Quick Start Guide:

Zend Studio V.5.5

By **Zend Technologies, Inc.**

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About the Zend Studio^{TM} Quick Start Guide

The Zend Studio Quick Start Guide is intended to provide the information necessary for installing and using Zend Studio^{TM}. This Guide presents a selection of main features necessary to quickly acquaint yourself with Zend Studio's components. Complete descriptions of Zend Studio features and components can be found in the Zend Studio User Guide and Online Help[1].

About Zend

Zend Technologies, Inc., the "PHP Company" is the leading provider of products and services for developing, deploying, and managing business-critical PHP applications. Zend and its founders are the architects of PHP, which is used by more than fifteen million Web sites and has quickly become the most popular language for building dynamic Web applications.

Deployed at more than 12,000 companies worldwide, the Zend family of products is a comprehensive platform for supporting the entire lifecycle of PHP applications.

Zend Studio Editions

Zend Studio comes in two different editions to suit different developer and organizational requirements.

Zend Studio Standard

Zend Studio Standard is designed with beginning PHP programmers in mind. It is the perfect development tool for PHP beginners, as well as for advanced programmers who need a powerful editor and local debugger. It includes Zend Studio's most complete editor with support for PHP 4 and PHP 5, HTML, Javascript, XML, CSS, plus its powerful local debugger.

Zend Studio Professional

Zend Studio Professional is the most advanced Integrated Development Environment (IDE) available for professional PHP developers. Through a comprehensive set of editing, debugging, analysis, and optimization tools, Zend Studio Professional speeds development cycles and simplifies complex projects. Designed with business application development needs in mind, it is the perfect development environment for developers creating robust database applications with PHP.

Zend Studio Professional was expressly engineered to deliver ease-of-use, scalability, reliability, and extensibility that professional developers need. Studio Professional provides a rich interface and a robust advanced debugger, plus: integrated database components and tools, and complete connectivity to IBM DB2/Cloudscape/ Derby, MySQL, Oracle, PostgreSQL, SQLite, and Microsoft SQL Server. Studio Professional also supplies over 50 sample database applications in PHP, support for PHP 4 and PHP 5, Code templates, secure

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[1] Zend Studio Enterprise Users can additionally benefit the Zend Platform User Guide that is provided with Zend Studio Enterprise.

remote debugging, SFTP, FTP over SSL and improved FTP for secure remote uploading and debugging, and one-click browser debugging. Additionally, Studio Professional delivers tight CVS and Subversion integration, Project wizards, a Site Profiler, more than 100 code snippets, and PHPDoc and PHPDocumentor support. Studio Professional also integrates with Zend Platform for real time feedback on code and script performance on a live server.

Installation and Registration

Zend Studio installation consists of three components:

- Zend Studio

- Zend Core (Is a mandatory prerequisite for Windows users and should be manually downloaded from http://www.zend.com/core/start before installing Zend Platform).

- Zend Platform

Zend Studio Installation

This section describes the Installation procedure for the Zend Studio's components.

Zend Studio works out-of-the-box for an evaluation period of 30-days. The evaluation period begins upon installation. Any time during this period, a valid license can be entered (Help | Register Product).

At the end of the evaluation period, the product will stop working and a valid license will be necessary to continue to use Zend Studio.

Note:
The Zend Studio Installation includes Zend Platform and a free, 30-day license for its use. At any time during the 30 days, or afterwards, development users can extend this free license for Zend Platform, for development purposes only, by contacting Zend from the Zend Platform GUI or the appropriate page at www.zend.com and completing the appropriate License acquisition form.

Downloading from the Web

The following describes the download, procedure for downloading Zend Studio.

1. Select the relevant operating system (UNIX, Mac, Microsoft etc.) and click **Download**.

2. Do one of the following:

    a. If you are a current Zend user, click Login (on the upper right hand side of the screen) and type in your Zend Username and Password to Sign In.

    b. If this is your first time at Zend, click Register (on the upper right hand side of the screen) to Sign Up.

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Note:

Upon registration to Zend.com, you will receive a Welcome email, confirming your Zend Username. We recommend that you keep this for future reference. An additional e-mail with the Zend Studio License information will be sent to those who purchased Zend Studio.

Zend Studio Installation

You are now ready to install Zend Studio. After downloading the file or inserting the product CD, run the Zend Studio file as follows:

- ZendStudio-5.x.x.exe for Windows

- ZendStudio-5.x.x.tar.gz for Linux

- ZendStudio-5.x.x.zip for Mac

Extract and run the installation file, and follow the installation process.

