# SpeechMiner 8.5

## Administration Guide

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# SpeechMiner 8-5 Administration Guide

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http://www.genesys.com/support/general-pages/contact-us.aspx

or contact our support team at:

customercare@genesys.com

# Introduction

SpeechMiner®, Genesys Telecommunications Laboratories's award-winning speech-analytics platform analyzes call content as well as text-based interactions such as e-mails and chats. Speech-analytics leverages recorded customer interactions (from any recording system) and analyzes each interaction for critical business topics and events. With unmatched accuracy, the system "listens" to conversations between customers and contact-center agents, precisely identifies the topics that were discussed, and categorizes what took place within each interaction.

Beginning with version 8.5, SpeechMiner supports three alternative modes of operation:

- **Analytics and Recording UI:** In this mode, SpeechMiner plays back, and analyzes the Genesys Interaction Recording recorded calls/interactions, and records of other interactions, and process the contents of these calls/interactions.
- **Recording UI Only:** In this mode, SpeechMiner plays back the call audio and displays the other interactions, but the contents of the interactions are not processed by the speech-analytics system.
- **Analytics Only:** In this mode, SpeechMiner imports recorded call audio and records of other interactions from any recording system, and uses its speech-analytics system to process the contents of the interactions.

The SpeechMiner user interface is made up of two software components:

1. SpeechMiner browser-based interface, which offers a variety of ways to access recorded interactions and the results of the analyses performed by the speech-analytics system on them (when Analytics mode is used). Users of the speech-analytics system can employ this interface to find interactions that have specific characteristics or that deal with particular topics, to identify and listen to the parts of calls that interest them, to audit and fine-tune SpeechMiner's call processing, and to keep track of a range of system-metrics.
2. SpeechMiner Administration Tool (SMART), which enables users of the speech-analytics system to configure it to search interactions for specific topics and other characteristics.

This manual explains how to install and configure SpeechMiner. It is intended for system administrators. Most of the steps described are only performed once, usually with the help of Genesys Customer Care.

## See also

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# Installing SpeechMiner

This chapter explains how to install SpeechMiner at your enterprise. This procedure includes setting up the system components, the database, and the software that users employ to interact with the system. The components can be installed on a single machine, or on separate machines, as required by the particular configuration of your system.

## System Services

The SpeechMiner system makes use of the following components:

| Component | Modes | Description | For Installation On |
|---|---|---|---|
| UPlatform service | All modes | Manages all the processing tasks of SpeechMiner – fetching (in the case of Analytics mode), recognition and exploration (in the case of Analytics and Analytics & Recording UI modes), categorization compression, and indexing (in all modes). | All machines on which SpeechMiner processing tasks take place |
| Recognition engine | Analytics and Recording UI, Analytics | Nuance speech-recognition engine that transcribes call audio into text. | • All machines on which SpeechMiner processing tasks take place (i.e., on which UPlatform is installed)<br>• All machines on which SMART runs |
| UConnector service | Analytics and Recording UI, Analytics | Retrieves interaction data (call audio and the text of other types of interactions) and metadata from the recording systems and places it in the SpeechMiner input folder. | A machine that can connect both to the recording system database and to the SpeechMiner input folder |
| Interaction Receiver | Analytics and Recording UI, Recording UI | A web service which fetches calls (audio and metadata) from the Genesys Interaction Recording system. | A machine that can connect both to the recording system and the database |
| MS-SQL database | All modes | The SpeechMiner database, which stores the interaction data and the results of interaction processing. | SpeechMiner database server |
| Web service | All modes | Runs the SpeechMiner web-based interface that anables users to view and work with the interaction data after it has been processed | One or more machines in the system, as required |

## System Software

Users employ the following software to work with SpeechMiner:

1. **SpeechMiner browser-based interface**, which offers a variety of ways to access the audio of calls and the results of the interaction analyses performed by the system (when Analytics mode is in use). Users can employ this interface to find interactions that have specific characteristics or that deal with particular topics, to identify and listen to parts of calls that deal with particular issues or have specific characteristics, to audit and fine-tune SpeechMiner's call processing, to keep track of a range of system-metrics, and to generate reports based on the data.
2. **SpeechMiner administration tool (SMART)**, an application that enables users to configure the speech-analytics system to search calls for specific topics and other characteristics.
3. **SMConfig**, an application that is used by system administrators to configure SpeechMiner.

