

Microsoft[®] Virtual Labs

**Installing ASP, ASP.NET
and PHP/FastCGI
Applications on IIS 7**

Microsoft[®]

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Hosting with Microsoft Windows Server 2008 Lab 3: Installing ASP, ASP.NET and PHP/FastCGI Applications on IIS 7

Objectives

The objective of this lab is to guide you through the basics of installing ASP, PHP, and ASP.net applications on IIS 7.

IIS 7 enjoys a very high degree of compatibility with IIS 6. Your static content, Classic ASP, and ASP.net applications are all easier to manage and run more reliably on IIS 7. In addition, FastCGI/PHP has been optimized on IIS 7 to provide a great platform for PHP developers to host their applications.

Due to the new integrated pipeline, UI, and configuration system, there are some changes that you may need to make on applications on case by case basis. In this lab, you will observe and correct some of the most common migration issues. In addition, you will deploy Qdig, a PHP/FastCGI application. Finally, you'll see how a managed code global module can provide services to all your Web applications.

Scenario

Prerequisites

Estimated Time to Complete This Lab

30 Minutes

Computers used in this Lab



ContosoWeb3

The password for the Administrator account on all computers in this lab is: P@ssword.

Exercise 1

Deploy the Applications

Scenario

Tasks	Detailed Steps
1. Deploy the applications	<p>a. Browse to E:\Lab Files\Lab 3\Collateral.</p> <p>b. Double-click Deploy.bat. This will copy four Web sites to the c:\inetpub\webroot folder.</p> <p><i>Note: Use this batch file to ensure proper operation of the labs.</i></p> <p><i>Note: In production, Web sites should be deployed on a non-system drive.</i></p>