Note:

The installation process may slightly vary depending on the chosen operating system Linux/Mac/Windows. Slight variations do not indicate problems with the actual installation process and only if the installation fails should Zend Support be contacted.

1. Read and accept the License Agreement and click **Next** to continue.

2. Choose the install set you wish to install: Full (all components), or Custom (manually select components). Then click **Next.**

3. If you selected to install the Internet Explorer Toolbar you will be prompted to change your browser's configuration to enable BHO's[2]. If you do not enable BHO's, you will not be able to view the Zend Studio Toolbar. Choose Yes or No, and click **Next.**

4. In the next screen, type the folder location for the installation or accept the default one, and click **Next.**

5. Choose Shortcut Folder options to specify where the product icons will be created, and click **Next.**

6. Associate file extensions with the IDE to determine which file types you wish to associate with Zend Platform. Check the relevant file extensions and press **Next**.

7. Determine the PHP version in use. This determines the default version of PHP (PHP 4

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[2] BHO (Browser Helper Object) - enabling BHO's makes invisible objects visible.

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or PHP 5).[3] Select the relevant version and click **Next.**

8. The Pre-install Summary provides an installation profile that verifies the installation folder you entered and supplies you with disk space information. Click **Install** to continue or **Previous** to change the location or add/remove one of the installed features.

9. Zend Studio is now being installed. During installation, screens are provided that allow you to monitor the progress of the installation. These screens also provide information about the product and contact information.

10. Once the files are prepared, you will be prompted to download Zend Studio Components. Click the **Download** button to continue.

11. The display will change to show the installations progress bars.

Note:

While installing Zend Studio, a separate installation dialog will open to install Zend Platform.

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12. Once the Zend Studio installation is completed you will be prompted to install the Zend Guard for distributing encoded applications. Check Yes to install or No to ignore and click Next.

13. If you chose to install Zend Guard, the display will change to show the installation's progress. Click Download to continue, and then Next to open the install dialog for Zend Guard. Once it is finished installing, click Finish to return to Zend Studio.

14. The Important Information screen opens, telling you how to enable the Zend Studio Browser Toolbar integration. To continue, click Next.

15. Zend Studio is now installed on your machine. It is recommended that you read the README file prior to launching the application. To do so, choose to view the README file, and click Done.

16. The ReadMe file opens and you are now ready to launch the application.

When launching the product for the first time, the 30-day evaluation begins.
To enter a purchased product's *Registration Name* and *License Key,* Open, Zend Studio and go to: Help | Register...

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[3] You can switch between PHP versions after installation through the Preferences menu.

Figure: 1 - Zend Studio Registration Screen

Starting Zend Studio

This section details how to start Zend Studio after installation. Starting Zend Studio is straightforward.

Windows

Click the icon ( ) on your desktop or go to the installation folder and click the exec file ZDE.exe. The default installation is located at:
C:\Program Files\Zend\ZendStudio-<VERSION>\bin\ZDE.exe

Mac

Click the icon ( ) on your desktop or go to the installation folder and click the exec file ZDE.exe. The default installation is located at:
/Applications/Zend/ZendStudio-<VERSION>/bin/ZDE.app

Linux

Run the executable binary named **ZDE** located in the install folder. The default folder is:
/usr/local/Zend/ZendStudio-<VERSION>/bin/ZDE

Zend Platform Installation

Installing Zend Platform[4]

Please refer to the Zend Platform Installation Guide for details on installing Zend Platform for Windows and for detailed installation options.

Windows users must install Zend Core before running the Zend Platform installer. Download and install Zend Core from http://www.zend.com/core/start.

To install Zend Platform under UNIX (Linux, Solaris, and FreeBSD), follow these steps:

1. Build a supported version of PHP 4.2 and above in non-debug mode (the default). You can ensure that PHP is built in non-debug mode by adding:
   disable-d--ebug
   to the PHP configure line. Otherwise, Zend Platform will not load.

2. To unpack Zend Platform, run the command:
   gunzip -c <package name> | tar xvf -

3. The unzipped files will be placed in a directory with the same name as the package, without the archive suffix (e.g. '.tar.gz').

Note:
Zend Platform comes with two terminal-based installation scripts. The Text UI (TUI) dialog-based script is described in detail below. A similar TTY-based script is also provided for terminal-based systems that do not support the graphics capability of the TUI installation dialog boxes. To run the script, type the following command in the installation directory: ./install and follow the instructions.

4. Select OK and press Enter to continue.

5. Accept the terms of the license agreement.

6. Confirm the location of your php.ini file and select OK and press Enter.

7. The Zend Studio Enterprise requires the Standalone Zend Platform option. Select this option from the installation methods.

