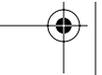


Part 1

Using IIS 7

- ◆ **Chapter 1: Working with the New Interface**
- ◆ **Chapter 2: Configuring IIS 7 Features**
- ◆ **Chapter 3: Working with Files**

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Chapter 1

Working with the New Interface

To say that the new Internet Information Services (IIS) 7 interface is different from the IIS 6 interface is akin to saying that a plane is different from a boat. Anyone who looks at the new IIS will instantly see that Microsoft has made significant changes. Some people may be mystified as to why anyone would call the new product IIS, because it doesn't look anything like the previous version of the product.

Microsoft has specific goals for IIS 7 that will help developers and administrators alike to work together. In addition, they've added features to make IIS more reliable and to help it perform better. All of these changes (and many more) define an IIS that looks nothing like its predecessor and, for once, almost all of the changes are for the best. After you read this chapter, you'll agree that Microsoft has made some good decisions this time around.

Of course, the fact that the changes are good doesn't mean you'll like all of them. Some of them will affect your applications and will mean doing a little rework. All of the changes will definitely affect any scripts you have for working with IIS and you'll generally find yourself starting again at the basics. You'll find yourself asking why Microsoft didn't produce this IIS in the first place because it really is so much better.

In this chapter, you will learn how to do the following:

- ◆ Define a new way to manage IIS
- ◆ Apply the drill-down approach to management
- ◆ Understand the features view versus the contents view
- ◆ Sort features and contents in a specific order
- ◆ Perform specific actions with objects

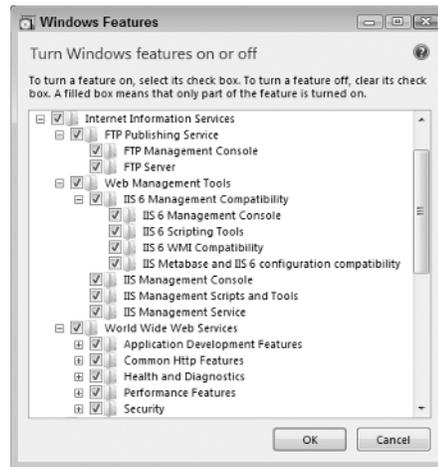
Defining Microsoft's New Approach to IIS Management

One of the problems with the older versions of IIS is that Microsoft didn't encourage the parties responsible for maintaining a Web site to work together. The new IIS fixes that problem by placing a focus on the application and on the tasks administrators and developers must perform together. In addition, IIS 7 places a major emphasis on ASP.NET. Instead of being a mere add-on, ASP.NET is now a major part of IIS, which means that your ASP.NET applications will run better and with fewer errors. No longer will you need to rely on command line utilities such as `ASPNet_RegIIS.EXE` to fix registration problems with your IIS setup. The following sections provide an overview of Microsoft's new approach. Chapter 2 provides a detailed view of individual IIS features.

This book assumes that you've already installed IIS 7. You'll find the IIS setup features in the Windows Features dialog box shown in Figure 1.1. To access this dialog box, click the Turn Windows Features On or Off link in the Control Panel\Programs and Features folder. Installing some features automatically installs other features as needed by IIS. For example, if you install File

Transfer Protocol (FTP) support, IIS also installs some of the IIS 6 Management Compatibility features because you manage FTP using the Internet Information Services (IIS) 6.0 Manager (see Chapter 7 for details).

FIGURE 1.1
Install the IIS features you want to use by selecting them in this dialog box.



TIP I strongly suggest that you install the full IIS 7 suite when working with this book. You can always remove features you don't want to use later. If you really want to see what IIS 7 can do, you need to install everything and test it out. Never use a production machine for an initial installation.

Administrators and Developers Work Together

In the past, you needed several different tools, along with command line utilities, to manage IIS completely. With IIS 7, you use a single tool to perform all of your work. As shown in Figure 1.1, this one tool helps you manage Web sites and all of the ASP.NET functionality in one location. You can sort the icons in a number of ways (feature name and description), group them (category and area), and show them in a number of forms (details, icons, tiles, and list). Figure 1.2 shows the default setup, which relies on a feature name sort, area group, and icon display.

TIP Older versions of IIS placed restrictions on a client setup—in part, to force you to buy a server for some needs. IIS 7 lets you create as many Web sites as needed and it no longer has the 10-connection limit. These changes mean that you can perform real-world application testing and use a client setup in ways that may have required a server in the past.

The changes to IIS also affect Web site hosting. You can use the delegated administration feature to let a customer administer their Web site. The customer can only see their Web site and not any of the other Web sites on the server. To go along with this new setup, IIS 7 uses HTTP-based Web services for the administration tool, rather than the Distributed Component Object Model (DCOM) connectivity used in the past. The difference in communication technique means that someone can administer IIS through a firewall—firewalls often blocked the DCOM connection.

Of course, this new connectivity also makes it possible for a developer to make tweaks needed to an application from a remote location, rather than making them on site. A developer can fix any application errors faster because it's easier to get to them quickly.

FIGURE 1.2
The new interface places a definite focus on working with applications.