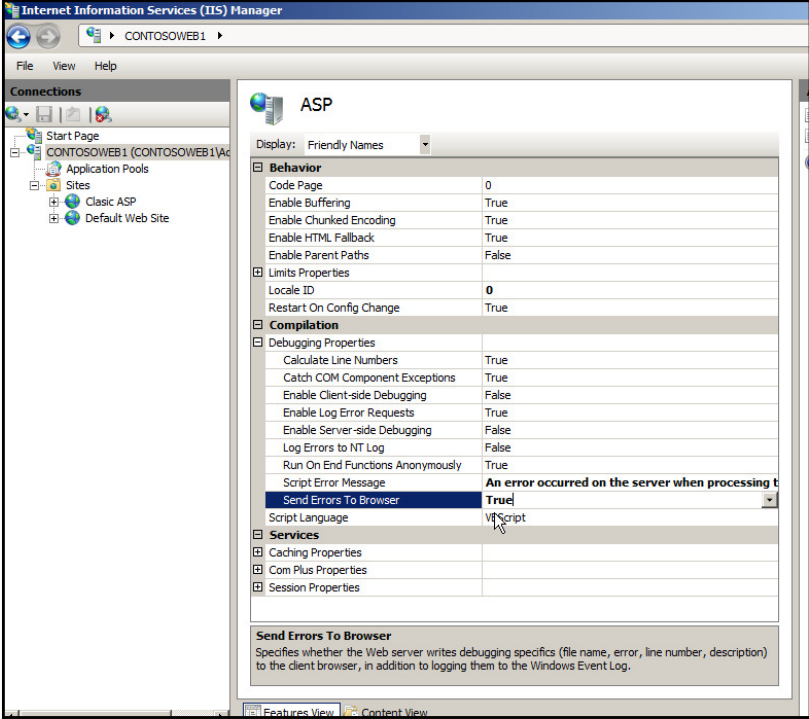
Exercise 2

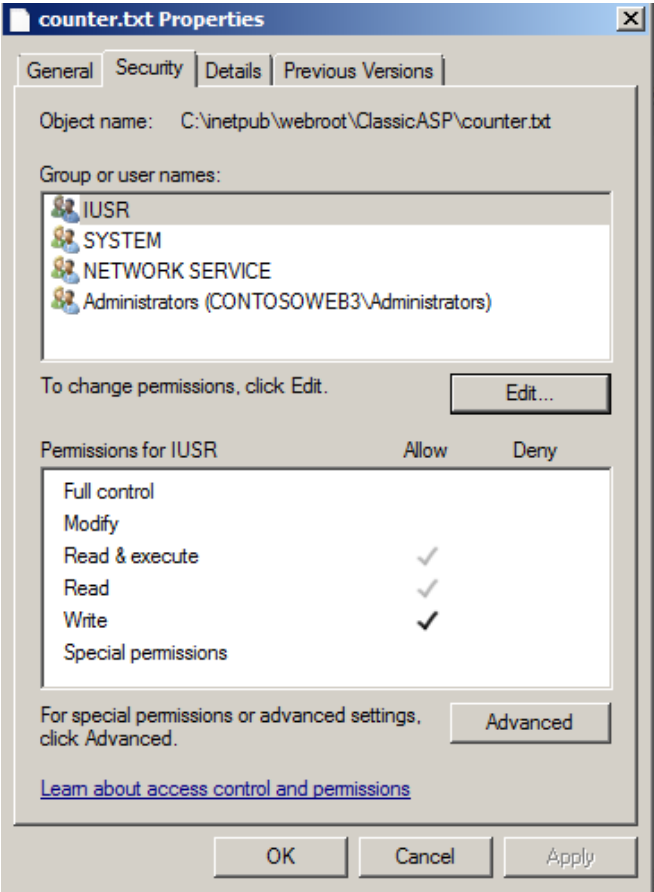
Installing a Classic ASP Application

Scenario

In this exercise, you will install a simple ASP page that writes a counter to disk file and reads it back, displaying the number of times the counter's page has been invoked. You will encounter several problems that will need to be resolved, resulting in a functional application. In the end, you will review the simple procedures that would have prevented any difficulties.

Tasks	Detailed Steps
<p>1. Create a Web site for the page</p>	<p>a. Open the IIS Manager.</p> <p>b. In the left pane, expand CONTOSOWEB3 and click Sites.</p> <p>c. In the Actions pane, click Add Web Site...</p> <p>d. In the Add Web Site window, enter Classic ASP as the site name.</p> <p>e. In the Physical Path: text box, type C:\inetpub\webroot\classicasp</p> <p>f. Set the Port number to 200 and click OK.</p>
<p>2. Test the Web site</p>	<p>a. In the Actions pane, click Browse *:200 (http).</p> <p><i>Note: You will see the following message:</i></p> <p><i>An error occurred on the server when processing the URL. Please contact the system administrator.</i></p> <p><i>If you are the system administrator please click here to find out more about this error.</i></p> <p><i>This happens because by default on IIS 7, error messages are trapped by the IIS 7 error message system. The next steps will enable passing through ASP errors.</i></p> <p><i>Note: If you receive a generic 500 error message rather than the one above, turn off Show friendly HTTP error messages in Windows® Internet Explorer® Options Advanced, and then restart Internet Explorer to load the page.</i></p> <p>b. Close Internet Explorer.</p>
<p>3. Configure ASP errors to pass through</p>	<p>a. In the IIS Manager, with the Classic ASP site selected in the left pane, double-click ASP in the Feature pane.</p> <p>b. Double-click Debugging Properties located under Compilation. The list of debugging properties will be displayed.</p>

Tasks	Detailed Steps
	 <p>The screenshot shows the IIS Manager console with the 'ASP' configuration page selected. The 'Send Errors To Browser' property is highlighted and set to 'True'. The 'Script Language' is set to 'VBScript'. Other properties like 'Behavior', 'Limits Properties', 'Compilation', and 'Services' are also visible.</p> <ol style="list-style-type: none"> c. Change Send Errors to Browser to True as shown, then click Apply in the Actions pane. d. Right-click the Classic ASP site and select Manage Web Site, then Browse. e. Now you will see a different error: <pre>Microsoft VBScript runtime error '800a0046' Permission denied /Default.asp, line 9</pre> f. Close Internet Explorer. g. To examine the file Default.asp, right-click the Classic ASP site and select Explore. h. Double-click Default.asp to open with Notepad. <p><i>Note the line ReadS.Write fcount (line 10) attempts to write to the file counters.txt (in line 9). The error indicates that counter.txt file does not have the proper permissions.</i></p> g. Close Notepad.
<p>4. Examining and setting permissions</p>	<ol style="list-style-type: none"> a. Right-click counter.txt (not default.asp) and select Properties then click the Security tab. <p><i>Note: The permissions do not include Write for the anonymous user. You need to add write permissions for the IUSR user account, which is the new built-in anonymous user account. The Network Service account should also have access to the site because that is the account under which the Classic ASP application pools runs.</i></p> <p><i>Note: You will assign permissions to the Web content folders based on the preliminary hosting guidelines in another lab.</i></p> b. Click Edit.