8. The Node installation option is not required for Zend Studio Enterprise.

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[4] For compatibility issues refer to the Zend Platform compatibility table at
http://www.zend.com/store/products/product_compatibility.php

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9. Specify the Apache Control Utility path.

10. Specify the target directory for Zend Platform.

11. Specify the location of the Apache document root directory

12. Enter a password for accessing the GUI5

13. Enter a new password in the Password dialog box.

14. Confirm the user name that your PHP scripts run as under Apache

15. Enter the path for the cache storage directory.

16. Confirm the URL that corresponds to the Apache document root

17. Add a line to the user's crontab file that will remove outdated cache files from the system. The cleaner process by default runs every 10 minutes.

18. Add a line to the user's crontab file that will insure that Zend Central's event collector process is operating at all times. The collector process by default runs every 2 minutes.

19. Accept the configuration changes that have been made to php.ini file.
    Enter the full path to the Java binary that will be used for running the Zend Java Bridge.

20. Zend Platform Installation displays a list of components that were successfully installed.

21. Select OK and press Enter to continue.
    Installation displays the URL for accessing Zend Platform's user interface.

The Zend Platform GUI is accessed from:

http://<your-host>:<port>/ZendPlatform/

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[5] Platform Installation automatically searches for a GUI password already stored in the system

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Working with Zend Studio

Zend Studio is a complete development environment for PHP developers. As such is designed for simplicity and ease-of-use. Straight from the beginning, before developers write their first line of code they are exposed to advanced tools and capabilities such as: Templates, Goto functionality, Code Completion and many other advanced features that support ease-of-use and save development time.

Components

Zend Studio consists of two components: Zend Studio and Zend Platform (which includes the Studio Server component). These components interact with each other to cover the entire development lifecycle – to manage, develop, and deploy:

Zend Studio

Zend Studio is a powerful IDE for writing and maintaining PHP applications. It includes the Zend Browser Toolbar, the PHP manual, and an internal PHP 4 and PHP 5 debugger.

Zend Platform

Zend Platform is installed on staging machines for Debugging and Profiling. Zend Platform is an "Enterprise PHP Run-Time Environment." This environment supports and strengthens PHP development by adding key features that speed the development process. Zend Platform streamlines development and deployment, increases application responsiveness, and provides detailed forensic data on problems that occur throughout the application lifecycle.

Zend Platform's Studio Server Component

The Studio Server is used for communication with remote machines for Debugging and Profiling PHP code. Studio Server is the Zend Platform component that adds remote debugging and profiling capabilities to existing PHP servers. Furthermore, it allows setting up a PHP-enabled Web server, even if one does not already exist.

Environment

The Zend Studio environment is easily accessible through Zend Studio's main window. The main window provides users with an intuitive interface that consists of a multi-pane display to show or hide a wide array of provided features (file view, debug output, messages, etc.). These features have been carefully designed to accommodate varying developer preferences and requirements.

The interface includes control features such as development, debugging, and deployment capabilities, along with management features such as file, project, and debug settings, all from a single view.
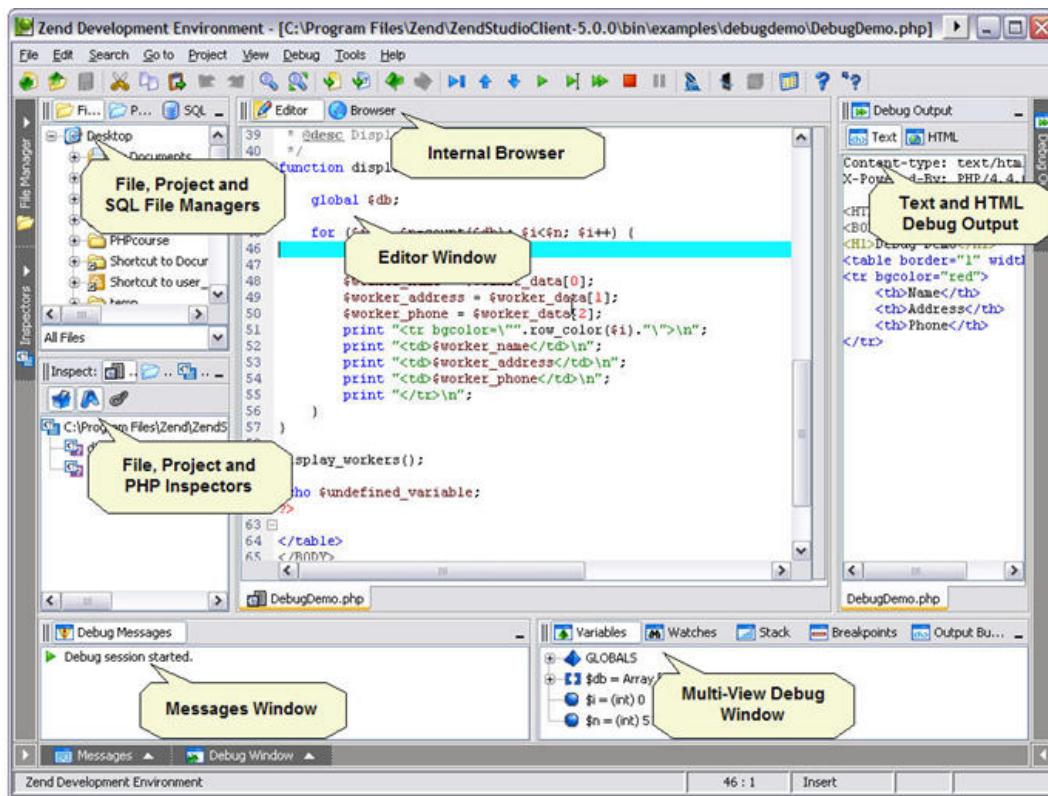
Figure: 2 - User Interface