### See also

System Requirements
What Is Installed
Ports Used by System Components
Before You Begin
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Installing the Interaction Receiver
Installing the UPlatform Server
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# System Requirements

## Database

The database must run on a machine on which one of the following SQL servers is installed:

- Microsoft SQL Server 2008 with Reporting Services, SP1 or above (Enterprise edition is recommended for large installations.)

  -OR-

- Microsoft SQL Server 2012 with Reporting Services

## Operating Systems

All machines must have Windows operating systems. The table below lists the Windows operating systems that are compatible with each SpeechMiner component.

| Component | Compatible Operating Systems |
|---|---|
| Servers (platform, database, and Web) | ▪ Windows Server 2008 R2 64 bit<br>▪ Windows Server 2012 |
| SMART | ▪ Windows Server 2008 R2 64 bit<br>▪ Windows Server 2012<br>▪ Windows 7 Professional<br>▪ Windows 8 Professional |
| Web interface | ▪ Windows XP Professional (SP3 or above)<br>▪ Windows Vista Business 32 bit<br>▪ Windows 7 Professional 32 bit<br>▪ Windows Server 2008<br>▪ Windows Server 2008 R2 |

## Browser

The SpeechMiner web interface is compatible with Internet Explorer (IE) versions 8, 9, and 10, and Chrome.

Neither JAVA, .NET, or ActiveX are required for web-based access to SpeechMiner (via the SpeechMiner web-based interface).

Users of the SpeechMiner web application must have a functioning audio device on their desktop. Users browsing using Internet

Explorer should have Windows Media Player version 10 or 11 installed.

### Memory (RAM)

Machines running SpeechMiner servers and applications should have at least the following amounts of memory:

- Database server: 4 GB - 32 GB
- Web server: 4 GB
- SMART application: 1 GB minimum; 2 GB recommended
- Platform server: 4 GB - 8 GB (allow 1 GB per recognizer task, as a rule of thumb)

### Disk Space

The machines in the system should have at least the following amounts of disk space available before you install SpeechMiner on them:

- **All servers:** Approximately 1 GB of disk space for the recognition engine
- **Recognition server(s):** For the UPlatform service, 20MB of disk space for the runtime folder plus approximately 10 GB for caching recognition packages. (The exact amount required for caching depends on the size of the implementation.)
- **Database server:** At least 20 GB for the SpeechMiner database, plus 20MB of disk space for the runtime folder of the UConnector service. In addition, on some types of recording-system integrations that have a very high volume, a larger (10GB-200GB) storage area is needed for temporary files.

  **Notes:**

  - The initial size of the database is about 20 GB; it may grow larger, depending on the call volume and the call-purging policy.
  - On relatively high-volume installations, UConnector may need its own dedicated server.
- **Web server:** About 20MB for the SpeechMiner virtual folder, plus additional space for cached reports and call audio. (The exact amount required for caching depends on user activity.)
- **Interaction Receiver:** About 15 MB for the Interaction Receiver virtual folder.
- **Machines running SMART:** About 1 GB of disk space for the recognition engine

### See also:

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# What Is Installed

When the installation process is completed, the following software will be installed on the machines in your system:

### On All Servers

- MS .NET Framework 3.5 with SP1 (aka 3.5.1)

### On the Recognition Server(s)

- UPlatform service
- Nuance recognition engine

### On the DB Server

- MS-SQL 2008 or 2012 Server, including MS Reporting Services (normally installed by the customer beforehand)
- SpeechMiner database
- UConnector service

### On the Web Server

- SpeechMiner virtual folder

### On the Interaction Receiver Server

- Interaction Receiver virtual folder

### On Every Machine Running SMART

- .Net Framework 3.5 with SP1
- Recognition engine
- SMART executable and runtime files (dlls)

### See also

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Home > Installing SpeechMiner > Ports Used by System Components

# Ports Used by System Components

The following ports are used by SpeechMiner.

**Note:** The ports listed are the default ports. Most of them can be changed upon request.

| Source | Destination | Protocol and Port Pair (ex. TCP 3389) |
|---|---|---|
| Web servers, Platform servers, SpeechMiner Administrator Workstations (SMConfig/SMART) | Database server | tcp 1433 |
| Database server, Web server, Platform servers, SpeechMiner Administrator Workstations (SMConfig/SMART) | MS-SQL report server | http 80 / https 443 |
| SpeechMiner Administrator Workstations (SMConfig/SMART) | Web servers | http 80 / https 443 |
| Genesys Interaction Recording server | Interaction Receiver Server | http 80/ https 443 |
| Web Servers | Genesys Interaction | http 80/ https 443 |