Tasks	Detailed Steps
	<p>c. Select IUSR and set the Write check box.</p> <p>d. Click OK.</p>  <p>e. Click OK twice. Permissions will be written to Web contents.</p>
<p>5. Test the Web site</p>	<p>a. Switch to IIS Manager.</p> <p>b. In the left pane, click the Classic ASP site.</p> <p>c. In the Actions pane, click Browse *:200 (http).</p> <p><i>Note: The Web site should work correctly, displaying an incremental counter every time it is loaded.</i></p> <p>d. Close Internet Explorer and the ClassicASP folder.</p>

Exercise 3

Installing FastCGI and PHP

Scenario

In this exercise you will configure PHP and install a PHP application. FastCGI was installed in Lab 1 and is recommended as part of the preliminary Hosting Guidelines for Shared Hosting. It is not installed by default. In addition, PHP 5.2.3 non-thread safe version has been expanded and placed on the data drive.

This lab uses PHP, which is an open source programming language available at <http://php.net>. No modifications were made to PHP other than the PHP.ini file that was edited to run Qdig.

The application used in this lab, Qdig, is an open source PHP application that can be found at <http://qdig.sourefourge.net>. There were no modifications to the source code for Qdig.

Tasks	Detailed Steps
<p>1. Configure the PHP module mapping</p>	<p>a. In the IIS Manager, click CONTOSOWEB3 and then double-click the Handler Mappings icon in the Feature pane.</p> <p>b. In the Actions pane, click Add Module Mapping.</p> <p>c. In the Add Module Mapping form, enter the following:</p> <ul style="list-style-type: none"> • Request Path: *.php • Module: FastCGIModule • Executable: “E:\Lab Files\Lab 3\Collateral\php-5.2.3-nts-Win32\php-cgi.exe” <p><i>Note: Click the ... button to browse to this location instead of typing. For the file to be listed, use the file extension drop-down list to select (*.exe).</i></p> <ul style="list-style-type: none"> • Name: PHP with FastCGI <p><i>Note: Ensure the full executable path is enclosed in double quotes.</i></p> <p><i>Note: You can use APPCMD to create this configuration as follows:</i></p> <ul style="list-style-type: none"> • <code>appcmd set config /section:system.webServer/fastCGI /+[fullPath='E:\Lab Files\Lab 3\Collateral\php-5.2.3-nts-Win32\php-cgi.exe']</code> • <code>appcmd set config /section:system.webServer/handlers "/+[name='PHP-FastCGI',path='*.php',verb='*',modules='FastCgiModule',scriptProcessor='E:\Lab Files\Lab 3\Collateral\php-5.2.3-nts-Win32\php-cgi.exe',resourceType='Either']"</code> <p>d. Click OK.</p> <p>e. You will see a prompt asking you if you want to create a FastCGI application. Click Yes.</p> <p>f. The Handler Mappings list will now contain an entry “PHP with FastCGI” that shows as Enabled.</p>
<p>2. Deploy and create the Qdig Web site</p>	<p>a. In IIS Manager, create a Web site that maps to Qdig Web root as follows:</p> <ul style="list-style-type: none"> • Expand the CONTOSOWEB3 server node in the left pane and click Sites. • Click Add Web Site in the Actions pane. • Complete the Add Web Site form as follows: • Site Name: Qdig

Tasks	Detailed Steps
	<ul style="list-style-type: none">• Physical path: C:\inetpub\wwwroot\Qdig• Port: 400 <p>b. Click OK.</p> <p>c. Launch the site. Click the Qdig Web site in the left pane and then click Browse *:400 (http) in the Actions pane.</p> <p>If time permits, launch taskmgr from the Run command and view the active processes. Locate the php-cgi.exe process. This is the process that delivers the PHP applications.</p> <p>d. Close Internet Explorer.</p>

