



## **SQL Server Upgrade Assistant**

*User Guide*

# User Guide

*All the information you need to use SQL Server Upgrade Assistant*

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This user guide is a basic and complete set of instructions for using SQL Server Upgrade Assistant. There is a table of contents on the next page and an index at the end of this guide to help you locate information easily and quickly.

Scalability Experts also provides online help, release notes, and a Quick Reference guide to support your success in learning and using SQL Server Upgrade Assistant. The Quick Reference is included in this user guide, and the release notes are included with the online help.



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# 1 Introducing SQL Server Upgrade Assistant

SQL Server Upgrade Assistant (Upgrade Assistant) allows you to verify how an application designed for SQL Server 2000 will run on SQL Server 2005. Upgrade Assistant guides you through the steps to use a baseline instance of SQL Server 2000 Service Pack 3a (SP3a) or later as a test environment and then upgrade the server to an instance of SQL Server 2005. During this process, Upgrade Assistant backs up and restores databases and creates and replays traces. Finally, Upgrade Assistant compares the trace results and identifies areas where SQL Server 2005 will perform differently from SQL Server 2000.

## Upgrade Assistant Results

Upgrade Assistant evaluates how a client application works with SQL Server 2000 and compares that with how the application will work after you upgrade to SQL Server 2005. When you complete all of the tasks associated with Upgrade Assistant you will:

- Identify problems with an application that need to be corrected before you upgrade to SQL Server 2005.
- Understand how a SQL Server 2000 client application will work with SQL Server 2005.
- Have experience upgrading from SQL Server 2000 to SQL Server 2005.

## Required Knowledge and Skills

To use Upgrade Assistant, you should be familiar with the following tasks and concepts:

- Installing and configuring SQL Server 2000 and SQL Server 2005.
- Installing and operating any client applications that you support with SQL Server 2000.
- Backing up and restoring databases. See [Backing Up and Restoring Databases](#) in Microsoft SQL Server 2005 Books Online.
- Collecting and replaying a trace. See [Using SQL Server Profiler](#) in Microsoft SQL Server 2005 Books Online.

## Steps

Upgrade Assistant collects information and performs specific tasks based on that information. There are several steps in using Upgrade Assistant. Each step corresponds to a page in the Upgrade Assistant. Once all of the steps are completed, Upgrade Assistant returns results and provides an interface to browse them.

**Note:** Before using Upgrade Assistant, please be sure to have a full understanding of what actions it will perform, and the impact it will have on your systems. This can be done by both reading this document. When possible, use Upgrade Assistant on test systems rather than production systems.

The following table describes the steps performed when you run Upgrade Assistant. Click a link for the Help topic associated with the task.

Step	Task	Description
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1	<a href="#">Create a Test Environment</a>	<p>You first create a test environment. In a test environment you can test the functionality in an application without affecting production databases.</p> <p>Create the test environment before launching Upgrade Assistant. This step is not associated with a screen in the Upgrade Assistant interface.</p>
2	<a href="#">Capture a Playback</a>	<p>The next step is to capture a playback. A playback consists of a backup of all system and user databases, and a trace that can be replayed. During the trace you will use the client application to connect to the database and make changes to the data. Use as many features of the client application as possible to create a comprehensive trace.</p>
3	<a href="#">Set Up Playback Baseline System</a>	<p>The third step is to restore the databases from the backups that you created in the previous step.</p>
4	<a href="#">Run Upgrade Advisor</a>	<p>To prepare to upgrade the test environment to SQL Server 2005, next run Upgrade Advisor and fix any problems that Upgrade Advisor detects. Upgrade Advisor is a free tool provided by Microsoft to prepare administrators to upgrade from SQL Server 2000.</p> <p>Upgrade Advisor is available as a download from the <a href="#">Microsoft Download Center</a>.</p>
5	<a href="#">Replay Trace on SQL Server 2000</a>	<p>After running Upgrade Advisor, replay the trace created in step 2. The replayed trace result becomes the baseline from SQL Server 2000. This baseline will be compared with the same trace, replayed on SQL Server 2005, to help you understand any changes to expect after upgrading production servers.</p>
6	<a href="#">Set Up Playback Test System</a>	<p>During this step, you restore the databases from the backups created in step 2.</p>
7	<a href="#">Upgrade to SQL Server 2005</a>	<p>With the databases restored, you upgrade the test server to the latest version of SQL Server.</p>
8	<a href="#">Replay Trace on SQL Server 2005</a>	<p>To evaluate how your application will perform on SQL Server 2005, you replay the trace from the playback. The results from this playback will be compared with the baseline to help you understand any differences you can expect when you upgrade to SQL Server 2005.</p>
9	<a href="#">Compare Trace Files</a>	<p>At this point you have results from a single trace replayed twice -- once against SQL Server 2000 and once against SQL Server 2005. During this step, Upgrade Assistant evaluates both trace results and creates a report comparing the two.</p>
10	<a href="#">View Replay Differences</a>	<p>The playback results analyzer (PRA) viewer is the final step in Upgrade Assistant. Perform this step to view the trace results from SQL Server 2000 and SQL Server 2005 side by side.</p>

