PRIVILAGES;**

#### Step 27 open port 3306

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	<p>On both machines navigate to <b>firewall&gt;Advanced options</b> select <b>new Inbound rule</b> in the upper right corner of the window.</p> <p>Add a MySQL rule, by creating an inbound rule for port 3306.</p>
<p><b>Step 28 create database</b></p> 	
In MySQL command prompt create a new database with the table names: <b>Create database project1;</b> <b>Create table names</b> <b>(Count int not null auto_increment,</b> <b>first varchar(20),</b> <b>MI varchar(1),</b> <b>Last varchar(20),</b> <b>Primary Key (Count));</b>	Create the code for <code>input_names.php</code>
Create the code for <code>include.htm</code>	Create a file called <code>storenames.php</code>
Set DataBase connection to: <b>\$DBConnect = mysql_connect("10.20.102.87", "root", "pass");</b>	
<p><b>Step 29 Finished</b></p> 	
To test if MySQL is working on your apache server open your WebServer Internet Browser and type in the URL: <b><a href="http://localhost/input_names.php">http://localhost/input_names.php</a></b> and navigate through the windows to make sure you have no errors.	