

CHAPTER 16

Tools of the Trade

Every area of expertise, or trade, has tools that practitioners use to get their jobs done. These tools of the trade help practitioners accomplish tasks, access components, and otherwise go about their job of being experts.

With SQL Server 2005, the tools have changed. Many of the tools have been consolidated into the SQL Server Management Studio, and yet other tools have been introduced, such as the SQL Server Configuration Manager. Microsoft is moving complex platforms such as SQL Server 2005 to a paradigm of ecosystems of tools available from a single user interface or tool to simplify management and administration.

This chapter looks at the major tools available with SQL Server 2005. It also looks at some of the different command-line tools available to streamline and automate routine tasks.

To assist in understanding the tools and making sense of them all, this chapter breaks down the tools into different classes of tools. The tool classifications are

- Studio class tools
- Explorer class tools
- Configuration class tools
- Tuning class tools
- Command-line tools
- Other tools

The tools introduced in this chapter are used in other chapters, where the capabilities are explored in greater depth.

What's New in Tools with Service Pack 2

There are no new tools with the introduction of SQL Server 2005 Service Pack 2; however, there are improvements to some of the tools. These improvements include

- Maintenance plans are now supported directly in the SQL Server Management Studio tool without needing to install SQL Server Integration Services.
- Maintenance plans now support multiserver environments.
- Integration Services packages' interaction with external data sources can be troubleshooted within the SQL Server Management Studio tool and the Designer tool.
- The SQL Server Management Studio Import and Export wizard supports Office 12.0 Access Database Engine OLE DB provider connectivity to Office Access 2007 and Office Excel 2007.
- SQL Server Management Studio Reporting Service has added a Select All check box for available values. This was inadvertently removed in SP1 and has been reintroduced in SP2.
- The SQL Server Management Studio now supports the integration of Custom Reports into the tool.
- The Copy Database wizard in the SQL Server Management Studio tool now discovers issues with dependent objects.
- The Copy Database wizard also offers a verbose logging option to allow detailed review and troubleshooting.
- The tools now allow the SQL Server 2005 Compact Edition to be managed.

These Service Pack 2 improvements extend the functionality and improve the usability of the tools in SQL Server 2005.

The Most Important Tool: Help

Probably the most important tool in your arsenal as a database administrator is SQL Server 2005 Books Online. This is the source of much information and the tool that you will have open most often, second only to the SQL Management Studio tool.

Books Online provides a wealth of information on all aspects of SQL Server 2005, ranging from how to install SQL Server 2005 to how to create a report

in SQL Server 2005 Reporting Services. It even seamlessly links to MSDN Online to provide answers to questions from the vast and ever-evolving library of information on the Microsoft Developer Network (MSDN).

To access Books Online, execute the following steps on a SQL Server 2005 computer:

1. Select Start.
2. Select All Programs.
3. Select Microsoft SQL Server 2005.
4. Select Documentation and Tutorials.
5. Select SQL Server Books Online.

The tool allows the filtering of content by the various components such as the SQL Server Database Engine or SQL Server Reporting Services. This helps reduce the volume of information presented. To filter content, select the Filtered By drop-down in the Contents window and select the appropriate component, such as the SQL Server Database Engine shown in Figure 16.1.

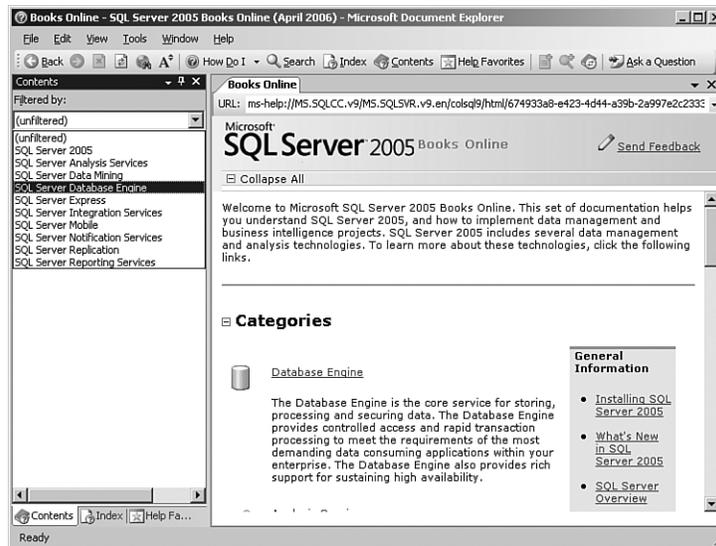


FIGURE 16.1
SQL Server 2005 Books Online filtering.