## 2 Getting Started

In This Section:

[Documentation Conventions](#)

[Release Notes](#)

[System Requirements](#)

[Installing SQL Server Upgrade Assistant](#)

### 2.1 Documentation Conventions

Throughout this guide, there are a number of documentation conventions used to distinguish between different elements.

Convention	Used for
UPPERCASE	T-SQL keywords
Fixed space font	Code samples
<b>Bold text</b>	Command-prompt utilities, menus, commands, dialog box options, programming elements, and text that must be typed exactly as shown.
<b>Notes</b>	Helpful notes or useful tips.

### 2.2 Release Notes

5/16/2006

This document provides additional details on new features and known issues with SQL Server Upgrade Assistant (Upgrade Assistant) Version 1.0.0.

**Note:** Before running Upgrade Assistant, ensure that your computer meets the [System Requirements](#). If you do not have the appropriate software installed Upgrade Assistant may not function properly.

#### Features

This is the initial release of Upgrade Assistant, which is a utility used to assist in the upgrade path from SQL Server 2000 to SQL Server 2005. This tool provides a method to capture playback from existing servers, then replay the trace files to gain valuable baseline information.

In addition, there is a built-in report view that allows you to compare data.

#### Known Issues

Since this is the initial release, there are no known issues at this time.

## 2.3 System Requirements

Component	Details
Operating System	Microsoft Windows Server 2003 SP1 (English).
SQL Server 2000	SP3a or later. The test computer should have the same service pack level, hotfixes, critical updates, and security updates as the production computer.
SQL Server collation	Same as production computer.
.NET Framework	.NET Framework version 2.0.
SQL Server 2005	SQL Server 2005 Management Tools. SQL Server 2005 Management Tools include SQL Server Management Studio, SQL Server Configuration Manager, SQL Server Profiler, and Replication Monitor.
System databases	Copies restored from the production server.
User databases	Copies restored from the production server, including all user databases required by client application.
Upgrade Assistant	<p>Run this program on the computer that you are testing.</p> <p><b>Note:</b> The user running Upgrade Assistant must have administrator privileges on the computer on the instance of SQL Server.</p> <p>Make sure that BUILTIN\Administrators Windows login exists and is part of the System Administrators role. If this account does not exist, create it, and then delete it after you have completed the test.</p>
Client application (or business program or Web application that connects to your instance of SQL Server)	Run the client application locally or connect to the test server over the network.
Internet access	May be required. For example, to download SQL Server 2005 Upgrade Advisor requires Internet access.

Local area network	<p>The test computer requires access to a local area network if you plan to do any of the following:</p> <ul style="list-style-type: none"><li>• Connect to the server remotely.</li><li>• Save backups to (or restore from) a network share. Ensure that the SQL Server service account has read/write access to the share.</li><li>• Save trace results to (or replay from) a network share. Ensure that the SQL Server service account has read/write access to the share.</li><li>• Save analysis results to (or review results from) a network share. Ensure that the SQL Server service account and the Windows account for the user running Upgrade Assistant have read/write access to the share.</li><li>• Install SQL Server 2005 from a network share.</li><li>• Run different steps of Upgrade Assistant on different computers. For more information on using different computers, see <a href="#">Create a Multiple-Computer Test Environment</a>.</li></ul>
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## 2.4 Installing SQL Server Upgrade Assistant

Use the procedure below to install SQL Server Upgrade Assistant.