An Emphasis on ASP.NET

You'll find that ASP.NET appears everywhere in IIS 7. Some of the changes aren't immediately obvious by looking at Figure 1.1. IIS 7 doesn't rely on a single metabase configuration store any longer. Instead, it uses the same `Web.CONFIG` file setup that ASP.NET uses to store configuration settings. This change means that you can copy the settings for a Web site from the test server to the production server without having to rely on scripts or other messy solutions. You can also copy settings from your system to a client system as needed to support applications as a third-party resource.

The Internet Information Services (IIS) Manager has more than just a new look. Microsoft wrote this administration tool using .NET technology. What you're seeing in Figure 1.1 is Windows form technology. You can use this feature to extend the administration tool. For example, you could write your own HyperText Transport Protocol (HTTP) runtime modules and configuration settings.

Security is a significant problem on any Web site. In the past, there was a difference between IIS and ASP.NET when it came to security. You always had to write workarounds and kludges to use .NET security within your applications. IIS 7 places the .NET role-based security at the forefront. For example, when you open the .NET Roles icon, you can set the roles for .NET applications executing

on the server. No longer do you need to go through some odd configuration procedure before the security on your application works.

NOTE You must have a copy of SQL Server installed on your system to employ many of the IIS security features. For example, even though you can select the `AspNetWindowsTokenRoleProvider` as a provider, this choice limits you to the roles defined as part of Windows security, which means you can't configure custom roles. In short, if you want to obtain the full benefits of IIS 7, you must have SQL Server installed. Fortunately, you can use SQL Server Express, a free product, for a local setup. See "Obtaining and Installing SQL Server Express" for more details.

Obtaining and Installing SQL Server Express

You can use SQL Server Express to implement the advanced IIS 7 features on a client machine if you only need a limited number of connections or you're performing development tasks. SQL Server Express doesn't provide the robust interface that the full version of SQL Server does, but if you obtain SQL Server Express from <http://msdn.microsoft.com/vstudio/express/sql/register/default.aspx>, you should have everything you need.

NOTE You'll actually see two versions of SQL Server Express on the Web site. The only time you need to obtain SQL Server 2005 Express Edition with Advanced Services SP2 or Microsoft SQL Server 2005 Express Edition Toolkit is when you need the functionality these two products provide, such as reporting services. Developers also need the advanced version to obtain full functionality with Visual Studio. Even though you don't need them to use IIS, you'll likely want to download the SQL Server 2005 Books Online so that you can obtain answers you have about configuration and SQL Server errors when they occur.

After you download a copy of SQL Server Express, either version, you'll need to install it. The following steps help you set up your hard drive and perform the required installation. You can skip this section if you haven't compressed your hard drive. SQL Server requires an uncompressed folder for installation, so you need to create one manually or the setup program complains.

1. Create a folder for SQL Server. Right-click the new folder and choose Properties from the context menu. You'll see a folder Properties dialog box.

TIP If you have two hard drives on your system, install IIS on one of them and SQL Server on the other to gain better performance. If you have three hard drives, install the SQL Server log files on the third drive to obtain even better performance. Using a three-drive setup provides optimal performance for an IIS configuration. Three partitions on a single drive aren't the same as three physical drives. The goal is to use different hardware for each activity so the system doesn't spend as much time waiting for actions to complete.

2. Click Advanced. You'll see the Advanced Attributes dialog box shown in Figure 1.3.
3. Clear the Compress Contents to Save Disk Space option and click OK twice. The folder is now ready for use by SQL Server.

Now that your hard drive is prepared, you can begin the SQL Server installation. The following steps tell how to perform this task.

1. Double-click the icon for the version of SQL Server that you downloaded. You'll see the End User License Agreement dialog box.

FIGURE 1.3
SQL Server won't use a compressed folder, so you must create an uncompressed folder for it.



2. Read and accept the licensing terms. Click Next. You'll see an Installing Prerequisites dialog box if you haven't installed SQL Server on the system in the past.
3. Click Install. SQL Server installs the Microsoft SQL Native Client and the Microsoft SQL Server 2005 Setup Support Files.

NOTE If you choose to remove SQL Server from your system, you need to uninstall the prerequisite features separately. Make sure you uninstall the SQL Native Client as the next-to-last feature and the Microsoft SQL Server 2005 Setup Support Files as the last feature or you'll experience problems uninstalling SQL Server and its support features.

4. Click Next. You'll see the Welcome dialog box.
5. Click Next. SQL Server performs a system configuration check. When this check is complete, you'll see a System Configuration Check dialog box like the one shown in Figure 1.4. All of the checks should have success indicators. If you see a warning, check the message and try to fix the problem before you proceed. If you see an error, you must fix the problem before you proceed or SQL Server Express won't work well. In most cases, if your system runs Vista well, it will also run SQL Server Express well.

NOTE The help files provided with SQL Server Express work well with Windows XP or Windows 2000 but not with Vista. For example, the instructions tell you to open the Add/Remove Programs applet, even though this applet appears as Programs and Features in Vista. You'll need to perform some conversions for the help instructions until Microsoft fixes this problem.

6. Click Next. SQL Server performs a few installation steps and then asks you to enter your name and company name.

NOTE Clear the Hide Advanced Configuration Options dialog box if you want to configure all of the advanced SQL Server features, such as how it performs sorting. In most cases, you won't need to configure these options when installing SQL Server Express for IIS.

7. Type your name as a minimum and then click Next. You'll see a Feature Selection dialog box similar to the one shown in Figure 1.5. (Figure 1.5 shows the advanced version—the standard version contains fewer features.)