To use SQL Server 2005 Books Online on a system that does not have SQL Server 2005 installed, you can download the tool from the Microsoft website by using this link: <http://technet.microsoft.com/en-us/sqlserver/bb428874.aspx>. It is available in a variety of languages such as English, Chinese, French, Japanese, and Korean.

Tip

Downloading the Books Online tool is a good way to get the latest version as well. SQL Server 2005 Books Online is updated on a regular basis, so it is a good idea to update the version on the server on a regular basis.

You can easily tell which version of the Books Online is installed on your system. The edition date of the Books Online tool is displayed in the title bar of the tool downloaded from the Web in the format *Month Year*—for example, *December 2006*. The RTM version has no date displayed in the title bar.

SQL Server 2005 Books Online is even available on the MSDN in HTML format. This requires no software to be installed locally. You can access the MSDN version at <http://msdn2.microsoft.com/en-us/library/ms130214.aspx>.

The tool even includes a Help on Help section, which provides help in using it.

Studio Class Tools

The studio class tools are a new direction for Microsoft. It is moving to integrated environments that help users complete interrelated tasks more easily and access suites of tools in a seamless manner. This concept was first utilized in the application development sphere with Visual Studio and was brought into SQL Server 2005 with the SQL Server Management Studio and the Business Intelligence Development Studio.

SQL Server Management Studio is a real expansion of the concept because it moves the paradigm into management and administration rather than just development.

SQL Server Management Studio

SQL Server Management Studio is the tool used to manage and administer all the components of the SQL Server 2005 environment. It provides an integrated management environment that allows you to access, configure, manage, and administer the various facets of the platform. It also allows you

to have access to almost all the tools you need from a convenient and customizable user interface. Some of the key tools that the SQL Server Management Studio incorporates are

- Registered Servers
- Object Explorer
- Template Explorer
- Solution Explorer
- Query Editor

SQL Server Management Studio is new with SQL Server 2005. It replaces a myriad of tools from the previous version of SQL, but the primary tools it replaces are the SQL Server 2000 Enterprise Manager and Query Analyzer.

As do many of the other tools in the platform, the SQL Server Management Studio follows a Windows Explorer navigation model with folders and details.

The features of SQL Server Management Studio include

- An integrated environment for managing and administering the SQL database engine and services
- An easily customizable window framework that allows you to view the information and objects you need
- A tools view window for quick access to other tools such as the Object Explorer and the Solutions Explorer
- Customizable menus and shortcut keys
- An online tutorial for a variety of tasks for the various services
- A context-sensitive help function that is completely integrated with SQL Server 2005 Books Online

To access the SQL Server Management Studio, follow these steps:

1. Select Start.
2. Select All Programs.
3. Select Microsoft SQL Server 2005.
4. Click SQL Server Management Studio.

Many of the tools are accessed via the View menu. As additional tools are opened, they create tabbed views in the window on the right of the SQL

Server Management Studio. This allows you to have many tool windows open simultaneously without creating too much clutter.

One of the more frustrating experiences with a complex user interface like the SQL Server Management Studio is customizing the interface to the point where it is no longer functional. This can easily happen while you're exploring the features and options. To get back to the default layout, follow these steps:

1. Launch the SQL Server Management Studio.
2. Select Window, Reset Window Layout.
3. Click Yes to reset the window layout.
4. Select Tools, Options.
5. Expand the Environment folder and select the General subfolder.
6. In the Environment Layout section, select the Tabbed Documents radio button.
7. Select the Keyboard subfolder.
8. Select the Standard keyboard scheme from the pull-down menu.
9. Exit and relaunch the SQL Server Management Studio for the changes to take effect.

The SQL Server Management Studio is now back to the default layout.