1. Ensure that your computer meets the system requirements.
2. Double-click the `SSUASetup.exe` to launch the installation wizard.
3. On the **Welcome to the InstallShield Wizard for SQL Server Upgrade Assistant** page, click **Next**.
4. Review the License Agreement and click to select **I accept the terms in the license agreement**, then click **Next**.
5. On the **Destination Folder** page of the installation wizard, you can click **Change** to specify the folder to install the Upgrade Assistant. If you wish to install in the default folder, simply click **Next** to continue.
6. Click **Install** to begin the installation process.
7. Click **Finish** to close the wizard. You can launch Upgrade Assistant from the Scalability Experts programs group in the Start-Programs menu.

## 2.5 License Agreement

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## 3 Create a Test Environment

SQL Server Upgrade Assistant (Upgrade Assistant) helps database administrators evaluate functional differences between SQL Server 2000 Service Pack 3a (SP3a) or later and SQL Server 2005.

Upgrade Assistant is designed to run in a test environment. Although Upgrade Assistant has been tested to ensure consistent and accurate results, it has not been optimized. Scalability Experts therefore does not recommend installing or running Upgrade Assistant on production servers or servers running databases required for business operations. Instead, run Upgrade Assistant on a test server that is identical, to the extent feasible, to your production system.

You can create a test environment to conduct the entire test on a single computer or on separate computers. For information on configuring a lab to conduct the test on a single computer, see [Create a Single-Computer Test Environment](#).

If you have multiple computers, you can perform various steps on different computers. For example, you can create the playback and replay the trace on one computer with SQL Server 2000 Service Pack 3a (SP3a) or later, and run the trace simultaneously on a separate computer with SQL Server 2005. To configure a lab for various computers, see [Create a Multiple-Computer Test Environment](#).

### 3.1 Create a Single-Computer Test Environment

You can configure a single computer to run SQL Server Upgrade Assistant (Upgrade Assistant). Choose this configuration when resources are not available to use a second computer to replay the trace. You may also choose this configuration to simplify the test process; however the process will take longer. Scalability Experts does not recommend running Upgrade Assistant on a single computer if the computer is a production computer supporting business operations.

#### Requirements

Install Scalability Experts on a computer reserved for testing applications and databases. The computer must meet the minimum hardware and software requirements for SQL Server 2005. For information on hardware requirements, see [SQL Server 2005 Enterprise System Requirements](#) on the Microsoft Web site.

The table below lists additional specific requirements for each component.

Component	Details
Operating System	Microsoft Windows Server 2003 SP1 (English).
SQL Server 2000	SP3a or later. The test computer should have the same service pack level, hotfixes, critical updates, and security updates as the production computer.

SQL Server collation	Same as production computer.
.NET Framework	.NET Framework version 2.0.
SQL Server 2005	SQL Server 2005 Management Tools. SQL Server 2005 Management Tools include SQL Server Management Studio, SQL Server Configuration Manager, SQL Server Profiler, and Replication Monitor.
System databases	Copies restored from the production server.
User databases	Copies restored from the production server, including all user databases required by client application.
Upgrade Assistant	<p>Run this program on the computer that you are testing.</p> <p><b>Note:</b> The user running Upgrade Assistant must have administrator privileges on the computer on the instance of SQL Server.</p> <p>Make sure that BUILTIN\Administrators Windows login exists and is part of the System Administrators role. If this account does not exist, create it, and then delete it after you have completed the test.</p>
Client application (or business program or Web application that connects to your instance of SQL Server)	Run the client application locally or connect to the test server over the network.
Internet access	May be required. For example, to download SQL Server 2005 Upgrade Advisor requires Internet access.