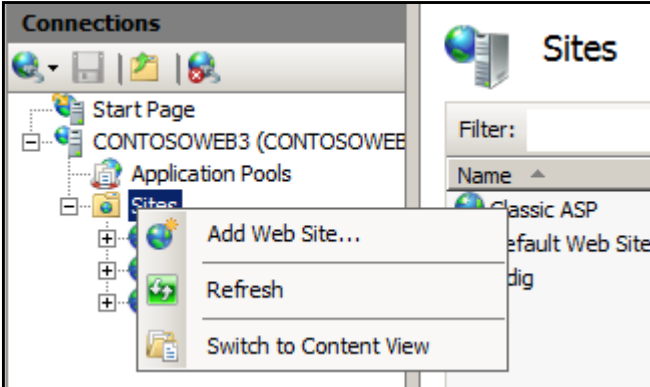
Exercise 4

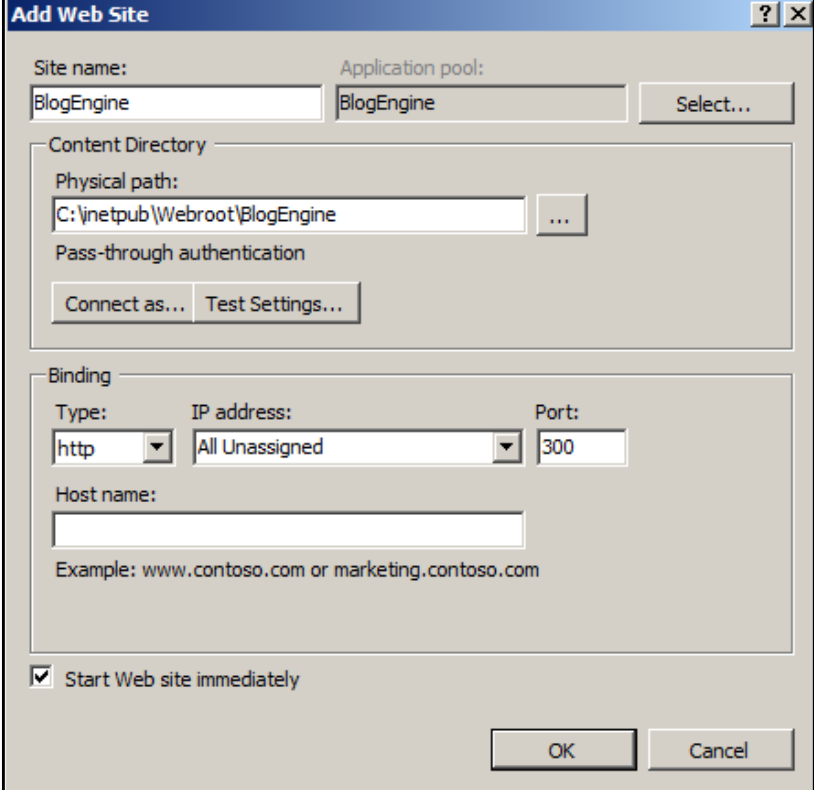
Migrating ASP.net Applications to IIS 7

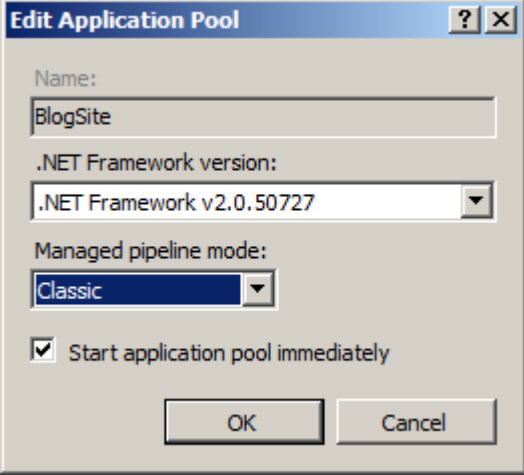
Scenario

In this exercise, you will install on IIS 7 an ASP.net application written for IIS 6. In many cases, no modifications are required to the application or your configuration. In this example, you will see configuration issues that can arise when using .net modules locally, running in an integrated application pool. You will solve the problem first by switching to a Classic mode application pool. To run the application in integrated mode, you will reconfigure the web.config file using APPCMD.