FIGURE 1.4
Verify that SQL Server Express will work on your system.

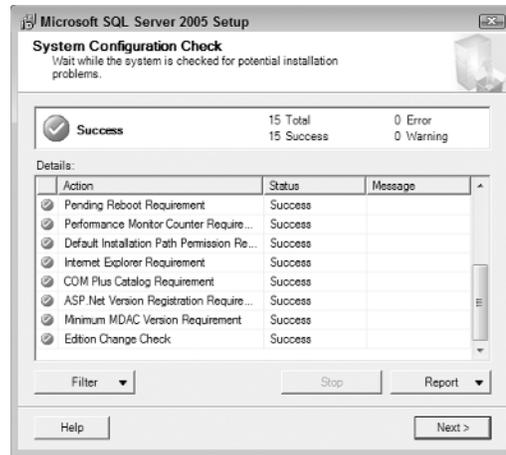
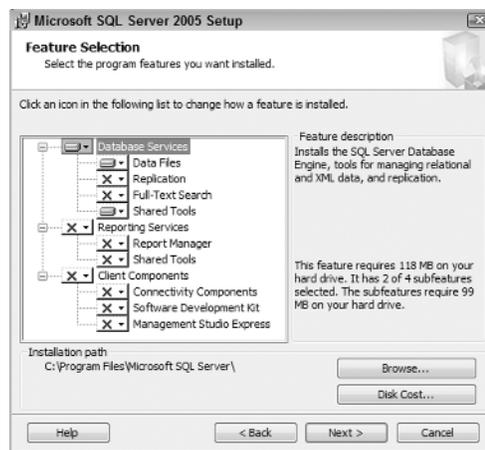


FIGURE 1.5
Choose the features you want to use with SQL Server Express.

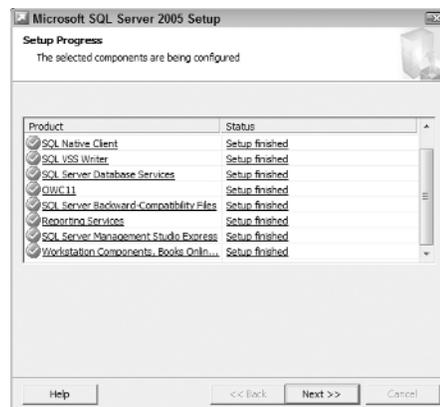


8. Choose the features you want to use. As a minimum, choose the Management Studio Express entry so that you can manage your SQL Server Express installation. Developers should choose all of the Client Components group entries. The only time you need Reporting Services is if you plan to report on IIS database entries (security and advanced features). Normally, you won't need this feature on a local machine. If you've set up special folders for your SQL Server installation, perform these additional steps as well.
 - A. Highlight the Database Service entry and click Browse. Choose the folder you have set up for the SQL Server database files.
 - B. Highlight the Shared Tools entry and click Browser. Choose the folder you have set up for the shared tools files.
9. Click Next. You'll see an Authentication Mode dialog box. For security reasons, you always want to choose Windows Authentication Mode unless you have existing code that requires Mixed Mode.

10. Choose an authentication mode and click Next. You'll see a Configuration Options dialog box.
11. Check the Add User to the SQL Server Administrator Role option to ensure you can manage SQL Server Express. Click Next. At this point, you can see one of two dialog boxes, depending on the options you selected: Report Server Installation Options or Error and Report Usage Settings. If you see the Error and Report Usage Settings dialog box, skip to step 13.
12. If you selected the Report Server option, SQL Server asks if you want to use the default configuration. Normally, you'll want to use the default configuration, so click Next to get past this dialog box. If you want to see the default settings, click Details instead and follow the prompts. At this point, you'll see the Error and Report Usage Settings dialog box.
13. Choose the error and report usage settings that you want to use and then click Next. You'll see a Ready to Install dialog box.
14. Click Install. SQL Server performs the required installation. When the installation completes, you should see a success dialog box like the one shown in Figure 1.6.

FIGURE 1.6

Verify that the SQL Server Express installation completed successfully.

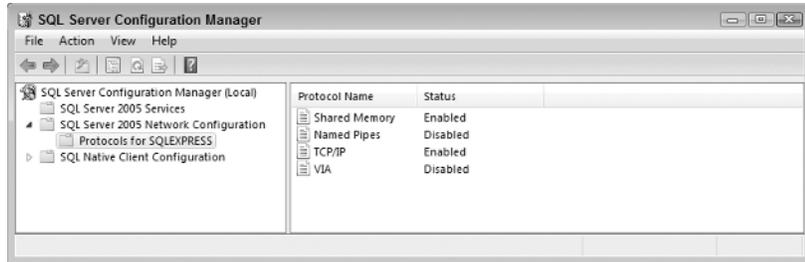


15. Verify that all of the SQL Server Express elements installed correctly. If a feature didn't install correctly, click the Setup Finished link for that feature to see the log entries. In most cases, you'll need to fix any installation errors as a separate action before you can use SQL Server Express.
16. Click Next. You'll see a Completing Microsoft SQL Server 2005 Setup dialog box.
17. Click Finish.

SQL Server Express is installed but not ready for use yet.