Editing Code

Zend Studio supports various editing features such as:

- **Syntax Highlighting** - Benefit from visualization of code syntax and hierarchy using Syntax Highlighting - for PHP, HTML, JavaScript, CSS, XMl and SQL.

- **Code Folding** - Provides the ability to expand and collapse code in order to ease the management of large amounts of code.

- **Code Completion** - Automatically displays a list of completion options based on code section type (PHP or HTML) as well as existing methods, classes, functions, etc.

- **Templates** - A fast and efficient way to code many typical constructs. Just type the Template name, press Tab, and the relevant code is instantly added.

- **Smart Goto Source** - Navigate from variable to variable within the editor window by pressing CTRL (META in MAC) and hovering over a selected element.

- **Real Time Errors** – underline syntax errors in the code while you write.

- **Matching Bracket Navigation** - jump from the one bracket to the other to reduce the need for scrolling.

The following example illustrates Zend Studio's **Code Completion** feature.

1. Go to the main toolbar. Select **File | New File** (CTRL+N). A blank Editor window will open.

2. Go to the Editor window; enter the "less than" symbol (**<**). The Code Completion window will appear and display a list of HTML tags.

3. Select **html** from the list and press ENTER (or double-click). The tag "HTML" will appear in the editing window.
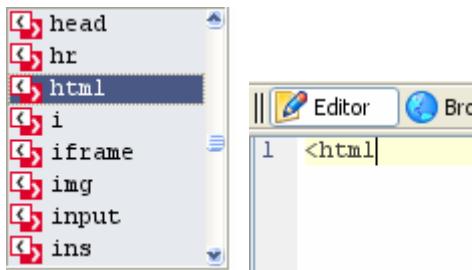
Figure: 3 - Html tag

4. Type **<?php**, and press ENTER twice.

5. Type **pri**. The PHP Code Completion drop down will open and display the existing PHP code completion options.

6. Select the **print_r** function from the Code Completion window and press ENTER. **print_r** appears on the edit line and the Code Completion window re-displays the function syntax.
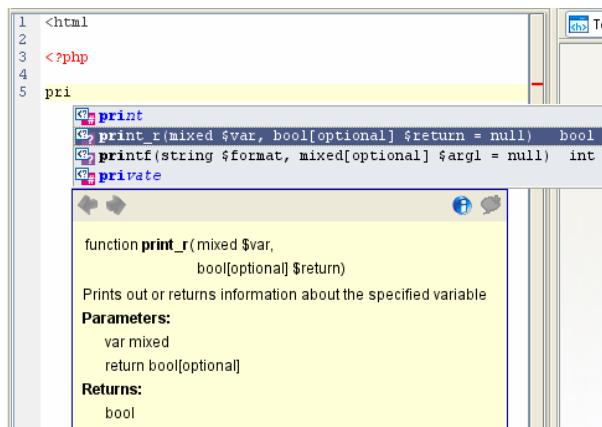
Figure: 4 - Code completion

7. Type "hello" between the parentheses and hit END, then add a semicolon and press enter. Move your cursor outside the parentheses and press ENTER.

Working with Projects

This section describes the procedure for creating a project. Projects are a collection of files, folders and definitions[6] that provide a means for organizing a collection of files under a single classification.