The application used in this lab is called Blogengine.NET and is available at <http://www.codeplex.com/blogengine>.

Tasks	Detailed Steps
<p>1. Start Internet Information Services (IIS) Manager</p>	<p>a. If the IIS Manager is not already open, click Start Administrative Tools Internet Information Services (IIS) Manager.</p>
<p>2. Install the BlogEngine.NET Web site</p>	<p>a. In the left pane, expand CONTOSOWEB3, right-click Sites and select Add Web Site... to add a new Web site.</p> <p><i>Note: You can also select Add Web Site in the Actions pane.</i></p>  <p>b. Complete the Add Web Site dialog box as below with the following value:</p> <ul style="list-style-type: none"> • Site name: BlogEngine • Physical path: C:\inetpub\wwwroot\BlogEngine • Port: 300 <p><i>Note: Make sure the physical path and the port number are configured properly.</i></p>

Tasks	Detailed Steps
	 <p data-bbox="509 1003 886 1031">i. Click OK to start the Web site.</p>
<p data-bbox="185 1062 477 1119">3. Browse to the BlogEngine Web site</p>	<p data-bbox="509 1066 1414 1157">a. In the left pane, expand Sites, click the BlogEngine Web site and select Browse *:300 from the Actions pane. Internet Explorer will open and display the following error message:</p> <div data-bbox="509 1178 1321 1346" style="border: 1px solid black; padding: 5px;"> <p data-bbox="537 1192 656 1209">Error Summary</p> <p data-bbox="537 1230 1032 1257">HTTP Error 500.22 - Internal Server Error</p> <p data-bbox="537 1272 1235 1325">An ASP.NET setting has been detected that does not apply in Integrated managed pipeline mode.</p> </div> <p data-bbox="509 1367 1422 1457">b. Read the sections of the error named Most likely causes and Things you can try. When possible, IIS 7 error pages provide prescriptive guidance (when browsed locally) on how to correct a problem.</p> <div data-bbox="509 1472 1430 1598" style="border: 1px solid gray; padding: 5px;"> <p data-bbox="509 1478 1398 1591"><i>Note: This error appears because the web.config file contains module definitions in the <System.web> namespace. Refer to the Appendix in this lab for the web.config listing. In an integrated application pool, module definitions must be in <System.webServer>. As you will see, this is easy to correct.</i></p> </div>
<p data-bbox="185 1625 477 1682">4. Set the application pool to Classic mode</p>	<p data-bbox="509 1629 1321 1829">a. Close Internet Explorer.</p> <p data-bbox="509 1677 1198 1705">b. In the IIS Manager, click Application Pools in the left pane.</p> <p data-bbox="509 1724 1321 1780">c. The list of application pools will display. Double-click the BlogEngine application pool.</p> <p data-bbox="509 1799 1138 1827">d. Set the Managed pipeline mode to Classic as shown.</p>

Tasks	Detailed Steps
	 <p>e. Click OK.</p>
<p>5. Browse to the BlogEngine Web site</p>	<p>a. In the left pane click the BlogEngine Web site and select Browse *:300 from the Actions pane. After a pause while the application initializes, the Web site will now display correctly.</p> <p>b. Close Internet Explorer.</p>
<p>6. Reset the BlogEngine to run in Integrated Mode</p>	<p><i>Note: The application is working in Classic mode, but you would like to run in Integrated mode to take advantage of the Integrated pipeline. The following steps implement a migration of this application to Integrated mode.</i></p> <p>a. In the IIS Manager left pane, click Application Pools.</p> <p>b. Double-click the BlogEngine application pool.</p> <p>c. Set the Managed pipeline mode back to Integrated.</p> <p>d. Click OK.</p> <p>e. Minimize the IIS Manager.</p>
<p>7. Use APPCMD to update web.config for the Integrated pipeline</p>	<p>a. Open a command prompt. Click Start Command Prompt.</p> <p>b. Type appcmd migrate config "BlogEngine/" and press ENTER.</p> <p><i>Note: You should see:</i></p> <p><i>Successfully migrated section "system.web/httpModules".</i></p> <p><i>Successfully migrated section "system.web/httpHandlers".</i></p>
<p>8. Browse to the BlogEngine Web site</p>	<p>a. Close the command prompt window.</p> <p>b. Restore the IIS Manager window.</p> <p>c. In the left pane, click the BlogEngine Web site and select Browse *:300 from the Actions pane. After a pause while the application initializes, the Web site will now display correctly.</p> <p>d. Close Internet Explorer.</p>
<p>9. Optional: Inspect the updated web.config</p>	<p>a. If time permits, in the IIS Manager, right-click the BlogEngine Web site and click Explore.</p>