Business Intelligence Development Studio

The Business Intelligence Development Studio is essentially Microsoft Visual Studio 2005 with some additional SQL Server 2005 business intelligence project types. It is an applications development environment that allows developers to build business solutions (applications) that include Analysis Services, Integration Services, and Reporting Services.

The layout of the Business Intelligence Development Studio is similar to the SQL Server Management Studio. Many of the components' names are the same, such as the Object Explorer. However, their function is different due to the different natures of the tools themselves. The Business Intelligence Development Studio is aimed at the development of projects and solutions, whereas the SQL Server Management Studio is aimed squarely at administration and management.

Note

The Business Intelligence Development Studio is a 32-bit application. As such, it runs on 32-bit platforms and 64-bit AMD platforms in compatibility mode. It does not run on 64-bit Itanium platforms.

The Business Intelligence Development Studio tool includes a number of component tools and functionality, including

- Server Explorer
- Solution Explorer
- Class View
- Code Definition Window
- Object Browser

You can launch the tool by following these steps:

1. Select Start.
2. Select All Programs.
3. Select Microsoft SQL Server 2005.
4. Click on SQL Server Business Intelligence Development Studio.

The development of applications is outside the scope of this book.

Report Manager

The Report Manager tool is a web-based tool for managing SQL Server 2005 reports. While not really a studio-branded tool, the Report Manager follows many of the concepts by integrating the viewing of information, the creation of content, and the launching of other tools into a single coherent interface.

The tool allows you to administer report services, manage reports, and view reports.

The features of the Report Manager tool include

- Viewing, searching, and subscribing to reports
- Maintaining the folder hierarchy
- Configuring the report site properties
- Configuring roles-based security
- Launching the Report Builder tool

The Report Manager tool is launched through a browser because no shortcut is installed by the installation of SQL Server 2005. The default URL is <http://localhost/Reports/>.

Explorer Class Tools

The explorer class tools are all based on the Windows Explorer model of user interface. This type of user interface allows you to quickly browse and explore large numbers of objects, drilling down to details where needed.

Within SQL Server 2005, there are explorer class tools to work with objects, templates, and even solutions.

Object Explorer

The Object Explorer is a key component of the SQL Server Management Studio and allows you to view and manage all objects in Database Engine, Analysis Services, Integration Services, Reporting Services, and SQL Server 2005 Compact Edition. This is the place to find and manage SQL components and services.

Features of the Object Explorer include

- Viewing and managing all objects in the SQL Server 2005 platform
- Filtering objects to reduce the scope
- Easily launching the Registered Server tool

The folder and detail view paradigm makes it easy to navigate objects quickly, similar to the Windows Explorer interface. The details view is tabbed, as shown in Figure 16.2, to allow you to have multiple detail windows open at the same time. If they fill up the available tab space, the detail windows can be quickly accessed via a pull-down tool, as shown in the figure.

The Object Browser can filter objects in the details window to reduce clutter. The filter can select by Name, Schema, or Creation Date with the Contains, Equals, and Does Not Contain operators. For example, the sample AdventureWorks database includes 70 tables. If you need to work with just those related to the address, you can set the Object Explorer to filter for just Address in the table name and reduce the visible table to just five tables using the filter function.

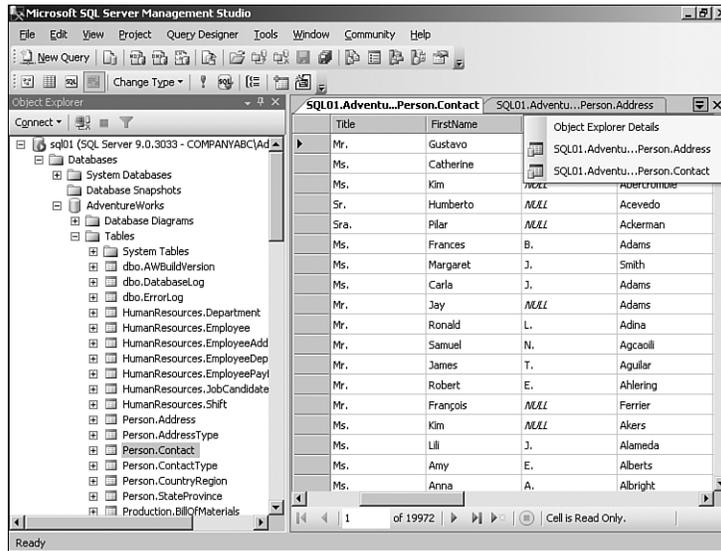


FIGURE 16.2
Object Explorer tabbed views.

