# Class Note 1 PHP Oracle Development

## Zend Server Setup (Updated 6/3/2015)

The "class note" is the typical material I would prepare for my face-to-face class. Since this is hybrid class, I am sharing the notes with everyone assuming you are in the class.

For the first task, our mission is to set up your PHP development environment in your computer. To make it easy for students who did not have or forget experience in Oracle database, we will delay the Oracle database installation until 5<sup>th</sup> week of the course. In the mean time, we will focus only on PHP.

1. Reading Assignments:

You will need to read chapter 1 carefully. The content of the chapter 1 will be in the future test.

You will need to skim through chapter 2. Since the available technology has changed since the release of the textbook. It will be more conducive for you to follow the notes here.

2. Zend Server Developers Edition.

Chapter 1 provided you with some history of PHP including the relationship between PHP and Oracle. At the time of this writing, Zend.com has integrated all necessary components for PHP/Oracle development in its server. Those components include Apache web server, PHP engine, and OCI8. OCI8, known as Oracle Call Interface 8, is a gateway for your PHP program to interact with Oracle database. With the Zend server integration, you can have everything you need to develop your PHP programs, except the Oracle database. Oracle database can be downloaded later for this class.

Now, you can buckle up and have fun with the installation.

You will receive a 30 day trial license for the Zend Server Developers Edition. We have reached an agreement with Zend Technology and we will provide you with license key after the 30 day trial period using D2L News.

This class note is based upon my own work with my desktop computer, as follows:

OS: Windows XP Professional Version 2003, Service Pack 3

Please note the possible changes in technology. Your experience may be slightly different since you will be using Zend Server Developers Edition.

### Download Zend Server:

http://www.zend.com/en/products/server-ce/downloads?hpb=server\_CE\_Download

If you acknowledge that you are lazy, you may hold your CTRL key and double click <u>here</u> to down load the file from my server. But, you are on your own risk.

Run the downloaded file to install, you will see the following screen. Everything else will be as easy as going to six flags in the summer.

| Zend Server Community  | Edition Installer  |      |
|------------------------|--|------|
| zend <sup>.</sup> serv | <b>e</b> Γ <sub>Community</sub> Edition  | zend |
|                        | Welcome to Zend Server Community Edition 4.0 Installer<br>The Installation wizard will install Zend Server Community Edition on your computer.<br>To continue click Next |      |
| InstallShield          | < <u>B</u> ack Next > Cance  |      |





| Zend Server Community Edition | Installer  | ×    |
|-------------------------------|--|------|
| zend Server                   | mmunity Edition  | zend |
|                               | <b>Web Server</b><br>Select the type of Web Server to use and define where to install Zend Server.                                 |      |
|                               | Select a Web Server:   |      |
|                               | Install an Apache 2.2.11 Web Server  |      |
|                               | Configure existing IIS Web Server  |      |
|                               | Note: Microsoft IIS is currently not installed. If you want to use IIS, please install it and restart the Zend Server installation |      |
|                               | Define where to Install Zend Server.<br>Click Next to approve or Browse to change the location.                                    |      |
|                               | Destination Folder   |      |
|                               | C:\Program Files\Zend\ Browse  |      |
|                               |  |      |
| InstallShield                 | < <u>B</u> ack <u>N</u> ext > Cancel   |      |

I highly recommend selecting Apache Server, which is open source and widely accepted web server.



Components to be installed:

- PHP 5.2.10
- -- Common Extensions
- -- Additional Extensions
- -- Zend Optimizer+
- -- Zend Debugger
- -- Zend Data Cache
- Zend Framework 1.8.4
- -- Zend Framework Base
- Oracle OCI Driver

#### - Apache Web Server on port 80

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The components will be installed to: C:\Program Files\Zend\

| Zend Server - Mozilla Firefox   |                                |
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| Zend'Server community Edition   |                                |
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| Welcome to Zend Server  |                                |
| Plass define voir Administration Infertance assessment  |                                |
| 1. And Designed   |                                |
| I. Set Password   |                                |
| Enfer password:   |                                |
| Retype password:  |                                |
| This password is required in order to access the Zend Server Administration Interface. To further secure Zend Server, please refer to the User Guide section on Securing Zend Server. |                                |
|   |                                |
| 2. Subscribe to Zend Server Product Update Notifications  |                                |
| Notify me of new Zend Server releases and other important updates   |                                |
| Email Address:  |                                |
|   |                                |
| Enter   |                                |
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Password: You may enter your dog's name or anything you like. But, please make a note. When you get to my age, you will find out it is necessary to take note.