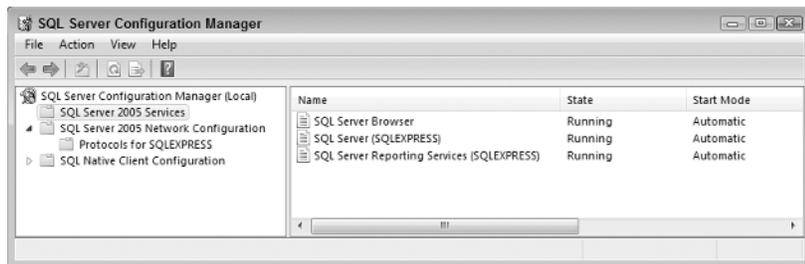
 1. Open Start > Programs > Microsoft SQL Server 2005 > Configuration Tools > SQL Server Configuration Manager. You'll see the SQL Server Configuration Manager console.
 2. Open the SQL Server Configuration Manager\SQL Server 2005 Network Configuration\Protocols for SQLEXPRESS folder shown in Figure 1.7.
 3. Right-click the TCP/IP entry and choose Enabled from the context menu. You'll see a Warning dialog box. Click OK to accept it.

FIGURE 1.7
Configure the TCP/IP
protocol so that IIS can
use it.



4. Open the SQL Server Configuration Manager\SQL Server 2005 Services folder. You'll see a list of services like those shown in Figure 1.8.

FIGURE 1.8
Make sure the
services are set
up and restarted
as needed.



5. Right-click the SQL Server (SQLEXPRESS) entry and choose Restart from the context menu. Windows restarts the database engine service for you.
6. Right-click any other services that start automatically and choose Restart from the context menu. Windows restarts the service for you.
7. If you plan to use SQL Server Express for development, you need to activate the SQL Server Browser so Visual Studio can locate your server. Follow these configuration steps to activate the service.
 - A. Double-click the SQL Server Browser entry. You'll see a SQL Server Browser Properties dialog box.
 - B. Select the Service tab.
 - C. Choose Automatic in the Start Mode field.
 - D. Click Apply. SQL Server sets the service to start automatically.
 - E. Select the Log On tab.
 - F. Click Start. SQL Server starts the SQL Server Browser service.
 - G. Click OK.
8. Close the SQL Server Configuration Manager. The SQL Server Express setup is now ready for use with IIS.

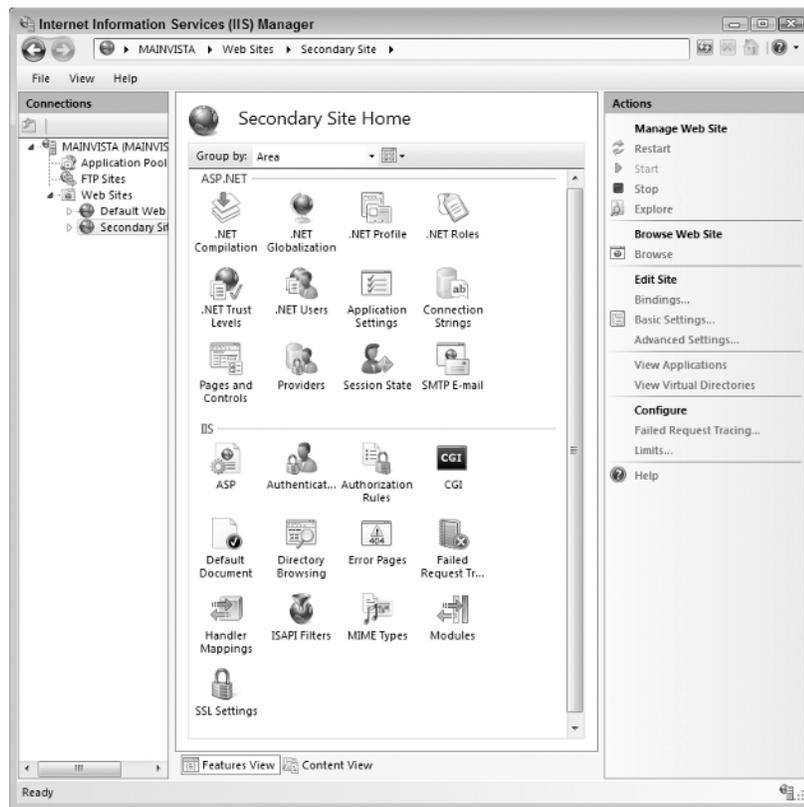
Using the Drill-Down Approach

Previous versions of IIS used an interface that relied heavily on Properties dialog boxes. The tabs on these Properties dialog boxes could vary a great deal depending on the features you installed. For example, adding FrontPage Extensions to your setup added another tab to some, but not all, dialog boxes. ASP.NET also added tabs in some cases. The problem is that it was possible to become quite confused as to where to find something because you never really saw an overview of anything. Everything was in its own little tab pocket. IIS 7 uses a drill-down approach to overcome this problem. You begin with an overview and then drill down to the functionality you actually require. At no time do you have to worry about becoming overwhelmed with details that you don't actually need. The following sections describe this drill-down approach in more detail.

As shown in Figure 1.2, IIS 7 uses an Explorer-like display. Choosing an entry in the Connections pane (left) pane defines icons you see in the Features (middle) pane and the actions available in the Actions pane (right). Consequently, when you choose a Web site, the icons change, as shown in Figure 1.9.