Note

The Object Explorer can display a maximum of only 65,536 objects at a time. Use filtering to reduce the number of objects if needed.

The Object Explorer window is organized by folders and nodes. Folders and nodes within the Object Explorer database connection include

- Databases
- Security
- Server Objects
- Replication
- Management
- Notification Services
- SQL Server Agent (a node)

The folders differ by connection type, so for an Analysis Services connection, there are also

- Databases
- Assemblies

This level of scoping customization lets you create SQL Server 2005 Management Studio workspaces with automatic registration to have immediate access to just the components and objects needed without cluttering up the user interface.

Solution Explorer

The Solution Explorer is a component of the SQL Server Management Studio that you can use to view and manage items that comprise projects and solutions. It includes all the items associated with a project. The projects are organized by solution, which allows you to have multiple projects grouped together.

Features of the Solution Explorer include

- Organized access and management of all elements of a project
- Service-specific nodes depending on the objects within the project
- Source control with Visual SourceSafe

The Solutions Explorer can launch the Query Editor directly from the project objects.

Template Explorer

The Template Explorer is a SQL Server Management Studio component that allows you to quickly browse the list of available code templates in SQL Server 2005.

The features of the Template Explorer are

- Rapid access to a large library of predefined code
- Ability to add frequently used code templates for extensibility
- Ability to open the code directly into the Query Editor for rapid use

The Template Explorer leverages the Windows Explorer model, as do the other explorer-styled tools in SQL Server 2005. The code templates are organized by the type of code that will be created, as well as by the category

of service. The categories of services are SQL Server, Analysis Services, and SQL Server Compact Edition.

Configuration Class Tools

Configuration class tools are really wizards that simplify complex configuration tasks. These tools typically take a series of infrequently run tasks and essentially walk you through their execution. They ensure that all the tasks are executed in the proper sequence and that best practices are followed.

These tools are typically reserved for tasks done only once, such as initial configuration tasks.

SQL Server Configuration Manager

The SQL Server Configuration Manager is a standalone Microsoft Management Console (MMC) tool to manage the services, network protocol, and connectivity of the SQL Server 2005. As an MMC snap-in, the SQL Configuration Manager can be added into any MMC custom console.

Features of the SQL Server Configuration Manager include allowing you to

- Manage services such as starting, stopping, or viewing service properties
- Change the service account authentication, such as changing the password or the account
- Manage the protocols used by the server and clients

The SQL Server Configuration Manager allows you to easily change the account name or password for any of the services and is the recommended method of adjusting the service account credentials. In addition to the standard service parameters, the tool also exposes some advanced service configuration parameters such as error reporting and the dump directory.

Note

The SQL Server Configuration Manager should always be used to change the account or password for the SQL services. In addition to just changing the authentication information, the tool also sets the appropriate Registry permissions that the service needs. Using other tools does not make all the changes needed and may cause the service to fail on startup.

This tool allows you to adjust server and network client protocols. The protocols can be enabled or disabled, default ports changed, protocol order changed, and connection parameters adjusted.

Note

Much of the configuration of the server network connections is handled by the Surface Area Configuration tool, so you do not normally need to adjust the server network connections.

You can access the tool by following these steps:

1. Select Start.
2. Select All Programs.
3. Select Microsoft SQL Server 2005.
4. Select Configuration Tools.
5. Click on SQL Server Configuration Manager.

The SQL Server Configuration Manager replaces three SQL Server 2000 tools, specifically the Server Network Utility, Client Network Utility, and Service Manager.

There are three separate sections in the Configuration Manager:

- SQL Server 2005 Services
- SQL Server 2005 Network Configuration
- SQL Native Client Configuration

There are two additional options in the properties of the Protocols for MSSQLSERVER under the SQL Server 2005 Network Configuration. These are the ForceEncryption and HideInstance options.