After the installation, you may access the Zend server using the following link.

Zend Server:

http://localhost/ZendServer/Index/Index#1249327664029

I hope you still remember the password you entered at the installation.

You may experiment with the server settings. It is normal that you do not know everything on the server setting at this time. With some basic logic and some common sense, you will be able to figure out what they are, sooner or later. The fun part of working with computers is that you can change

something and see what will be the result. It is totally different from Budweiser, which I do not want to try.

Do experiment with some settings. You will not break it. If you do break it, it is your computer anyway.

My only suggestion is to take note on what changes you made, so that you can revert back to the same old setting.

To prepare the Zend Server to connect to Oracle database, OCI8 in Zend Server should be turned on. Go to "Server Setup" tab, choose "Extension," find OCI8 and turn it on.

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| ON                      | pcre              | Built-in          | Directives       |  | (1)                   |
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| You You                 | r PHP needs to b  | e réstarted       |                  |  | Restart PHP           |
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Restart PHP (at the lower right corner).

Now, you may test to see if the Apache Web server works or not.

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Apache HTTPD server: <u>http://localhost/</u>

Virtual File Folder at Apache:

C:\Program Files\Zend\Apache2\htdocs

Write a simple php program (TestPHP.php) and placed it under the above directory, using Word Pad, NotePad or Notepad ++.

If you paid attention to what I said above, I used the word "write." I did not use "copy." It is because you are in a PHP class. PHP is a language, which you will learn by writing it. Over the past, I found it is the most effective for me to write or retype the code, instead of copying and pasting.

http://localhost/php/TestPHP.php

| 🐸 PHP Info Test Page - Mozilla Firefox      |                               |   |  |          |       |
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|   |                               | PHP Versior   | 5.2.10 <b>Php</b>  |          |       |
|   |                               | System  | Windows NT 154862FIU 5 1 build 2600  |          |       |
|   |                               | Build Date  | Jul 5 2009 17:02:08  |          |       |
|   |                               | Configure<br>Command  | cscript hologo configure js "-disable-lpv6" "-disable-zts" -enable-fastogi "-disable-<br>bornah"disable-calendar "-disable-tp" -disable-obc"disable-tokenzer<br>"-disable-gon"disable-mirader '-disable-mirader '-without-disable-tokenzer<br>sqlite "without-wdd"enable-di-win32"enable-goo"with-openser 'with-<br>libmit "without-osclite' |          |       |
|   |                               | Server API  | CGI/FastCGI  |          |       |
|   |                               | Virtual Directory<br>Support  | disabled   |          |       |
|   |                               | Configuration File<br>(php.ini) Path  | C:WINDOWS  |          |       |
|   |                               | Loaded<br>Configuration File  | C:\Program Files\Zend\ZendServerietc\php.ini   |          |       |
|   |                               | Scan this dir for<br>additional .ini files                                      | (none)   |          |       |
|   |                               | additional .ini files<br>parsed   | (none)   |          |       |
|   |                               | PHP API   | 20041225   |          |       |
|   |                               | PHP Extension   | 20060613   |          |       |
|   |                               | Zend Extension  | 220060519  |          |       |
|   |                               | Debug Build   | no   |          |       |
|   |                               | Thread Safety   | disabled   |          |       |
|   |                               | Zend Memory<br>Manager  | enabled  |          |       |
|   |                               | IPv6 Support  | disabled   |          |       |
|   |                               | Registered PHP<br>Streams   | https, ftps, php, file, data, http, ftp, compress.zlib, compress.bzip2, zip  |          |       |
|   |                               | Registered<br>Stream Socket<br>Transports                                       | tcp, udp, ssl, sslv3, sslv2, tis   |          |       |
|   |                               | Registered<br>Stream Filters  | convert.iconv.*, string.rot13, string.toupper, string.tolower, string.strip_tags, convert.*,<br>consumed, zib.*, bzip2.*   |          |       |
|   |                               | This program make<br>Zend Engine v2.2.0<br>with Zend Extens<br>- with Zend Data | s use of the Zend Scripting Language Engine:<br>Copyright (c) 1989-2009 Zend Technologies<br>on Manager AC. Jooprish (c) 2003-2009, by Zend Technologies<br>Zache v4.0, Copyright (c) 2003-2009, by Zend Technologies [loaded] likensed [lenabled]   |          | ×     |
| Doop  |                               |   |  |          |       |

Congratulations!!