Tasks	Detailed Steps
	<ul style="list-style-type: none"><li data-bbox="508 195 829 222">b. Double-click web.config.<li data-bbox="508 243 1414 327">c. At the bottom of the file, notice that APPCMD has added a <system.webServer> namespace which contains a copy of the modules and handler configuration. The original listing is left unchanged in case you want to run in Classic mode.<li data-bbox="508 348 1062 375">d. Close both Notepad and the Explorer window.

Exercise 5

Providing Services to Websites with an IIS 7 Global Module

Scenario

The objective of this exercise is to illustrate the power of global module to provide new services to all Web sites. In IIS 6, this required the use of ISAPI filters. Modules have many advantages over ISAPI filters in that they are far easier to write and have much greater agility.

Managed code modules have the advantage of being able to leverage the capabilities of .NET which can dramatically decrease development time.

In this exercise, you will deploy a managed module that will place a header and footer at the top and bottom of every page. *Even though the module is written in .NET, it will provide services for each site, including PHP.*

Note that the header/footer module is for demonstration purposes only and is not publicly available.

Tasks	Detailed Steps
1. Deploy the Header/Footer module	<p>a. Right-click Start Command Prompt and click Run as administrator.</p> <p>b. Enter:</p> <p style="padding-left: 20px;">E: cd Lab Files\Lab 3\Collateral\HeaderFooter</p> <p>c. Enter:</p> <p style="padding-left: 20px;">setupmodule.bat</p> <p><i>Note: Typically, a developer will provide you with module installation instructions. This batch file deploys the module to the server. You can inspect the batch for the actual steps.</i></p> <p>d. Close the Command Prompt window.</p>
2. Verify the module is operating for the ASP.net site	<p>a. Restore the IIS Manager.</p> <p>b. Expand CONTOSOWEB3 and then Sites in the left pane.</p> <p>c. Click the BlogEngine Web site.</p> <p>d. In the Actions pane, click Browse *:300 (http).</p> <p>e. You will see the header and footer specified by the module configuration added to the default page.</p> <p>f. Close Internet Explorer.</p>
3. Verify the module is operating for the Classic ASP site	<p>a. Click the Classic ASP site.</p> <p>b. In the Actions pane, click Browse *:200 (http)</p> <p>You will see the header and footer specified by the module configuration added to the default page.</p> <p>c. Close Internet Explorer.</p>
4. Verify the module is operating for the PHP site	<p>a. Click the Qdig Web site.</p> <p>b. In the Actions pane, click Browse *:400 (http)</p> <p><i>Note: You will see the header and footer specified by the module configuration added to the default page</i></p>
5. Verify the module is operating for the	<p>a. Browse to http://Contosoweb3</p>

Tasks	Detailed Steps
<p>Default Web Site (static content)</p>	<p>You will see the header and footer specified by the module configuration added to the default page.</p> <p>b. Close Internet Explorer.</p>
<p>6. Disable the Header/Footer module</p>	<p>a. Click Start Command Prompt.</p> <p>b. Enter:</p> <p>appcmd set config "MACHINE/WEBROOT" /section:headerAndFooter /enabled:false</p> <p>This command is entered into a batch file at E:\Lab Files\Lab 3\Collateral\NoHeaders.bat.</p>