Local area network	<p>The test computer requires access to a local area network if you plan to do any of the following:</p> <ul style="list-style-type: none"> <li>• Connect to the server remotely.</li> <li>• Save backups to (or restore from) a network share. Ensure that the SQL Server service account has read/write access to the share.</li> <li>• Save trace results to (or replay from) a network share. Ensure that the SQL Server service account has read/write access to the share.</li> <li>• Save analysis results to (or review results from) a network share. Ensure that the SQL Server service account and the Windows account for the user running Upgrade Assistant have read/write access to the share.</li> <li>• Install SQL Server 2005 from a network share.</li> <li>• Run different steps of Upgrade Assistant on different computers. For more information on using different computers, see <a href="#">Create a Multiple-Computer Test Environment</a>.</li> </ul>
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### Testing on a Single Computer

After you have configured the test computer to meet the above requirements, run Upgrade Assistant. Follow the steps listed in the pane on the left side of Upgrade Assistant. For more information, see [Introducing SQL Server Upgrade Assistant](#).

## 3.2 Create a Multiple-Computer Test Environment

You can configure multiple computers to run SQL Server Upgrade Assistant (Upgrade Assistant). Choose this configuration to see trace files replayed simultaneously. Also, follow the instructions in this topic if you chose to collect the trace from a production server. Scalability Experts does not recommend running Upgrade Assistant on a production computer supporting business operations.

### Multiple Computer Test Scenarios

To run the test on multiple computers, designate one computer for a baseline and another server for the test. Configure both computers identically but give them different names. For example, name one computer Baseline and the other computer Test.

### Requirements

Install Upgrade Assistant on each computer that you will use for testing applications and databases. Each computer must meet the minimum hardware and software requirements for SQL Server 2005. For information on hardware requirements, see [SQL Server 2005 Enterprise System Requirements](#) on the Microsoft Web site.

The table below lists specific requirements for each component.

Component	Details
Operating System	Microsoft Windows Server 2003 SP1 (English).
SQL Server 2000	SP3a or later. Both baseline and test computers should have the same service pack level, hotfixes, critical updates, and security updates as the production computer.
SQL Server collation	Same as production computer.
.NET Framework	.NET Framework 2.0
SQL Server 2005	SQL Server 2005 Management Tools. SQL Server 2005 Management Tools include SQL Server Management Studio, SQL Server Configuration Manager, SQL Server Profiler, and Replication Monitor.
System databases	Copies restored from production server.
User databases	Copies restored from production server. Must include all user database required by client application.
Upgrade Assistant	<p>Run this program on both computers.</p> <p><b>Note:</b> The user running Upgrade Assistant must have administrator privileges on the computer on the instance of SQL Server.</p> <p>Make sure that BUILTIN\Administrators Windows login exists and is part of the System Administrators role. If this account does not exist, create it temporarily for the purpose of running Upgrade Assistant, and then delete it after you have completed the test.</p>
Client application	Run the client application locally or connect to the test server over the network. The client application refers to any application you normally run against the production instance of SQL Server 2000.
Internet access	May be required. For example, to download SQL Server 2005 Upgrade Advisor requires Internet access.

Local area network	<p>The test computer requires access to a local area network if you plan to do any of the following:</p> <ul style="list-style-type: none"> <li>• Connect to the server remotely.</li> <li>• Save backups to (or restore from) a network share. Ensure that the SQL Server service account has read/write access to the share.</li> <li>• Save trace results to (or replay from) a network share. Ensure that the SQL Server service account has read/write access to the share.</li> <li>• Save analysis results to (or review results from) a network share. Ensure that the SQL Server service account and the Windows account for the user running Upgrade Assistant has read/write access to the share.</li> <li>• Install SQL Server 2005 from a network share.</li> <li>• Run different steps of Upgrade Assistant on different computers.</li> </ul>
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### Testing on Multiple Computers

After you have configured the test computers to meet the above requirements, run Upgrade Assistant on the baseline computer. Follow the steps listed in the pane on the left side of Upgrade Assistant. The following table shows what steps to perform on each computer.