FIGURE 1.9

Selecting a different element in the Connections pane changes the icons in the Features pane.



NOTE The name of the middle pane can vary according to activity. You'll find several activity-based names for it in this chapter alone.

IIS provides specific functionality at different levels. For example, when you set the .NET Compilation values for the entire site, they become the default values for all Web sites you create. However, you can set these same values for an individual Web site and it affects everything on that Web site. It's possible to go down another level and change the .NET Compilation setting for a folder or an application. In this case, the settings affect only that folder or application. Table 1.1 describes the various icons and the levels where you can use them.

TABLE 1.1: Icon Summary for IIS 7

ICON NAME	ENTIRE SITE	INDIVIDUAL WEB SITE	FOLDER	APPLICATION	DESCRIPTION
.NET Compilation	X	X	X	X	Defines the settings for compiling a .NET application.
.NET Globalization	X	X	X	X	Determines how IIS handles globalization issues for .NET applications. You also use these settings to determine the encoding used for text.
.NET Profile		X	X	X	Configures the per user settings. This configuration information affects everything from the features the user can access to how the Web site behaves.
.NET Roles		X		X	Defines groups of users by the roles that they fill within an organization. For example, you might have roles for administrators, developers, managers, and standard users.
.NET Trust Levels	X	X	X	X	Defines the trust level for management modules. This feature is part of code-based security. You use it to restrict the actions that code can perform.
.NET Users		X		X	Defines a list of users for access purposes. You can use this list for authorization and as a means of determining user access to site features.

TABLE 1.1: Icon Summary for IIS 7 (CONTINUED)

ICON NAME	ENTIRE SITE	INDIVIDUAL WEB SITE	FOLDER	APPLICATION	DESCRIPTION
Application Settings	X	X	X	X	Lets you create custom settings for your applications. You can use these settings to control application behavior.
ASP	X	X	X	X	Defines the settings used to host Active Server Pages (ASP) applications. You can control everything from the default scripting language to the use of COM+.
Authentication	X	X	X	X	Determines which forms of authentication that IIS accepts. The default setting provides anonymous access. You can also choose to enable ASP.NET, basic, digest, forms, and Windows authentication.
Authorization Rules	X	X	X	X	Provides rules for allowing access to a Web site or Web site element (such as an application). The default setting allows all users access to the Web site as a whole.
CGI	X	X	X	X	Defines basic rules for working with Common Gateway Interface (CGI) applications.
Connection Strings	X	X	X	X	Provides connections to database managers.

TABLE 1.1: Icon Summary for IIS 7 (CONTINUED)

ICON NAME	ENTIRE SITE	INDIVIDUAL WEB SITE	FOLDER	APPLICATION	DESCRIPTION
Default Document	X	X	X	X	Sets the default document—the one that the user sees when typing just the Uniform Resource Locator (URL) without a document name. The default settings include <code>Default.htm</code> , <code>Default.asp</code> , <code>index.htm</code> , <code>index.html</code> , <code>isstart.htm</code> , and <code>default.aspx</code> as the default documents.
Directory Browsing	X	X	X	X	Determines what data the user sees when using directory browsing. IIS disables directory browsing by default.
Error Pages	X	X	X	X	Defines the pages that IIS uses to handle specific HTTP error responses.
Failed Request Tracing Rules	X	X	X	X	Creates a set of rules for tracing failed requests. IIS doesn't provide any default failed request tracing. The trace can affect a specific technology, such as ASP.NET, and a specific HTTP error. You can also set the level of output information.
Feature Delegation	X				Helps you control the delegation state of IIS features. For example, you might want someone to know the CGI settings for the server, but not be able to change them when they only have access to a single Web site.
Handler Mappings	X	X	X	X	Tells IIS how to handle specific file types.

TABLE 1.1: Icon Summary for IIS 7 (CONTINUED)

ICON NAME	ENTIRE SITE	INDIVIDUAL WEB SITE	FOLDER	APPLICATION	DESCRIPTION
ISAPI and CGI Restrictions	X				Determines how IIS handles Internet Server Application Programming Interface (ISAPI) and CGI modules. IIS provides default ASP and ASP.NET ISAPI modules. It doesn't provide any default CGI modules.
ISAPI Filters	X	X			Provides a means of configuring ISAPI filters on IIS.
MIME Types	X	X	X	X	Defines the Multipurpose Internet Mail Extensions (MIME) types for certain file extensions. The MIME type determines how an email program handles the file and which helps it uses to interact with the file.
Modules	X	X	X	X	Configures and administers managed code modules used with IIS to provide services.
Pages and Controls	X	X	X	X	Defines application level settings for pages and controls, such as the namespaces that they rely on for support code.
Providers	X	X	X	X	Determines which security features that IIS uses in managing user access. The providers affect users, roles, and profiles.