| | | |
|---|---|---|
| | Receiver Server | |
| Web Servers | Web servers | http 80 / https 443 |
| SpeechMiner Administrator Workstations (SMConfig) | Platform servers, Web servers | tcp 135 |
| Platform servers (recognition), SpeechMiner Administrator Workstations (SMART) | SpeechMiner Nuance License server | tcp 27000 + another port (can be configured in license file) |
| Web servers, Platform servers, SpeechMiner Administrator Workstations (SMConfig/SMART) | File System | smb over tcp 445 |
| Web servers, SpeechMiner Administrator Workstations (SMConfig/SMART) | Active Directory | tcp 88 |
| Web servers, Platform servers | Email server | smtp over tcp 25 |

### Ports and Protocols Required for SpeechMiner UConnector

SpeechMiner UConnector requires access to the recording-system database and file-storage system. Access to the database is implemented using the TCP protocol with port 1433. (The port number can be configured on the database server.) Access to the file-storage system is implemented using SMB over TCP protocol with port 445. Other protocols can be used as well, if they are available in the underlying file-storage system.

### See also

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# Before You Begin

Before you install SpeechMiner, make sure of the following:

- The system requirements are met.
- The required software has been installed on the machines in your system.
- The required permissions are set.

Then, review the Pre-installation Checklist before you begin the installation process.

### See also

System Requirements
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Installing the SpeechMiner Database
Installing the SpeechMiner Web
Installing the Interaction Receiver

# Setting Up the Required Software

This section explains how to install the required third-party software on the machines in your system. This includes the following items:

- .Net framework
- SQL server
- IIS
- Report Viewer

You should install the required software before you install SpeechMiner. In addition, you should disable simple file sharing on all machines in your system before you install SpeechMiner.

### See also

Installing the .NET Framework
Setting Up the SQL Server
Installing IIS on the Web Server or Interaction Receiver Server
Installing Report Viewer
Disabling Simple File Sharing

Pre-installation Checklist



# Installing the .NET Framework

Microsoft .NET Framework 3.5 SP1 (3.5.1) must be installed on all machines that will run SpeechMiner components or interact with SpeechMiner. You can download the installation package at http://download.microsoft.com/download/2/0/e/20e90413-712f-438c-988e-fdaa79a8ac3d/dotnetfx35.exe.

If you are installing the .NET Framework on machines that are running Windows Server 2008 R2 or Windows Server 2012, do not download this installation package, because it is included with these operating systems. On these operating systems, you can install the framework using the **Add Features** option in the Server Manager (**Start** > **Administrative Tools** > **Server Manager**). For information about installing .NET Framework 3.5.1 on Windows Server 2008 R2, see http://support.microsoft.com/kb/2027770. For information about installing .NET Framework 3.5.1 on Windows Server 2012, see http://msdn.microsoft.com/library/windows/hardware/hh975396.

### See also

Setting Up the SQL Server
Installing IIS on the Web Server or Interaction Receiver Server
Installing Report Viewer
Disabling Simple File Sharing



# Setting Up the SQL Server

Before you begin installing SpeechMiner, you must install the SQL server on the database server. You can use either Microsoft SQL Server 2008 with Reporting Services or Microsoft SQL Server 2012 with Reporting Services. For additional information, please refer to the following Genesys documents: *SQL2008 Server Installation and Configuration for SpeechMiner* and *SQL2012 Server Installation and Configuration for SpeechMiner*.

### See also

Installing the .NET Framework
Installing IIS on the Web Server or Interaction Receiver Server
Installing Report Viewer
Disabling Simple File Sharing