Step	Task	Computer
1	<a href="#">Create a Test Environment</a>	Baseline or test server <hr/> <b>Caution:</b> Scalability Experts does not recommend using Upgrade Assistant to capture a playback from a production server.
2	<a href="#">Capture a Playback</a>	Baseline
3	<a href="#">Set Up Playback Baseline System</a>	Baseline
4	<a href="#">Run Upgrade Advisor</a>	Baseline
5	<a href="#">Replay Trace on SQL Server 2000</a>	Baseline
6	<a href="#">Set Up Playback Test System</a>	Test
7	<a href="#">Upgrade to SQL Server 2005</a>	Test

8	<a href="#">Replay Trace on SQL Server 2005</a>	Test
9	<a href="#">Compare Trace Files</a>	Baseline
10	<a href="#">View Replay Differences</a>	Baseline

## 4 User Interface Help Reference

In This Section:

[Welcome to Upgrade Assistant](#)

[Capture a Playback](#)

[Baseline SQL Server 2000 Help Reference](#)

[Test SQL Server 2005 Help Reference](#)

[Compare Trace Files](#)

[View Replay Differences](#)

### 4.1 Welcome to Upgrade Assistant

SQL Server Upgrade Assistant (Upgrade Assistant) verifies that your SQL Server 2000 application will continue to perform against SQL Server 2005.

- Before you run Upgrade Assistant, perform the following:
  - Ensure that Upgrade Assistant is installed on each computer involved in the test.
  - Back up system and user databases.
  - Configure the test environment. See [Create a Test Environment](#).

For information about running Upgrade Assistant on a single computer, see [Create a Single-Computer Test Environment](#).

For information about running Upgrade Assistant on multiple computers, see [Create a Multiple-Computer Test Environment](#).

- Click the items in the left pane to guide you through Upgrade Assistant. Proceed in order from top to bottom.

### 4.2 Capture a Playback

The Capture Playback page captures the playback. A playback consists of a backup of all system and user databases and a trace file. SQL Server Upgrade Assistant(Upgrade Assistant) will restore the databases and replay the trace file in later pages.

#### Before Capturing Playback

Before you proceed to the next step, perform the following:

- Stop the SQL Server Agent, Replication, and other services that generate connections.
- Stop all management tools and applications that have active connections to SQL Server.
- Restart SQL Server.
- Start the client application.
- Run DBCC CHECKDB against each database to ensure that database is in a consistent state.

## Run Location

If you are using multiple computers for the test, run Capture Playback from the baseline server. For more information, see [Create a Multiple-Computer Test Environment](#).

**Note:** Scalability Experts does not recommend using a production server to capture the playback, because Upgrade Assistant will trace the server, which will impair the server's performance.

## Element List

### Server name

This field is automatically populated with the computer name of the computer that Upgrade Assistant is on. For a named instance, specify `servername\instancename`.

### Authentication

Specify the type of connection to use to back up the databases and capture the trace. **Windows Authentication** is selected by default. If you select **SQL Server Authentication**, enter the user name and password for a SQL Server account that is a member of the `sysadmin` server role.

### Playback capture location

Specify the full path of a folder to store the database backups and the trace results file. By default, Upgrade Assistant will create a Playback folder in the Upgrade Assistant program folder. You can also specify either a local or remote folder. For example, to save the file in the Playback folder of drive C, enter `C:\Playback`; to save the file on the Playback share of a remote computer named FileShare, enter `\\FileShare\Playback`.

The folder must meet the following requirements:

- The SQL Server service account must have write access to the folder.
- The folder must have enough space to hold full database backups of all user and system databases, and a replayable trace file. The maximum size for the trace file is 1 gigabyte (GB). Minimum size for this folder is the size of all system and user database backups plus 1 GB.
- If you are capturing multiple playbacks, the folder must be empty before the capture can begin.

### Capture Playback

Upgrade Assistant performs the following tasks:

- Verifies that SQL Server 2000 Service Pack 3a or later is installed.
- Queries server configuration information.
- Begins backups of all system and user databases.
- Begins trace.

### Results

Displays progress of backups and trace.

After you click **Capture Playback**, the server begins to perform the specified step including begin the trace. In addition, a **SQL Server Upgrade Assistant** window will open to allow you to stop the trace at any time.

While the trace is running, use the client application to connect to the server and modify the database. Ensure that you perform every task required by the client application so that Upgrade Assistant includes every function the client application performs in the evaluation when Upgrade Assistant replays the trace on a test server.