ForceEncryption forces the encryption of all client/server communications. This requires a certificate, though the server generates a self-signed certificate if one is not installed. This option is inherently less secure and is vulnerable to man-in-the-middle attacks. See Chapter 12, “Hardening a SQL Server 2005 Environment,” for more details on encrypting client/server communications.

The HideInstance option prevents the SQL Server Browser Service from publishing the database engine, which prevents clients from locating the server via the browse feature. The client needs to know the name of the database instance to connect if this option is enabled.

SQL Server Surface Area Configuration

The SQL Server Surface Area Configuration (SAC) tool is a standalone tool that reduces the attack surface of a SQL Server 2005 system. It reduces the possibility of attacks by disabling unneeded services and protocols, reducing the surface area of the system that is available to attacks.

You can launch the tool by following these steps:

1. Select Start.
2. Select All Programs.
3. Select Microsoft SQL Server 2005.
4. Select Configuration Tools.
5. Click on SQL Server Surface Area Configuration.

The tool launches into a web-like menu with several options to add a new administrator, change the computer (the default is the localhost), or launch one of the tools. The two principal tools contained within the SQL Server SAC tool are as follows:

- Surface Area Configuration for Services and Connections is used to enable or disable Windows services and remote connectivity.
- Surface Area Configuration for Features is used to enable and disable features of the Database Engine, Analysis Services, and Reporting Services.

The Services and Connections portion of the tool is relatively straightforward, allowing you to set services' startup to manual, disabled, or automatic. The tool can also enable or disable remote connections to the services.

The Features portion of the tool is much more interesting because it exposes a number of detailed features that can affect security and that are for the most part disabled by default. These features include Ad Hoc Remote Queries, Database Mail stored procedures, Web Assistant, and linked objects in Analysis Services, among others. These features can be browsed and enabled or disabled one by one. Later in this chapter, the SAC tool is discussed in more detail. This tool allows you to export and import surface area settings to move them from one system to another.

See Chapter 12 for more details on securing the SQL Server 2005 platform and using the SQL Server Surface Area Configuration tool.

Reporting Services Configuration Manager

The Reporting Services Configuration Manager tool is used to configure the SQL Server 2005 Reporting Services. This standalone tool with a web-style interface provides access to all the configuration parameters of the service.

The tool's features include

- Creating and configuring virtual directories
- Configuring service accounts
- Creating and configuring the Report Server database
- Managing encryption keys
- Configuring email delivery
- Configuring clustering

To launch the Reporting Services Configuration Manager, perform the following steps:

1. Select Start.
2. Select All Programs.
3. Select Microsoft SQL Server 2005.
4. Select Configuration Tools.
5. Click on Reporting Services Configuration.

As mentioned previously, the tool has a web-style interface with helpful icons to indicate the status of components or tasks for the configuration of the report services. The status codes consist of Configured, Not Configured, Optional Configuration, Recommended Configuration, and Not Supported in the Current Mode.

The options that can be configured with the tool include

- Server Status
- Report Server Virtual Directory
- Report Manager Virtual Directory
- Windows Service Identity
- Web Service Identity
- Database Setup
- SharePoint Integration

- Encryption Keys
- Initialization
- Email Settings
- Execution Account

The preceding options are discussed further in Chapter 3, “Administering SQL Server 2005 Reporting Services.”

Tuning Class Tools

The tuning class tools allow you to troubleshoot and improve the performance of the SQL Server 2005 system. These tools are indispensable for ensuring that the SQL Server 2005 environment is operating at peak performance.

SQL Server Profiler

The SQL Server Profiler is a tool for capturing SQL Server 2005 events into a trace file. The trace file can be used to analyze a series of events or replay a series of events. The tool can also be used as an auditing tool for security purposes.

Features of the SQL Server Profiler tool include

- Capturing traces to screen, file, and/or table
- Restricting the events captured to reduce space needed
- Specifying a stop time
- Replaying trace files
- Diagnosing problem queries
- Correlating queries with performance counters to diagnose performance problems

To launch the SQL Server Profiler, follow these steps:

1. Select Start.
2. Select All Programs.
3. Select Microsoft SQL Server 2005.
4. Select Performance Tools.
5. Click on SQL Server Profiler.