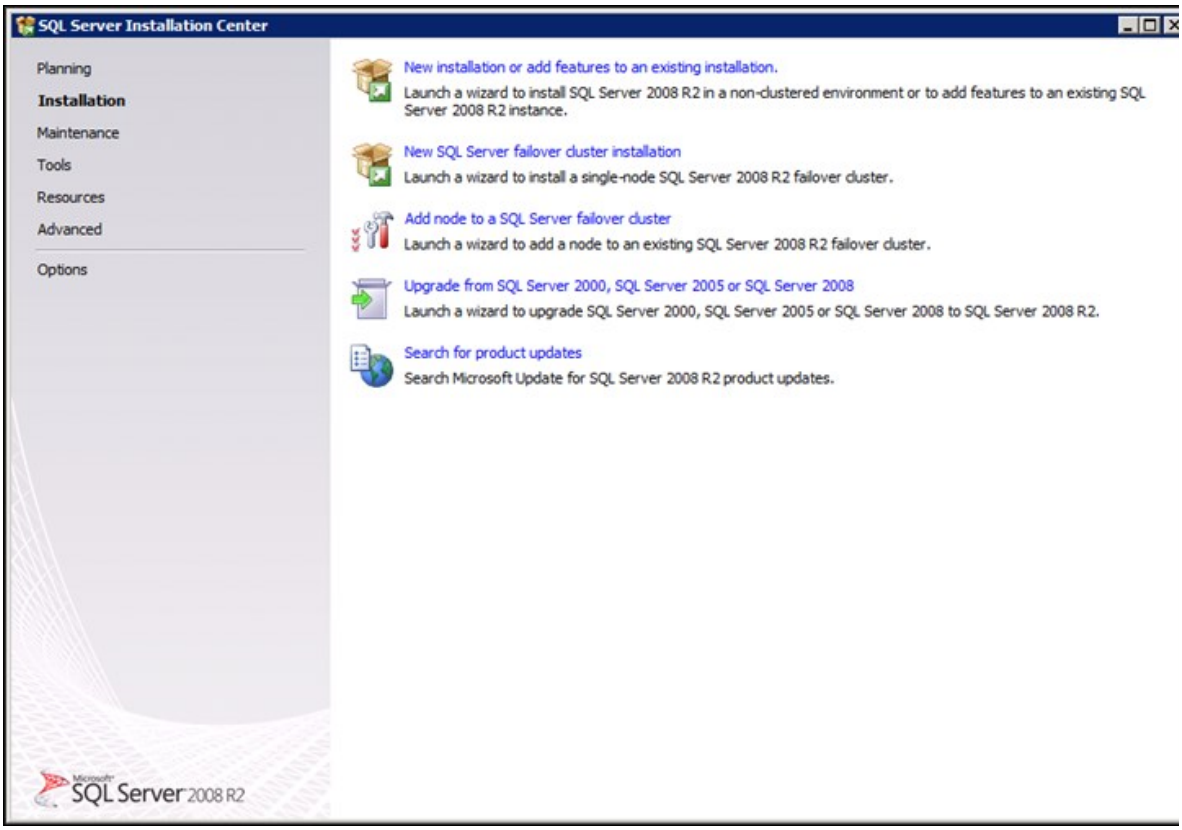


# Installing SQL Server 2008 R2

In order to install SQL Server 2008 R2 for use with SpeechMiner, you basically just run the normal setup wizard and follow the instructions in it. Below are instructions for the wizard screens for which SpeechMiner requires specific selections.

#### To install SQL Server 2008 R2:

1. Run the installation program. the **SQL Server Installation Center** window opens, with the **Planning** screen open.
2. In the menu on the left, select **Installation**. The **Installation** screen opens.