### Stopping the Trace

To stop the trace, click **OK** in the SQL Server Upgrade Assistant window. The trace will automatically stop if the trace file size reaches 1 GB or after 24 hours, whichever happens first.

## 4.2.1 Tips for Capturing a Quality Playback

Playback testing is most valuable when the playback captures a wide diversity of application behavior. For this reason we recommend capturing your playback against a test system by executing automated and/or manual test procedures that exercise most of the functionality of your application. This type of playback is known as a “code coverage” playback because it contains a wide diversity of Transact-SQL interaction that occurs between your application and databases. A high quality code coverage playback should contain 90% of the different types of Transact-SQL commands generated by your application.

While production playbacks are interesting, they may not provide good code coverage since all of the features of your application may not be in use during playback capture. If you do not have a test environment and decide to create your playback using a production system, capturing your playback overnight or on weekends may result in the least impact on performance of your production system, but may not provide good code coverage.

Use the following guidelines to judge the quality of your playback:

- The playback provides good code coverage and was created against a test system using automated and/or manual testing procedures that exercise most of the features of your application.
- Database objects should be unencrypted, if possible.
- The majority of the commands captured do not depend on external resources such as other SQL Server instances, extended stored procedures, distributed partitioned views, linked servers, distributed transactions or replication.
- The majority of the commands captured do not depend upon bulk copy operations performed during trace capture. Bulk copy operations cannot be replayed in the test environment.

- The trace capture began as soon as database backups were complete ensuring that there are no gaps in activity missed during playback capture that may cause failures during replay.

Be aware of the following potential impact on your system that will occur when capturing a Playback:

- The performance impact of using trace has been measured as high as 15% in some situations. Typically, it is approximately 6% or less. You may wish to test the impact of enabling tracing prior to capturing your playback if you are using production systems.

## 4.3 Baseline SQL Server 2000 Help Reference

In This Section:

[Set Up Playback Baseline System](#)

[Run Upgrade Advisor](#)

[Replay Trace on SQL Server 2000](#)

### 4.3.1 Set Up Playback Baseline System

Use this page of SQL Server Upgrade Assistant (Upgrade Assistant) to restore the user databases to a test computer. Upgrade Assistant will replay the trace against these databases in a later step.

If you are using multiple computers for the test, perform this task on the baseline server. For more information, see [Create a Multiple-Computer Test Environment](#).

#### Options

##### Server name

Specify the name of the server or instance where the databases will be restored. By default this field contains the name of the local computer. For a named instance, specify `servername\instancename`.

##### Authentication

Specify the type of connection to use to restore the databases. **Windows Authentication** is specified by default. If you specify **SQL Server Authentication**, enter the **User Name** and **Password** for a SQL Server account that is a member of the sysadmin server role.

##### Playback source directory

Specify the full path of the folder where the database backups are.

If you used Upgrade Assistant to capture a playback, the backup files are in the folder you specified in Playback capture location.

If you created the backups manually, enter the path to the local folder or network share where the backup files are.

Click **Browse** to locate the directory, or type the folder path.

##### Restore databases directory

Specify the full path of the folder where the user databases should be restored. The default directory is the folder where you installed Upgrade Assistant. The instance of SQL Server

2000 must have appropriate permissions for this directory.

Click **Browse** to locate the directory, or type the full path.

### Set Up Playback

Restore the user databases. This button is enabled when **Server name**, **Authentication**, **Playback source directory file**, and **Restore database directory** are specified.

### Results

Displays results as the user databases are restored. Once the Playback has been set up, you will receive a message in the Results window that states **Server setup was completed successfully**.

## 4.3.2 Run Upgrade Advisor

SQL Server 2005 Upgrade Advisor (Upgrade Advisor) is a tool you can use during the SQL Server 2005 upgrade process. Upgrade Advisor analyzes the configuration of installed SQL Server components, and then generates a report that identifies issues to address to ensure a successful upgrade.

**Important: You must fix these issues before you proceed to the next step in Upgrade Advisor.** SQL Server Upgrade Assistant was created to work in conjunction with Upgrade Advisor, and each utility focuses on different tasks.