Advantages of working with projects

When working with projects developers benefit from the following features:

- **Inspection** - All files are processed and the classes and functions are added to the Code Completion List.
- **Check Include Files** - Check for missing *include files* in the project.
- **Goto File** - Open or navigate to any file in the project.
- **Goto Resource** - Open or navigate to PHP resources in the project.
- **Bookmarks** – Mark and comment places in code to return to later
- **Search In Project** – search for text in the projects context.

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[6] Project definition files are assigned the *.zpj file extension.

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To create a new project:

1. From the main toolbar select **Project | New Project**. The New Project Wizard dialog box will appear.

2. Enter a name for the new project. The location is updated accordingly. Click **Next** to define specific properties for the new project. Or click **Finish** to skip all the following dialogs

3. To add the files/directories to the project click **Add Path** and browse for the files/directories to be included in the new project.

4. Click **Next** to continue or **Finish** to skip the Debug configuration.

5. The next window displays the default settings defined in the Debug tab in the Customization window. If you wish to apply specific debug settings for the current new project, un-check the **Use System Defaults** check box and modify the settings and Click **Finish.**

Note:

These settings are reflected in the Project Properties dialog. To view a project's debug settings at any time, open the project and go to Project | Project Properties.

PHP Code Analyzer

Zend Studio provides static source code analysis by problematic code reconciliation. It locates unreachable code, such as. code that has been defined but not used, or empty variables. The Code Analyzer produces a detailed error log while focusing on the error's location in the file that is open (in the Editing Window). In addition, it provides practical suggestions for improving the code.

To run the Code Analyzer:

1. Select a file/directory from the Project tab.

2. Right click to display the mouse menu.

3. Select Analyze Code (or, right-click on the active file in the Editor window and select Analyze Code).

4. A code error in the Code Analyzer Output tab will appear in the Messages window. Double-click the code error to move the cursor to the exact location in the file.

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Professional Database Applications

Building sophisticated database applications in PHP is now made easy with direct connectivity to the most widely used professional databases such as: IBM DB2/Cloudscape/Derby, MySQL, Oracle, Microsoft SQL Server, PostgreSQL and SQLite. In addition, Zend Studio simplifies Web database application development with an integrated suite of database tools.

Among other capabilities, DB support can be used to:

- Execute queries on connected servers

- Connect live to several servers simultaneously

- View database schemas

- Manage connections with Zend SQL Explorer

SQL

Right-click anywhere in the SQL Tree to view a changing menu that will include the Global Settings for each node.

Double-click on one of the tree nodes to view and edit tables and queries.

Data Display and Editing

Data can be displayed from the tree and from executing the Query Editor.

The Query editor can be expanded from the right click menu (SQL Query). To save time, the query target (server, DB, and Schema) is automatically adjusted when navigating the tree.

Double-click on a field to open an editor. Text fields will allow you to open a larger text editor.

Web Services Support (SOAP)
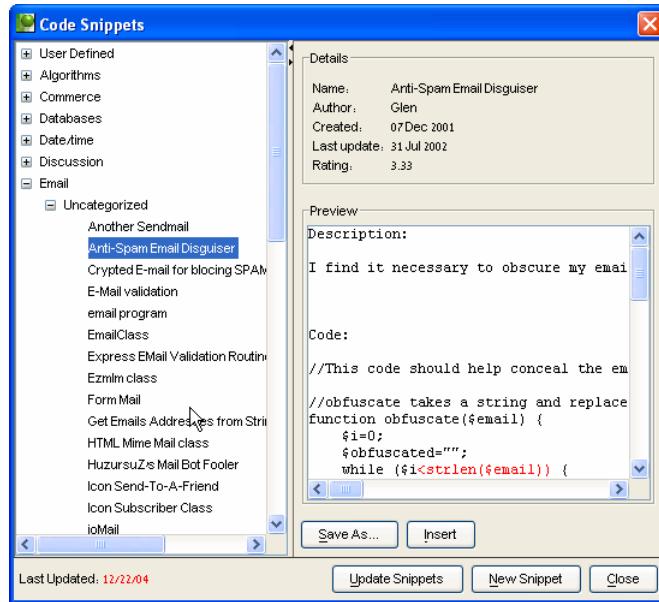
Web services are a standardized way of allowing applications to interface and share data across the network. Web service messages are written in XML, thus allowing for different applications in different programming languages to interface with each other. Web services allow businesses to communicate data with each other and clients.

With the Zend Studio Web Services Support developers can:

- Generate WSDL files with the WSDL file generator. To generate WSDL files and configuration sets, open the Wizard by selecting: Tools | WSDL Generator.

- Automatically view new SOAP clients that were inserted into the code. View new SOAP clients through the Inspectors and Code Completion windows.