The tool is also available from within the SQL Server Management Studio, although it launches a separate window rather than being integrated. You can launch the advisor by selecting Tools, SQL Server Profiler from within the SQL Server Management Studio.

The SQL Server Profiler can trace the events for either the Microsoft SQL Server 2005 Database Engine or Microsoft SQL Server 2005 Analysis Services. There are different events available to capture in the trace for each.

One of the more useful functions of the SQL Server Profiler is to capture a trace to be used as a workload for the Database Engine Tuning Advisor tool, which is discussed in the next section.

The SQL Server Profiler is discussed further in Chapter 22, “Performance Tuning and Troubleshooting SQL Server 2005” (online).

Database Engine Tuning Advisor

The Database Engine Tuning Advisor is a standalone tool that helps you create an optimized configuration of indexes, indexed views, and database partitions to ensure optimal performance. It reduces the need for a detailed knowledge of the SQL Server 2005 internals or the database being optimized.

The features of the Database Engine Tuning Advisor have been improved in the SQL Server 2005 platform and include

- Ease of use for novice DBAs
- Improved workload parsing
- Enhanced performance
- Integrated tuning
- Multidatabase tuning
- Offloading of tuning to a secondary server

You can launch the Database Engine Tuning Advisor tool by following these steps:

1. Select Start.
2. Select All Programs.
3. Select Microsoft SQL Server 2005.
4. Select Performance Tools.
5. Click on Database Engine Tuning Advisor.

The tool is also available from within the SQL Server Management Studio, although it launches a separate window rather than being integrated. You can launch the advisor by selecting Tools, Database Engine Tuning Advisor from within the SQL Server Management Studio.

The tool requires a database or set of databases and a workload for the analysis. The workload is a set of Transact-SQL (TSQL) that runs against the databases being tuned. The workload can be generated by the SQL Server Profiler based on traces, or the workload can be created using the Query Editor.

The Database Engine Tuning Advisor then generates a set of recommendations that include

- Recommended indexes
- Recommended partitions
- Recommended index views
- Recommended tuning settings
- A summary of the effects of implementing the recommendations

The tool has a number of tuning options to customize the analysis, including partition strategies to employ and what structures to keep constant in the database being tuned. The tool can even restrict recommendations to only those that do not require the database to be taken offline, which prevents the disruption of services.

This tool is discussed further in Chapter 22.

Command-Line Utilities

A number of command-line tools are available in SQL Server 2005. Table 16.1 describes each tool.

Table 16.1 **Command-Line Tools**

Tool	Description
bcp	Copies data between Microsoft SQL Server and a data file.
dta	Analyzes a workload and recommends physical design structures to optimize server performance for that workload. This command-line tool is from the Database Engine Tuning Advisor.
dtexec	Configures and executes a SQL Server 2005 Integration Services package.

Table 16.1 continued

Tool	Description
dtutil	Manages Integration Services packages.
nscontrol	Creates, deletes, and manages instances of Notification Services.
osql	Allows you to enter TSQL statements, system procedures, and script files at the command prompt.
profiler90	Starts SQL Server Profiler from a command prompt.
rs	Runs scripts designed for managing Reporting Services servers.
rsconfig	Configures a report server connection.
rskeymgmt	Manages encryption keys on a report server.
sac	Imports or exports Surface Area Configuration settings between instances of SQL Server 2005.
sqlagent90 Application	Starts SQL Server Agent from a command prompt.
sqlcmd	Allows you to enter TSQL statements, system procedures, and script files at the command prompt.
SQLdiag	Collects diagnostic information for Microsoft Customer Service and Support.
sqllogship Application	Enables applications to perform backup, copy, and restore operations and associated cleanup tasks for a log shipping configuration without running the backup, copy, and restore jobs.
sqlmaint	Executes database maintenance plans created in previous versions of SQL Server.
sqlservr Application	Starts and stops an instance of Database Engine from the command prompt for troubleshooting.
sqlwb	Starts SQL Server Management Studio from a command prompt.
tablediff	Compares the data in two tables for nonconvergence.

Other Tools

With any classification system, there are always a few outlying exceptions. These tools do not fit neatly into the classification but are essential tools nonetheless.