### Something Extra for the Professionals (Useful in Troubleshooting):

After installing Zend server, you will see Apache service:

Go to Control Panel—Performance and Maintenance—Administrative Tools—Services



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|-------------------------------|--|----------------------|--------------|------------|
| Secondara (Laral)             |  |                      |              |            |
| Services (Local)              | and the second   |                      |              |            |
| Apache2.2-Zend                | Name /   | Description Status   | Startup Type | Log On As  |
|                               | NET Runtime Optimization Service v2.0.50727_X86  | Microsoft            | Manual       | Local Syst |
| Stop the service              | Nerter   | Notifies sel         | Disabled     | Local Serv |
| Restart the service           | Manachez.z-zend  | Provides th Started  | Automatic    | Local Syst |
|                               | Application Layer Gateway Service  | Provides s Started   | Manual       | Local Serv |
| Description:                  | Application Management   | Provides s           | Manual       | Local Syst |
| Apache/2.2.11 (Win32)         | ASP.NET State Service  | Provides s           | Manual       | Network S  |
| mod_ssl/2.2.11 OpenSSL/0.9.8k | Audio Service  | Manages a Started    | Automatic    | Local Syst |
|                               | Automatic Liveopoate Scheduler   | Enables the Started  | Automatic    | Local Syst |
|                               | Background Intelligent Transfer Service  | Transfers f Started  | Manual       | Local Syst |
|                               | Bonjour Service  | Enables ha Started   | Automatic    | Local Syst |
|                               | 🖏 ClipBook   | Enables Cli          | Disabled     | Local Syst |
|                               | COM+ Event System  | Supports S Started   | Manual       | Local Syst |
|                               | COM+ System Application  | Manages t            | Manual       | Local Syst |
|                               | Scomputer Browser  | Maintains Started    | Automatic    | Local Syst |
|                               | A DataSvr  | Started              | Automatic    | Local Syst |
|                               | DCOM Server Process Launcher   | Provides la Started  | Automatic    | Local Syst |
|                               | DHCP Client  | Manages n Started    | Automatic    | Local Syst |
|                               | Solution Client Client   | Maintains li Started | Automatic    | Local Syst |
|                               | Distributed Transaction Coordinator  | Coordinate           | Manual       | Network S  |
|                               | Service Reporting Service  | Resolves a Started   | Automatic    | Network S  |
|                               | Service  | Enables ev Started   | Automatic    | Local Syst |
|                               | Extensible Authentication Protocol Service   | Provides w           | Manual       | Local Syst |
|                               | Fast User Switching Compatibility  | Provides m           | Manual       | Local Syst |
|                               | FLEXnet Licensing Service  | This servic Started  | Manual       | Local Syst |
|                               | Google Software Updater  | Google Up            | Manual       | Local Syst |
|                               | Google Update Service (gupdate)  | Keeps your           | Automatic    | Local Syst |
|                               | Health Key and Certificate Management Service  | Enables He Started   | Automatic    | Local Syst |
|                               | WHTTP SSL  | This servic          | Manual       | Local Syst |
|                               | Human Interface Device Access  | Enables ge           | Disabled     | Local Syst |
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|                               | bogical Disk Manager   | Detects an Started   | Automatic    | Local Syst |
|                               | Logical Disk Manager Administrative Service  | Configures           | Manual       | Local Syst |
|                               | LVCOMSer   | Logitech Vi Started  | Automatic    | Local Syst |
|                               | Se LVSrvLauncher   | Launcher f           | Automatic    | Local Syst |
|                               | Macromedia Licensing Service   | Transmite            | Manual       | Local Syst |
|                               | Microsoft Office Diagnostics Service   | Run portio           | Manual       | Local Syst |
|                               | MS Software Shadow Copy Provider   | Manages s            | Manual       | Local Syst |
|                               | Net Logon  | Supports p Started   | Automatic    | Local Syst |
|                               | Net.Tcp Port Sharing Service   | Provides a           | Disabled     | Local Serv |
|                               | NetMeeting Remote Desktop Sharing  | Enables an           | Manual       | Local Syst |
|                               | Network Access Protection Agent  | Allows win           | Manual       | Local Syst |
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|                               | Network Location Awareness (NLA)   | Collects an Started  | Manual       | Local Syst |
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| Concentred V preunden V       |  |                      |              |            |

You should be able to see Apache 2.2-Zend service. That is your web server.

If you use Task Manager (CTRL+ALT+Delete), under Processes, you should see httpd.exe. That is the process for the Apache.

In the Task Manager, you will also see the process named as php-cgi.exe. That is your PHP engine.

When you test your PHP server, those two above will give you clues if the web/php server is working or not.