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Code Snippets

One of the best ways to ensure that an application can be delivered in record time is to learn from other people's experience. Zend Studio's Code Snippets feature automatically incorporates utility functions and code samples from the hosted code Gallery at www.zend.com, increasing productivity with the addition of 100+ reusable code snippets.

Figure: 5 - Easily access and manage code snippets with Code Snippets Explorer

Note:

To view existing code snippets from within the application, select Edit | Show Snippets. To add code snippets select Edit | Create New Snippet.

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Debugging and Profiling

The advanced debugging and profiling options provided with Zend Studio can be performed directly to code being developed in the Zend Studio IDE on your local machine, or on a remote Web server.

The debugging and profiling options provide advanced diagnostics for improving the development lifecycle.

The following chapter describes the debugging and profiling features.

Zend Studio Debugger

Zend Studio supports two debugging capabilities:

- **Internal** – For local debugging and uses a local copy of PHP 4 or PHP 5.
- **Server** - For debugging remote servers, that are accessed online from the Client application using Zend Platform's Studio Server. When debugging files on a remote server the debugger uses the PHP installed on the remote server.

The internal debugger is a debugging tool that allows the developer to debug applications as they are being developed-before they are uploaded to the web server.

Zend Platform's Studio Server component allows developers to debug files residing on a content server.

Simple Debugging Example

The following example demonstrates the debugging process using the Internal Debugger.

Use the "Tip of the Day" dialog box to access sample code and a short explanation on debugging.

1. Start Zend Studio and select Help | Tip of the Day.

2. From the "Tip of the Day" dialog box, select the Debug Demo button. The file DebugDemo.php will open in the Editing window.

3. In Zend Studio's main toolbar, click ▶ (Run) to start the Debugger. The debugger icon 🐞 will appear while the Internal Debugger runs, and will remain onscreen until the Debugger detects a breakpoint (at line 46).

4. Click ▶▮ (Step Over) multiple times until the cursor arrives at line 51.

5. Place and hold the cursor over worker_name, worker_address, and worker_phone. Each time, a Tool tip appears displaying the variable values.

6. Click ⬇ (Step Into) - The Debugger advances to line 26.

7. In the Debug Window click the Stack tab and click the node to the right of row_color. The call stack tree expands displaying variable i.

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8. Click (Step Out) - The cursor arrives at line 51.

9. Click . Output appears in the Output Window; a Notice appears in the Debug Messages Window.

10. In the Debug Messages Window, double-click on the Notice. The cursor jumps to line 61 in the Editing Window.

11. Place the cursor in the Debug Output Window, right-click and select Show in Browser from the menu. A browser window appears with the Output window contents.

Configure Zend Platform's Studio Server

Zend Platform's Studio Server contains a debugger module, which means that an instance of the debugger resides wherever Studio Server or a Zend Platform node was installed. The **Studio Server tab includes three options:**

- **Settings** - These are the settings for the Studio Server that resides on a remote server.

- **PHP Configuration** - This is a shortcut to the PHP Settings configuration table. From this screen, you can configure PHP settings for a specific server. The settings are displayed in a collapsible table.

- **PHP Info** - This screen displays all the PHP information for the selected node.

To access any of the functions included in the Studio Server tab:

1. Click the Studio Server tab. The Select Server to Configure screen opens.

2. From the Server Tree, select the server you wish to configure (or which settings you wish to view).

3. Click **Select**. The Studio Server tab opens for the selected node.

Firewall Note:

Integration with any remote server presents a firewall issue. To overcome firewall limitations yet retain security standards in your organization, the Studio Server Tab's Settings option provides a means to define hosts to be connected using the Zend Tunneling option. Read on about the Studio Server Tab to discover how to pass through Firewalls for safe remote integration with Studio Server.

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Settings

The Settings screen of the Studio Server tab displays the settings for the Studio Server that resides on the selected node. There are four categories of settings:

- **Allowed Hosts** - hosts that are allowed to initiate debugging and profiling sessions.

- **Denied Hosts** - hosts that are not allowed to initiate debugging and profiling sessions, even if they are on the Allowed Hosts list.

- **Allowed Hosts for Tunneling** - hosts that reside behind a firewall require special handling in order to enable remote connectivity to Zend Studio Debugger.
  The servers that are allowed to remote-connect using the Zend Studio Tunnel for debugging across a firewall should be listed in this section.

- **Other Settings** - additional settings supported by Zend Platform. Currently, "*Expose Remotely*" is the only setting in this category. This setting determines whether the Debug Server will expose itself to remote clients. This is required if you want the Zend Studio Browser Toolbar[7] to automatically detect pages that can be debugged.