Registered Servers

The SQL Server Management Studio lets you administer and manage the database engine and services. However, to manage those components, you

must authenticate to each one to ensure you are authorized to perform the tasks. The Register Servers tool provides a convenient one-stop-shop to coordinate all the server and service registrations.

The features of the Registered Servers tool are

- Setting up connection information such as username and password with ease
- Creating groups of servers for ease of management
- Exporting and importing server groups with connection information to standardize administration
- Specifying custom connection settings per server and service

After a server is configured in Registered Servers, you can easily connect the Object Explorer to the server. This allows you to quickly access the relevant server and services from a single window. The server registrations can even be grouped to allow quick identification of server roles, such as production or development, as shown in Figure 16.3.

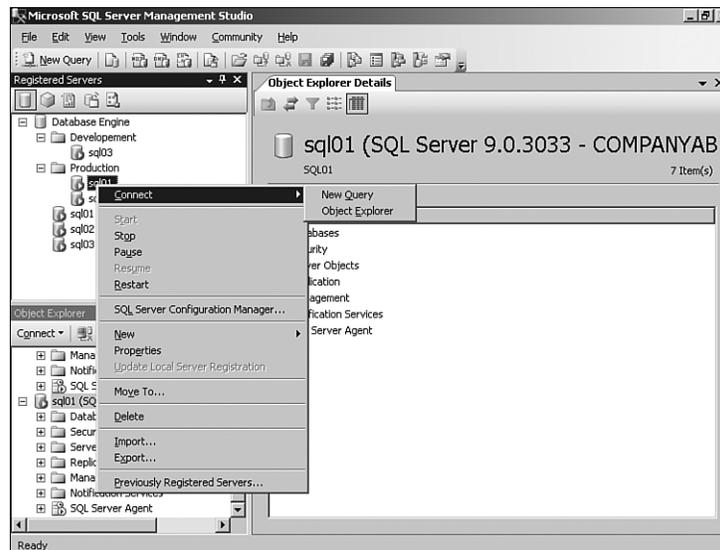


FIGURE 16.3
Server registrations by role.

The Registered Servers allows you to save the connection credentials to each server and service, reducing the time and administrative overhead of connecting to each server. This information can even be exported and imported to standardize the organization's view of database services or for you to work on different systems.

Note

When you're exporting the Registered Servers information, a separate file is required for each type of server or service. For example, database registrations and analysis service registrations would be saved into separate files.

Query Editor

Also known as the Code Editor, the Query Editor is used to edit queries, execute queries, and display their results. The editor supports TSQL, MDX, DMX, XMLA, and SQL Server Compact Edition language queries.

Features of the Query Editor tool include

- Templates of predefined code
- A graphical query designer
- Color-coded syntax for each language
- Presentation of results in a grid, text window, or to a file
- Syntax parsing of the query to verify syntax accuracy
- Display of estimated execution plan to view impact of query
- Execution of the query

You can launch the Query Editor directly from the Object Explorer against objects. Right-clicking on an object shows the Script *Object Type* As option. From there, you can choose from various other options to generate scripts including

- | | |
|-------------|--------------|
| ■ CREATE To | ■ INSERT To |
| ■ ALTER To | ■ UPDATE To |
| ■ DROP To | ■ DELETE To |
| ■ SELECT To | ■ EXECUTE To |

Each of these options generates a basic SQL statement into the editor with the option for that object already populated. Depending on the object chosen, different options are available, with the others being grayed out. Figure 16.4 shows the result of selecting **SELECT To** against the AdventureWorks Employee table. For readability, the query statement was edited to reduce the number of fields returned.