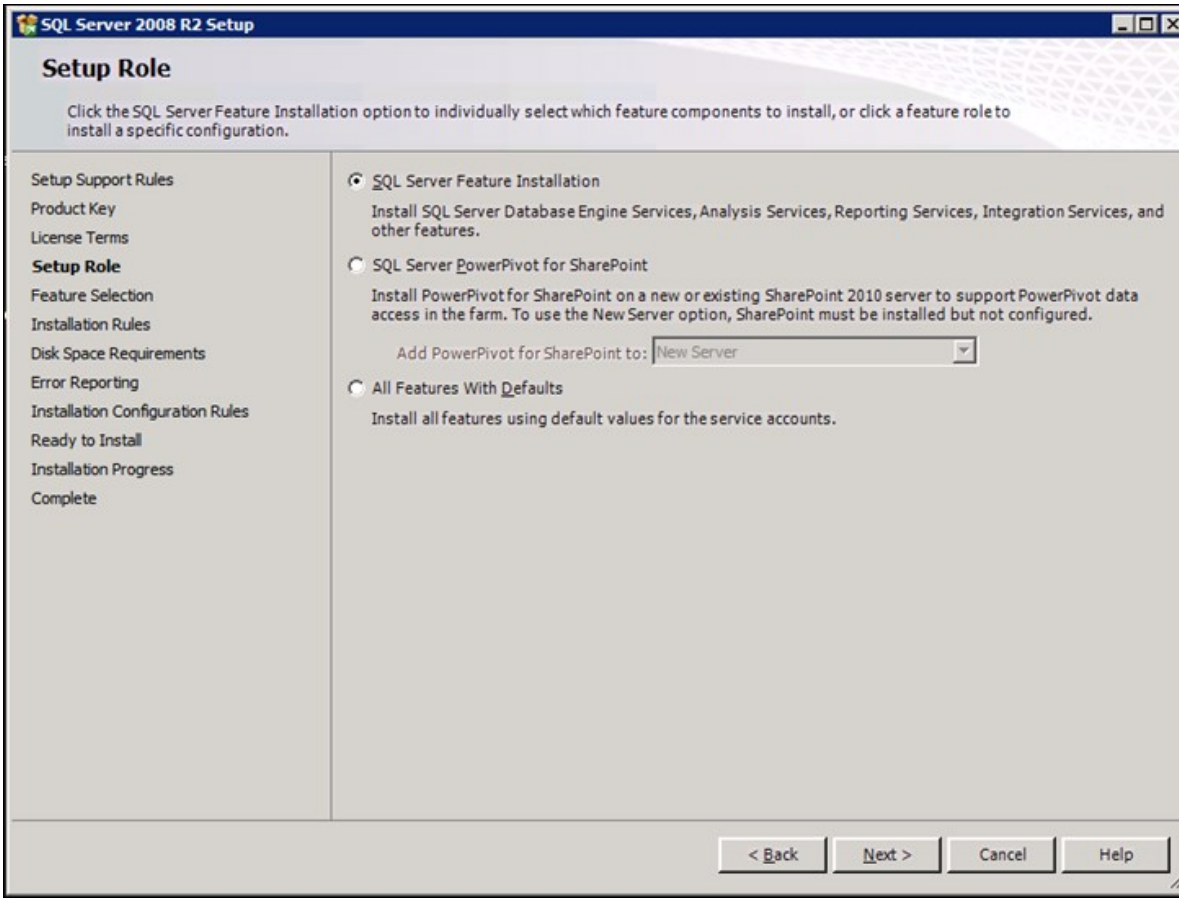



**Installation screen**

3. Select **New installation or add features to an existing installation**. The installation wizard opens.
4. Follow the on-screen instructions. When the screens mentioned below open, follow the instructions below to select the

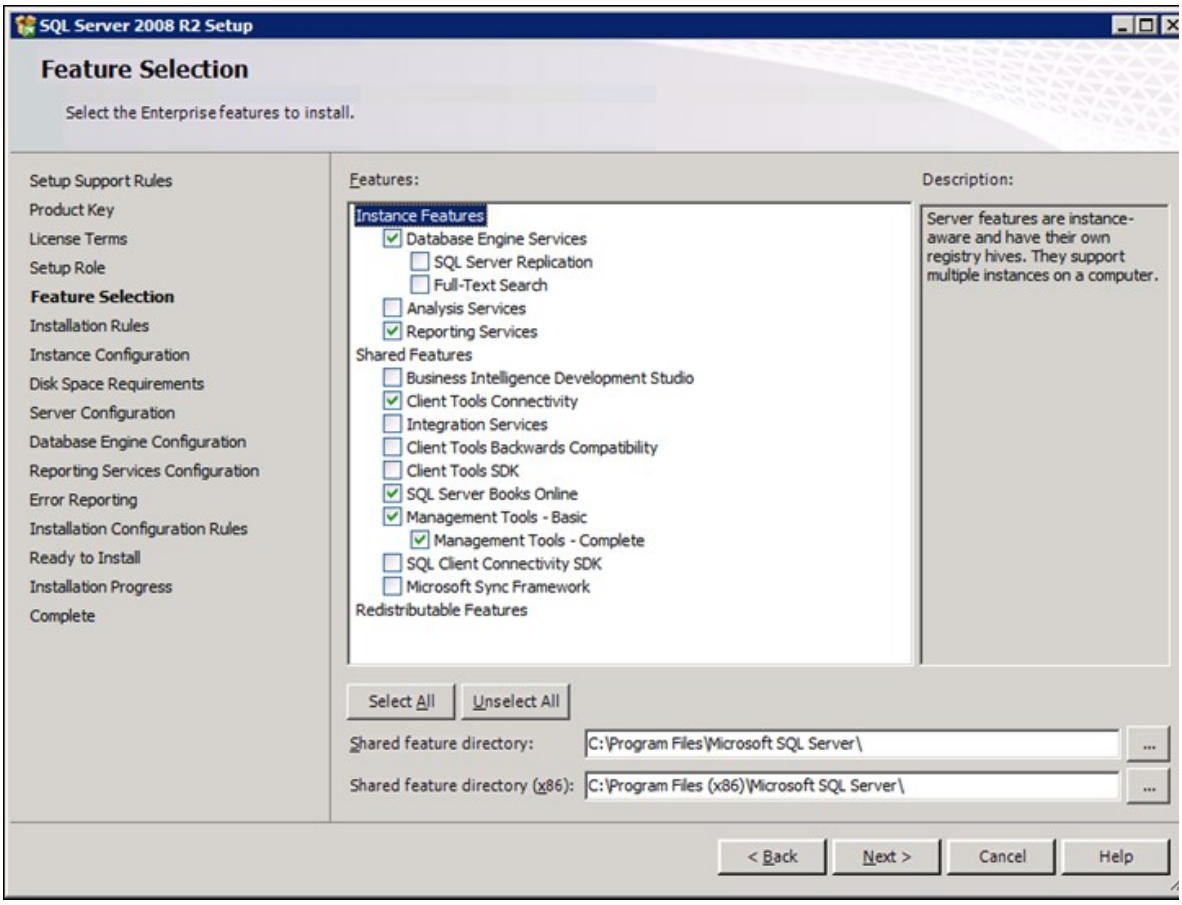
required settings and options for SpeechMiner.