From the Settings screen, you can Add, Edit, or Remove a host from the Allowed Hosts, Denied Hosts, or Allowed Hosts for Tunneling categories. You can also assign a value (Always, Selective, or Never) to the "*Expose Remotely*" setting for the selected node.

For security reasons, the user must first be configured as an authorized host in the Studio Server settings before using the Remote Debugger. Only authorized IP addresses can access the Server. All other IP addresses will be denied access.

To enable communication between Zend Studio and a remote server, use Zend Platform's Studio Server component to define the respective host (the server where Zend Studio is residing) as an "Allowed Host".

To define an allowed host:

1. Log on to Zend Platform as an Administrator from a permitted IP address.

2. Open the Studio Server tab.

3. In the Manage IP Permissions tab, add the IP address that you wish to allow accessing the Remote Debugger to the Allowed Host List.

4. Verify that the IP address you wish to allow to access the Remote Debugger does not appear on the Denied Host List. (If it is on the Denied Host List, remove it.)

5. Click OK.

6. Restart the Web Server. When the Web Server restarts, Zend Studio and the added IP address will be able to access the Remote Debugger.

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[7] The Zend Studio installation adds a toolbar to your browser. If you have Zend Studio installed and cannot see the Toolbar select **View | Toolbars** and select Zend Studio.

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Note:

Access to Zend Studio Enterprise is handled by a two-stage verification process. Only when an IP address passes both stages—i.e., it is allowed and it is not denied—can it then access debugging services.

Note:

You can also configure the Debugger's access-list through the zend_debugger.allow_hosts and zend_debugger.deny_hosts php.ini directives.

Debug URL

Debug URL allows you to run the debug procedure on pages currently mounted on a Web server. This process simulates real-life Web activity when debugging. You can initialize the debug session from Zend Studio by pressing the Debug URL menu or from Zend Studio's embedded Browser Toolbar.

Zend Studio has a unique debugging process. Because of this process, you can often avoid uploading your latest revisions. For example, if you browse on your Website and find that one of the pages is corrupted, you can initialize a Debug Session on that page directly from the Browser with the Zend Studio Browser Toolbar. After finding and fixing the problems, you can initialize a new Debug Session on the same URL and use your browser to view the new result without first uploading the files that were changed.

To run the debugger on a URL go to: Tools | Debug and enter the settings in the configuration screen[8].

Profiling Application Performance

Zend Studio's integrated Performance Profiler helps to optimize overall application performance.

Zend Profiler detects bottlenecks in scripts by locating problematic sections of code. These scripts consume excessive loading-time. The Profiler provides you with detailed reports that are essential in optimizing the overall performance of your application.

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[8] Make sure the Studio Server settings are configured to allow accessing remote servers.

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The Zend Studio Enterprise Profiler performs the following actions:

- Monitors calls to functions
- Monitors the number of times that a section of code is executed
- Calculates the total time spent on execution
- Generates reports that reflect the time spent on execution
- Graphically displays information of time division
- Enables comparison statistics between functions
- Enables viewing the file from the server by clicking on any function
- Shows the hierarchical structure of the functions involved in the script execution

Note:

Be sure to install the Zend Debugger on the Server hosting the URL.

Running the Profiler:

The profiler can be run in three ways:

- Directly from Zend Studio – See instructions below.
- Directly from a Zend platform Event Details[9] page – selecting the "Profile URL" button that appears in every Event Report automatically Profiles the URL that caused the Event Report. The results are then displayed in the IDE.
- From the toolbar (in Internet Explorer, Netscape, and Firefox).

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[9] Event Details pages are of Zend Platform's advanced diagnostic features, for more information see the Zend Platform User Guide or Online Help.

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Follow these instructions to Profile code directly from the IDE:

1. Select Tools | Profile URL.

2. Accept the default URL or change it and click OK. The browser opens the requested page and, after the Profiler accumulates information, the Profiler Information window opens.
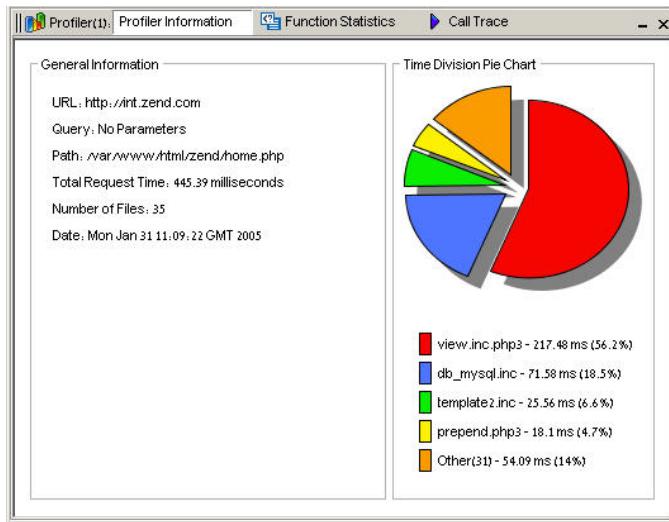
Figure: 6 - Zend Studio Enterprise Profiler