TABLE 1.1: Icon Summary for IIS 7 (*CONTINUED*)

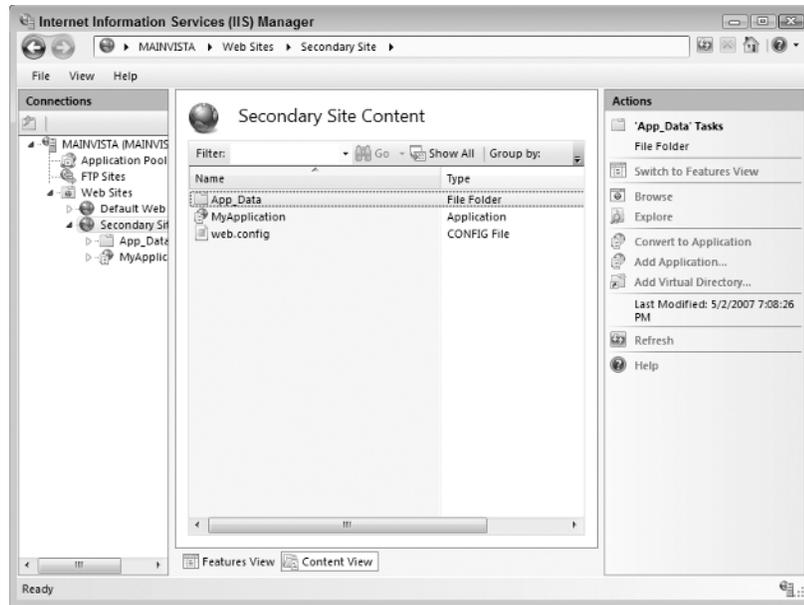
ICON NAME	ENTIRE SITE	INDIVIDUAL WEB SITE	FOLDER	APPLICATION	DESCRIPTION
Server Certificates	X				Provides a means of adding certificates to the server. You can install third-party certificates or create a self-signed certificate for local (personal) use.
Session State	X	X	X	X	Controls how IIS manages the client session data. These settings include timeout values and the use of cookies.
SMTP Email	X	X	X	X	Determines the Simple Mail Transfer Protocol (SMTP) settings that IIS uses when sending email from an application.
SSL Settings		X	X	X	Determines the Secure Sockets Layer (SSL) settings. You use SSL to encrypt documents. IIS supports 128-bit encryption. It's also possible to require a client certificate for mutual authentication.
Worker Processes	X				Displays the state of worker processes running on the server.

Using Features View versus Contents View

The fact that you see a hierarchical Explorer-like display in the new IIS naturally prompts the question of how you can see the content of each of the entities. The answer lies in the tabs at the bottom of Figure 1.2. Whenever you select an entry in the Connections pane, the contents of the middle pane vary. Up to this point in the chapter, you've seen the Features pane, which contains all of the icons that help you configure IIS. Click the Contents tab at the bottom of the screen and you'll see the Contents pane, as shown in Figure 1.10.

As with the Features pane, the Contents pane reflects the element you select in the Connections pane. The Actions pane reflects the major tasks you can perform with the selected element in the Contents pane. You can also right-click the element to choose actions from the context menu.

FIGURE 1.10
Use the Contents pane to work with the content of a particular IIS connection.



TIP Notice in Figure 1.10 that one of the actions is Convert to Application. Microsoft made this feature more accessible in IIS 7 so that you can easily set up a folder as an application. Whenever you move an application from one machine to another, there's a chance that the new machine will see an application as a folder. This feature makes it very easy to configure the folder as an application so that IIS will work with it correctly. You must configure ASP.NET folders as applications before IIS will use them to serve the desired content.

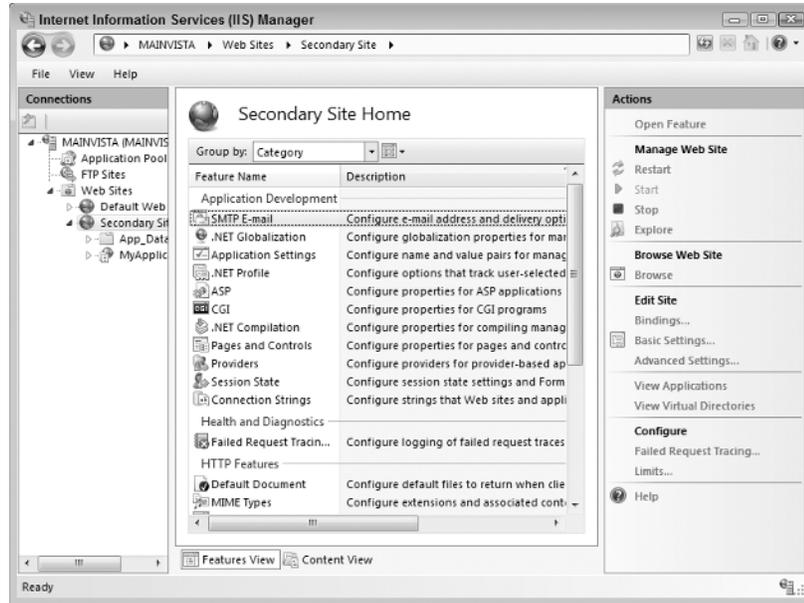
Displaying Features and Content in Order

Figure 1.2 shows the Features pane in the default configuration, while Figure 1.10 shows the default setup for the Contents pane. In most cases, these views will work fine, but they may not always meet your needs. For example, you might want to group features in a particular way or you might want to see a detailed view of them. Features let you display the content based on:

- ◆ Group (Area and Category)
- ◆ Sort (Feature Name and Description)
- ◆ View (Details, Icons, Tiles, and List)

Figure 1.11 shows the Features pane using the Category grouping, sorted by Description, and with a Details view. As you can see, the display is significantly smaller than the one shown in Figure 1.2 and provides more information, but the icons are harder to see, so you might actually spend more time looking for what you need. You can select the grouping using the Group By field, the view by choosing an option from the View split button, and a sort by choosing a column in the Details view. If you aren't using the Details view, choose an option from the View > Sort By menu instead.