Upgrade Advisor can be installed in two ways:

- From the redist folder of the SQL Server 2005 product media. Run the SQLUasetup.msi file to install Upgrade Advisor. Follow the on-screen instructions.
- As a download from the [Microsoft Download Center](#).

Upgrade Advisor is available as an installer package from the Download Center. You can run or save it. If you click **Run**, the installer runs and installs Upgrade Advisor. If you click **Save**, a **Save As** dialog box is displayed; you can save the installer package to your computer and then install Upgrade Advisor later.

### Run Location

If you are using multiple computers for the test, run Upgrade Advisor on the baseline server. Database issues identified on the baseline server must also be fixed on the test server before you upgrade. For more information, see [Create a Multiple-Computer Test Environment](#)

## 4.3.3 Replay Trace on SQL Server 2000

Use this page of SQL Server Upgrade Assistant (Upgrade Assistant) to specify the trace file to replay and the trace output file. The trace file is the file you created from SQL Server 2000. The trace output file will contain the results of the replayed playback trace file.

If you are using multiple computers for the test, perform this task on the baseline server. For more information, see [Create a Multiple-Computer Test Environment](#).

### Options

**Server name**

Specify the name of the server or instance where the trace will be replayed. By default this text box contains the name of the local computer. To replay traces on a different server, specify the server name. For a named instance, specify `servername\instancename`.

### Authentication

Specify the type of connection to use to replay the trace. **Windows Authentication** is specified by default. If you specify **SQL Server Authentication**, enter the **User Name** and **Password** for a SQL Server account that has permission to replay a trace on the server.

### Playback trace file

Specify the full path to the trace file.

If you used Upgrade Assistant to capture a playback, the trace file is in the folder you specified for Playback capture location.

Click **Browse** to locate the directory, or type the full path.

### Trace output file

Specify the full path for the replay results. By default, this is in the log folder where Upgrade Assistant is stored.

### Replay Trace

Replay the trace file. This button is enabled when **Server name**, **Authentication**, **Playback trace file**, and **Trace output file** are specified.

### Results

Displays the events as they are replayed.

### Status

Displays the status of the replay as it progresses.

### Query

Displays the query that is currently being replayed.

## 4.4 Test SQL Server 2005 Help Reference

In This Section:

[Set Up Playback Test System](#)

[Upgrade to SQL Server 2005](#)

[Replay Trace on SQL Server 2005](#)

### 4.4.1 Set Up Playback Test System

This page of SQL Server Upgrade Assistant (Upgrade Assistant) is used to restore the user databases to an instance of SQL Server 2000. You will upgrade the test computer to SQL Server 2005 and replay a trace against these databases at a later step.

If you are using multiple computers for the test, run this step on the test server. For more information,

see [Create a Multiple-Computer Test Environment](#).

## Options

### Server name

Specify the name of the SQL Server 2000 server or instance where the databases will be restored. By default this field contains the name of the local computer. For a named instance, specify `servername\instancename`.

### Authentication

Specify the type of connection to use to restore the databases. **Windows Authentication** is specified by default. If you specify **SQL Server Authentication**, enter the **User Name** and **Password** for a SQL Server account that is a member of the sysadmin fixed server role.

### Playback source directory

Specify the full path of the folder containing the database backups.

If you used Upgrade Assistant to capture a playback, the backup files are in the folder you specified in Playback capture location.

If you created the backups manually, enter the path to the local folder or network share where the backup files are.

Click **Browse** to locate the directory, or type the full path.

### Restore databases directory

Specify the full path of the folder where the user databases should be restored. The default directory is the folder where you installed Upgrade Assistant. The instance of SQL Server 2000 must have appropriate permissions for this directory.

Click **Browse** to locate the directory, or type the full path.

### Set Up Playback

Restore the user databases. This button is enabled when **Server name**, **Authentication**, **Playback source directory**, and **Restore databases** directory are specified.

### Results

Displays results as the user databases are restored.

## 4.4.2 Upgrade to SQL Server 2005

Use this page of SQL Server Upgrade Assistant (Upgrade Assistant) to upgrade the test server to SQL Server 2005. Follow the upgrade steps specified in the SQL Server 2005 installation media.