3. The Profiler user interface contains three tabs:

   - **Profiler Information** - provides general information, profiling duration, date, number of files constructing the requested URL, and more. In addition, it displays a Time Division Pie Chart for the files in the URL.

   - **Function Statistics** - provides the list of files constructing the URL and detailed information on functions in the files.

   - **Call Trace** - provides a hierarchical display of functions according to process order, enabling you to jump to the function, view the function call, function declaration, details, and more. The Call Trace tab supports the following sorting options: Sort By Time, Sort By Original Order, Collapse All, Expand All, View Function Call, View Function Declaration, and View Function Statistics.

Communication Tunnel (for Firewalls or NAT)

The Communication Tunnel enables Zend Studio users to view, connect, and debug code on remote servers that are protected by Firewalls or NAT. Moreover, this enables Zend Platform users to connect to Zend Studio in order to edit Event source code using the IDE features.

Configuring the Communication Tunnel

To configure Tunneling Settings for Zend Studio:

1. Open the Tunneling dialog: Tools | Tunneling Settings.

2. Define values for the settings.

3. Click Connect. Zend Studio connects to the Tunnel Target Host over the specified port.

Broadcasting Port

Zend Studio's communication tunnel is implemented via a persistent broadcasting port that broadcasts information about tunneling to Zend Platform and to the Toolbar. The broadcasting port is configured from the Debug tab of Preferences: **Tools | Preferences | Debug.**

HTTP Authentication

Zend Studio Tunneling supports HTTP authentication. This enables users to send HTTP authentication information, such as a username and password, together with the header sent to the server. Therefore, you can improve security by specifying that tunneling to a server require authentication.

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Troubleshooting the Communication Tunnel

If Zend Studio is unable to connect to the target server, you will receive an error message. The table below describes the most likely causes and recommended actions for successfully establishing a connection with the target server.

Possible Cause	Recommended Action
The server address or the port you entered is incorrect.	Enter the correct server information in the Tunneling Settings dialog.
HTTP authentication is required.	Enter authentication information in the Tunneling Settings dialog box. Then select the 'Send authentication information' checkbox.
The dummy file content or location on the server is incorrect.	The dummy file on the server side was changed or does not exist. You will need to ensure that the correct dummy file with the correct content is placed in the correct directory on the target server.
	Note:
	The correct dummy file is created and located properly as part of the Installation procedure. The problem here is post-installation.
You are not allowed to connect with the server via the communication tunnel.	You must have tunneling permissions in the php.ini file. Make sure that the zend_debugger.allow_tunnel variable is properly configured.

Zend Platform PHP Intelligence Development Tools

Zend Platform Event Reports pinpoint problematic areas in code based on Event Rules. These Event Rules are easily defined in the PHP Intelligence Tab. Zend Platform enforces these rules throughout the server on which it is installed, generating Event Reports whenever one of the configured rules is not kept. The Resulting Event Report includes a complete audit trail of information that is central for investigating and resolving occurrences.

Through these Event Reports advanced diagnostics can be performed, such as:

- Debugging

- Profiling

- Testing

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Enterprise Development & Deployment

Team Development

Version control application integration allows teams to synchronize PHP code development with source control capabilities. It also enables your team to work concurrently on the same source files, directly from Zend Studio, without having to launch an additional version control application.

Currently Zend Studio Supports CVS and Subversion.

Settings for both version control tools can be configured from the Preferences Menu (**Tools | Preferences**)

Version Control DIFF functionality allows to compare recently saved versions of PHP files with the version of the file held in the repository.

To perform a DIFF comparison and show it in the Zend Studio DIFF display:

1. Edit the PHP file you are working on and save the changes.

2. Right-click to open the available menus.

3. From the right-click menu, select DIFF. The DIFF display opens showing the repository version of the file on the left, and the current version of the file on the right.

FTP Advanced Integration

FTP, SFTP, and FTP over SSL integration in Zend Studio's File System and Project views allow multi-developer access to source files on the FTP server. Advanced Integration provides team members with direct and seamless access to and from multiple locations, allowing secure connections to the production server for secure and safe remote uploading and debugging.

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