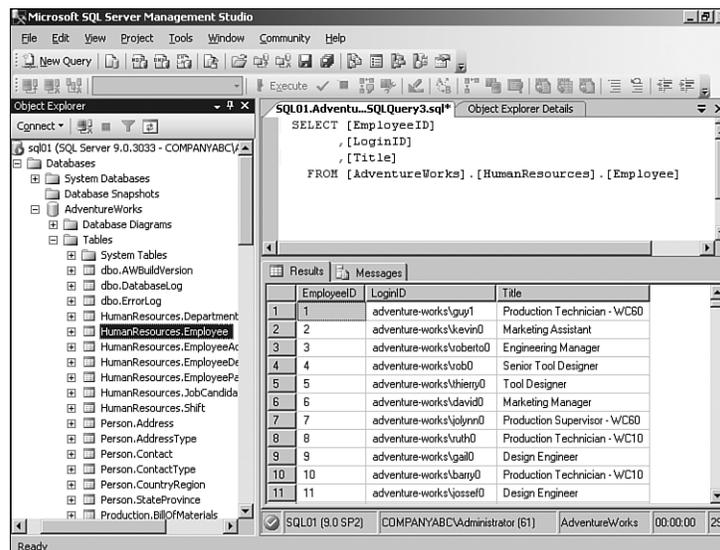


FIGURE 16.4
Query Editor.

Note the highlights indicating the keyword syntax of the command. Table 16.2 lists the colors and their meaning in the Query Editor.

Table 16.2 Query Editor Colors

Color	Category
Red	Character string
Dark green	Comment
Magenta	System function
Green	System table
Blue	Keyword

Table 16.2 continued

Color	Category
Teal	Line numbers or template parameter
Maroon	SQL Server stored procedure
Dark gray	Operators

The Query Editor displays several windows after query executions to help you understand the results of the query. These windows are

- The Query Editor, showing the query code
- The Results tab, showing the results of the query execution
- The Messages tab (not shown), displaying any messages from the execution of the query
- The optional Client Statistics (not shown), displaying statistics from the query execution

Tip

You can enable line numbers in the text editor to allow easier troubleshooting. This is a global option in SQL Server Management Studio under the Tools, Options menu for the Test Editor.

Report Builder

The Report Builder tool supports ad hoc creation of reports. Users can easily create their own reports with little or no help from you.

The features of the Report Builder tool include

- Allowing users to explore, find, and display information
- Allowing users to easily build ad hoc reports
- Providing clickthrough functionality to easily navigate through subreports
- Providing permissions to prevent unauthorized access
- Providing integration with the Business Intelligence models

The Report Builder tool uses models defined and published by the Model Designer tool within the Business Intelligence Development Studio.

You can launch the Report Builder by following these steps:

1. Launch Internet Explorer.
2. Enter one of these two URLs:
 - http://localhost/reportserver/reportbuilder/reportbuilder.application**
 - http://localhost/reportserver/reportbuilder/reportbuilderlocalintranet.application**
3. Press Enter.
4. Select the data source and click OK.

Alternatively, you can launch the Report Builder from within the Report Manager website.

Comparing SQL Server 2000 and SQL Server 2005

Many tools in SQL Server 2005 have equivalent tools in SQL Server 2000. Table 16.3 lists some of the SQL Server 2000 tools and their equivalents in SQL Server 2005.

Table 16.3 **Equivalent Tools in SQL Server 2005**

SQL Server 2000 Tool	SQL Server 2005 Tool
Enterprise Manager	SQL Server Management Studio
Query Analyzer	Code editor in SQL Server Management Studio
Service Manager	SQL Server Configuration Manager
Server Network Utility	SQL Server Configuration Manager
Client Network Utility	SQL Server Configuration Manager
Index Tuning Wizard	Database Engine Tuning Advisor

Even though there are many equivalent tools, SQL Server 2005 brings many enhancements and new tools to the product. It is not simply a cosmetic renaming of the tools, but rather a top-to-bottom restructuring to allow you to be far more effective and productive in the new platform.

Summary

There are a lot of new tools and consolidated tools in the SQL Server 2005 environment. The move to a paradigm of integrated environments with an ecosystem of tools available from a single user interface such as the SQL Server Management Studio is a welcome development. If the tools are leveraged properly, you will find that you are able to accomplish your tasks more quickly and effectively.

Best Practices

Some important best practices from the chapter include

- Use Registered Servers to set up groups and server registrations for ease of access.
- Export and import server registrations to standardize access to servers.
- Use Object Explorer filters to reduce the volume of objects.
- Use templates to jump-start query development.
- Use the SAC tool to standardize SQL Server 2005 security.
- Allow the SAC tool to manage network and protocol settings.
- Always use the SAC tool to manage SQL services authentication.