5. In the **Setup Role** screen, select **SQL Server Feature Installation**.



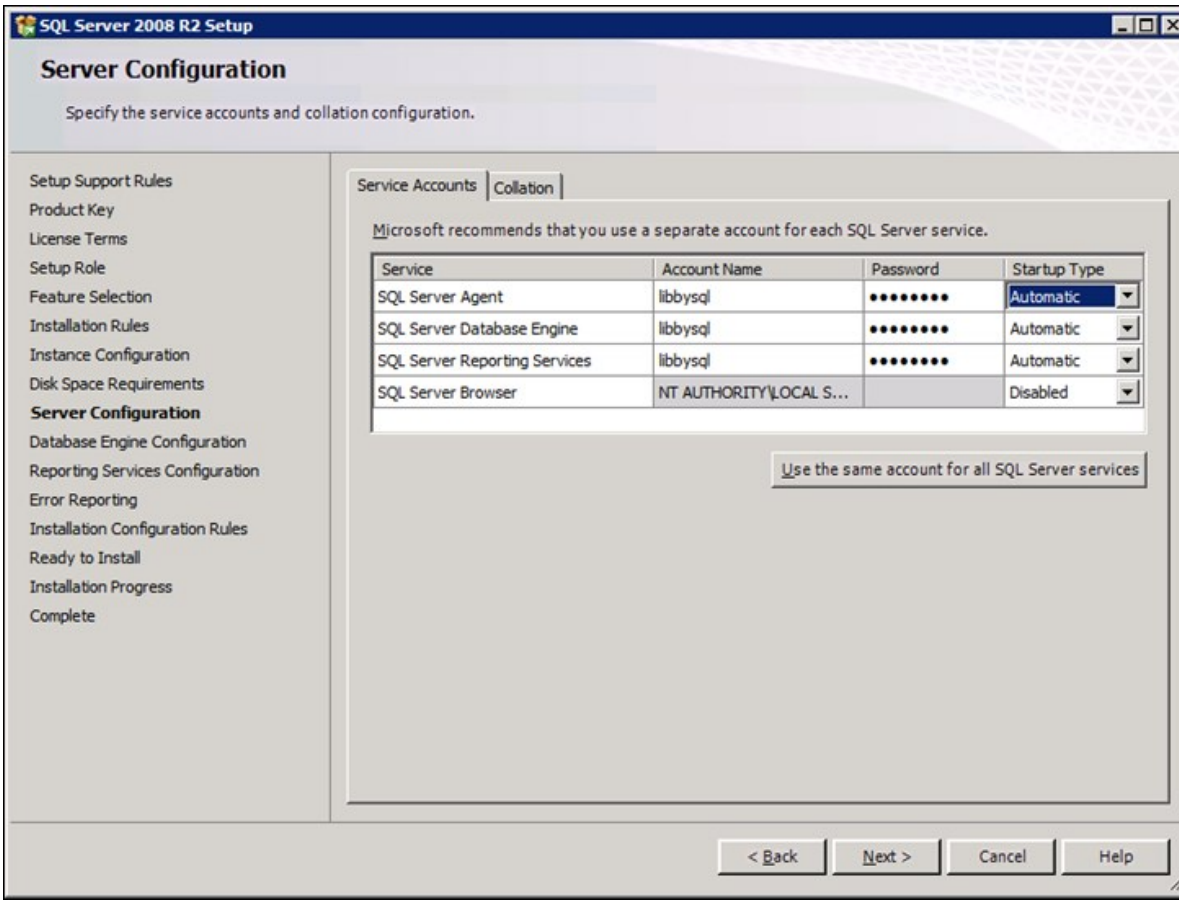

**Setup Role screen**

6. In the **Feature Selection** screen, select the following options:
   - Database Engine Services
   - Reporting Services
   - Client Tools Connectivity
   - SQL Server Books Online
   - Management Tools Basic
   - Management Tools Complete