If you are using multiple computers, upgrade the test server. For more information, see [Create a Multiple-Computer Test Environment](#).

## 4.4.3 Replay Trace on SQL Server 2005

Use this page of SQL Server Upgrade Assistant (Upgrade Assistant) to specify the trace file to replay against SQL Server 2005 and the trace output file. The trace file is the trace file you created from

SQL Server 2000. The trace output file will contain the results of the replayed trace file.

If you are using multiple computers for the test, perform this step on the upgraded test server. For more information, see [Create a Multiple-Computer Test Environment](#).

## Options

### Server name

Specify the name of the SQL Server 2005 server and instance where the trace will be replayed. By default this field contains the name of the local computer. To replay the trace to a different server, specify the server name. For a named instance, specify `servername\instancename`.

### Authentication

Specify the type of connection to use to replay the trace. **Windows Authentication** is specified by default. If you specify **SQL Server Authentication**, enter the **User name** and **Password** for a SQL Server account that has permission to replay a trace on the server.

### Playback trace file

Specify the full path of the trace file.

If you used Upgrade Assistant to capture a playback, the trace file is in the folder you specified as the Playback capture location.

Click **Browse** to locate the directory, or type the full path.

### Trace output file

Specify the full path to store the results of the replay. By default, this is the log folder where Upgrade Assistant is stored.

### Replay Trace

Replay the playback trace file. This button is enabled when **Server name**, **Authentication**, **Playback trace file**, and **Trace output file** are specified.

### Results

Displays each event as it is replayed.

### Status

Displays the status of the replay as it progresses.

### Query

Displays the query that is currently being replayed.

## 4.5 Compare Trace Files

Use this page of SQL Server Upgrade Assistant (Upgrade Assistant) to compare the trace output files collected from one instance of SQL Server 2000 SP3a or later and one instance of SQL Server 2005.

If you are using multiple computers for the test, run **Compare Traces** on the baseline server. For more information, see [Create a Multiple-Computer Test Environment](#).

## Options

### Server name

Specifies the name of the baseline server and instance where the traces will be compared. By default this field contains the name of the local computer. To compare databases on a different server, specify the server name. For a named instance, specify `servername\instancename`.

### Authentication

Specify the type of connection to use to connect to SQL Server 2005. **Windows Authentication** is specified by default. If you specify **SQL Server Authentication**, enter the **User name** and **Password** for a SQL Server account that has permission to create and drop databases on the server.

### SQL Server 2000 trace file

Specify the full path of the SQL Server 2000 trace output file.

Upgrade Assistant stores the trace output file to the log directory where Upgrade Assistant is installed.

Click **Browse** to locate the directory, or type the full path.

### SQL Server 2005 trace file

Specify the full path of the SQL Server 2005 trace output file.

Upgrade Assistant stores the trace output file to the log directory where the Upgrade Assistant is installed.

Click **Browse** to locate the directory, or type the full path.

### Compare Traces

Compare the traces. This button is enabled when **Server name**, **Authentication**, **SQL Server 2000 trace file**, and **SQL Server 2005 trace file** are specified.

### Results

Displays the progress as the trace output files are compared.

## 4.6 View Replay Differences

This step launches a viewer. Launch the viewer to view trace output files from SQL Server 2000 and SQL Server 2005.

To complete this page, perform the following:

- Click **Launch Viewer** to view the replay differences.
- Ensure that any differences between the SQL Server 2000 trace output file and the SQL Server 2005 trace output file were identified by Upgrade Advisor.

If you are using multiple computers for the test, view the replay differences on the baseline server. For more information, see [Create a Multiple-Computer Test Environment](#).

## 5 Support

SQL Server Upgrade Assistant is provided as a free resource to the SQL Server community and is believed to be free of defects. While Scalability Experts does not provide any additional telephone or email support for this product, you can visit us online for additional information and tips at <http://www.scalabilityexperts.com/ssua>.

In addition, Scalability Experts is committed to continually refining and improving SQL Server Upgrade Assistant. If you do discover a bug or defect in the software, please visit <http://www.scalabilityexperts.com/ssuabugs> and submit a bug report.

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