FIGURE 1.11
Choose a display that helps you work faster and more efficiently in IIS.



When working in the Contents view, you can choose not to use a grouping at all or group the content by type. In addition, you can choose some level of filtering or no filtering at all. When you filter content, you can choose to filter it by:

- ◆ Name
- ◆ Type

When you filter by name, the filter applies to the entire entity name. For example, if you type App, then everything with the word App in it appears in the Contents pane, as shown in Figure 1.12. If you want to remove the filtering, click Show All. You can change the kind of filtering that IIS uses by clicking the down arrow next to Go and choosing a different option from the list. All of the grouping and filtering options also appear on the View menu. This figure also shows the effects of grouping the display by type.

Working with the Actions Pane

The Actions pane shows the most common activities that you can perform with a particular selection. If you select an entry in the Connections pane, the Actions pane will reflect the tasks you can perform with that entry. However, the moment you select an entry in either the Features or Contents pane, the Actions pane entries reflect the activities you can perform with that entry. Consequently, it's possible to see different Actions pane views even when the other panes haven't changed. The Actions pane always reflects the tasks you can perform with the highlighted element.

The Actions pane may not show advanced tasks. Consequently, if you want to see everything you can do with a particular entry, right-click the entry and choose an option from the context menu. That said, the Actions pane contains most of the tasks you'll perform and you may never need to rely on the context menu.

Don't confuse the Actions pane with a properties pane. The Actions pane never displays settings changes you can make to a feature. When you need to make a settings change, always double-click the icon for the feature to view its settings. For example, Figure 1.13 shows the settings for the Pages and Controls feature. The Actions pane will always include only the activities you can perform with a given feature or content.

FIGURE 1.12
Use filtering and grouping in the Contents pane to make the information more usable.

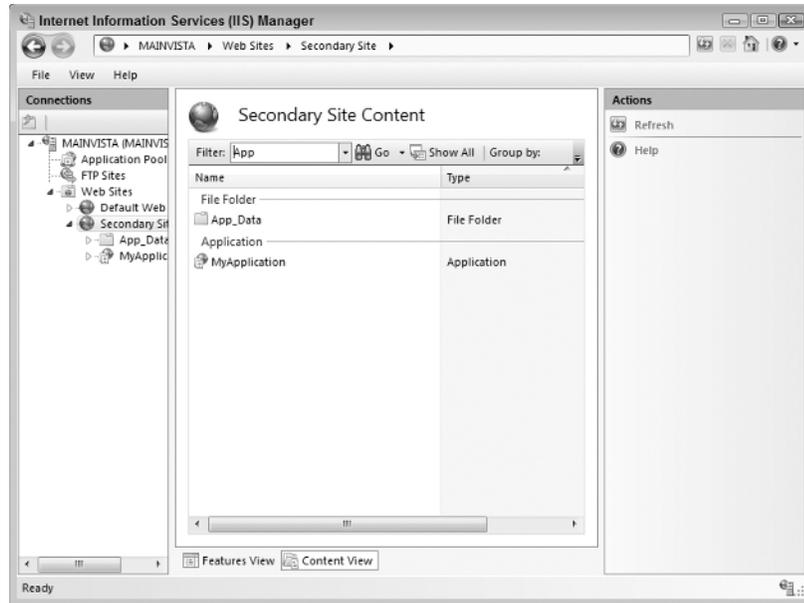
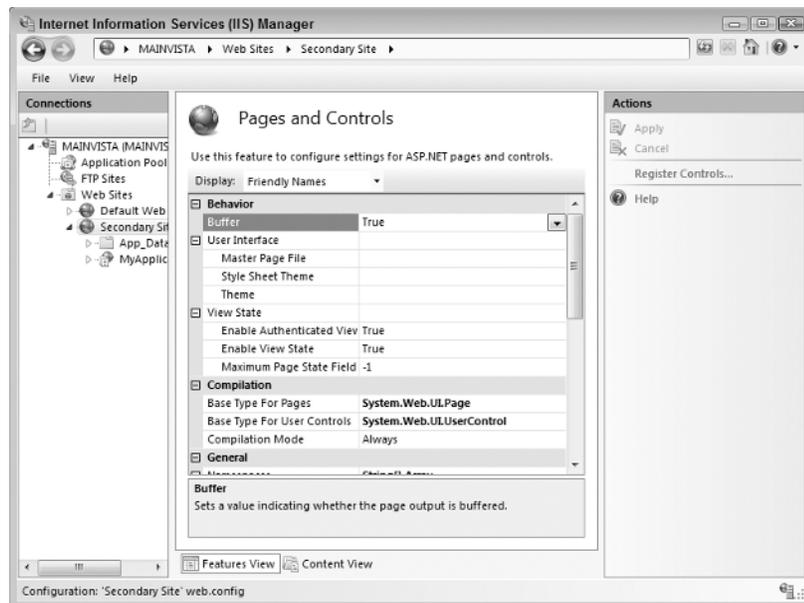


FIGURE 1.13
Double-click the icon for the feature you want to change to view its settings.