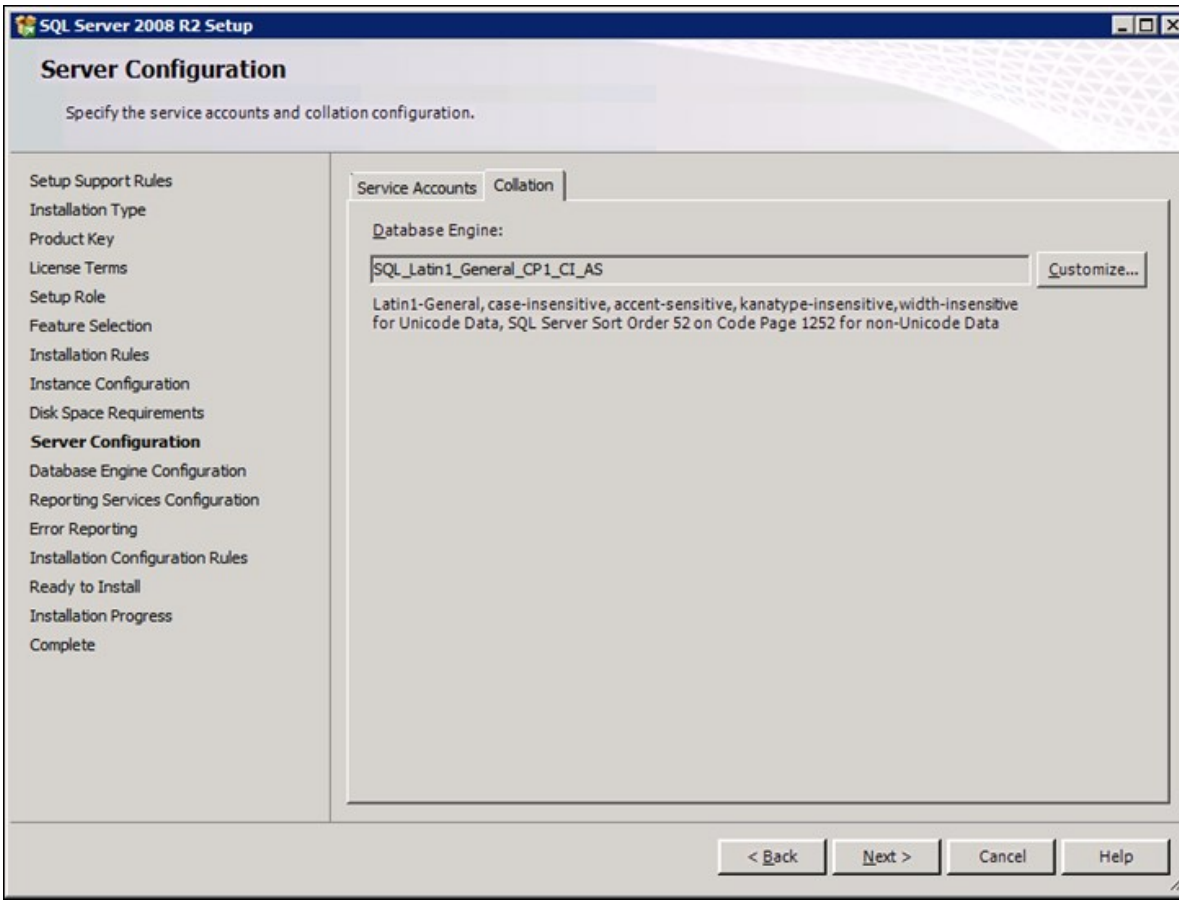

**Feature Selection screen**

7. In the **Server Configuration** screen, in the **Service Accounts** tab, for the **SQL Server Agent**, **SQL Server Database Engine**, and **SQL Server Reporting Services**, do the following:
   - Enter the user account and password of the service account.
   - Under **Startup Type**, select **Automatic**.