Understanding Friendly Names and Configuration Names

IIS 7 uses a Web . CONFIG file to hold the settings you provide. So you can modify the Web . CONFIG file by hand or using a custom application—you don't even need to use the Internet Information Services (IIS) Manager to perform most configuration tasks. Of course, it helps to know what the settings are so that you have a better idea of how to modify them. IIS helps you discover the entry names. Figure 1.13 shows the friendly name of the entries for the Pages and Controls feature. However, if you select Configuration Names from the Display field, the names change, as shown in Figure 1.14.

Some of the names are quite similar. For example, Buffer in Figure 1.13 appears as `buffer` in Figure 1.14. Other names are different. For example, Enable Authenticated View State in Figure 1.13 appears as `enableViewState` in Figure 1.14. Let's say you make a change to the `enableViewState` option and then click Apply in the Actions pane. The change will appear in the Web . CONFIG file for the entry, as shown in Figure 1.15.

The `enableViewState` option appears as an attribute of the `<pages>` element. You could just as easily make the change directly to the Web . CONFIG file, as shown here. Of course, it's much easier using the Internet Information Services (IIS) Manager to make the change.

FIGURE 1.14
Use the Configuration Names option to see how the settings appear in the Web . CONFIG file.

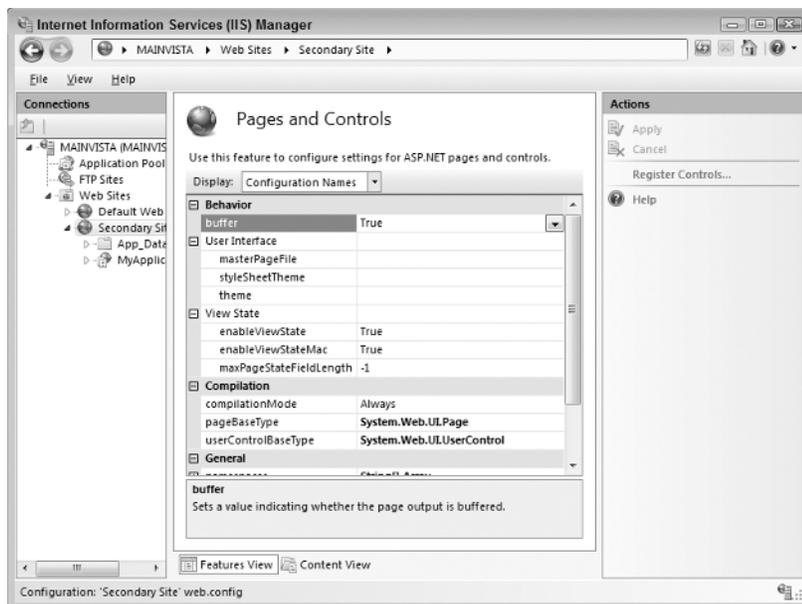
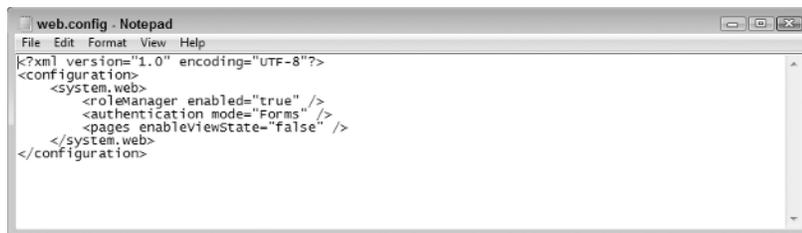


FIGURE 1.15
The Web . CONFIG file contains any changes you make using the Internet Information Services (IIS) Manager.



Let's Start Building

This book is about building—building Web sites, building applications, building a good user experience, and building a secure environment. Most of all, it's about building a team. Instead of using separate tools to perform tasks separately, all of the members of the Web site team now work together using a single tool. Although IIS 7 involves a lot of change, it also provides many new features that help you create and manage Web sites with greater ease. This chapter helps you build these skills:

- ◆ Define how administrators and developers work together
- ◆ Understand the use of ASP.NET in IIS 7
- ◆ Use the user interface to locate features
- ◆ Modify the basic IIS 7 setup
- ◆ Define the difference between features and content
- ◆ Order the information on screen
- ◆ Perform common actions
- ◆ Define the difference between friendly and configuration names

Now that you have these new skills, it's time to put them into action. IIS 7 uses a drill-down approach that requires you click things to explore. Consequently, one of the tasks you should perform first is to open a copy of Internet Information Services (IIS) Manager and start clicking icons to see how things work. Because the interface is so different, you'll want to spend some time exploring it before you do any real work with it.

In addition to exploring the interface, take the time now to install a copy of SQL Server if you want to use some of the advanced features that IIS 7 provides. Remember that you don't need to purchase a copy of the full SQL Server product; all you really need is the free version of SQL Server Express to get the job done. Download and install the product as mentioned in the "Obtaining and Installing SQL Server Express" section of the chapter.

Chapter 2 provides details about using the new interface. Make note of the features you don't understand as you click around the user interface. You'll find information about using them in Chapter 2. In addition to more information about the new interface, Chapter 2 shows how to perform some additional management tasks. Many of these tasks are generic—you'll perform them with most of the applications you create, no matter what kind of application it is. For application-specific tasks, make sure you review Part 2 for older applications and Part 3 for ASP.NET applications.