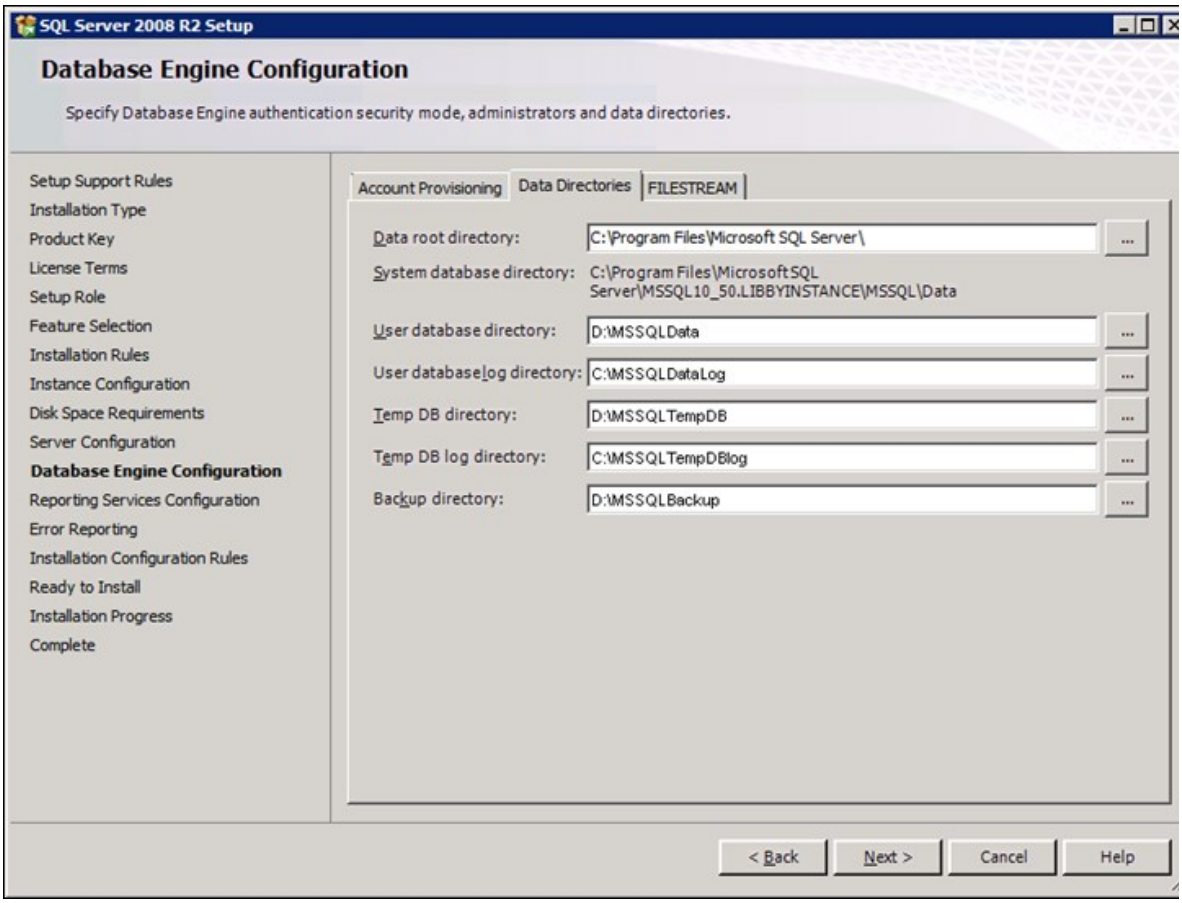

**Server Configuration screen, Service Accounts tab**

8. In the **Server Configuration** screen, in the **Collation** tab, under **Database Engine**, select **SQL_Latin1_General_CP1_CI_AS** (the default value).




**Server Configuration screen, Collation tab**

9. In the **Database Engine Configuration** screen, in the **Data Directories** tab, select the locations for the database folders. If possible, put the *User database directory*, the *Temp DB directory*, and the *Backup directory* on a separate drive from the other folders.




**Database Engine Configuration screen, Data Directories tab**

10. In the **Reporting Services Configuration** screen, select **Install the native mode default configuration**.
11. When you finish installing the SQL Server, restart the machine on which you installed it.

## See also

Installing SQL Server 2012
Configuring the SQL Server



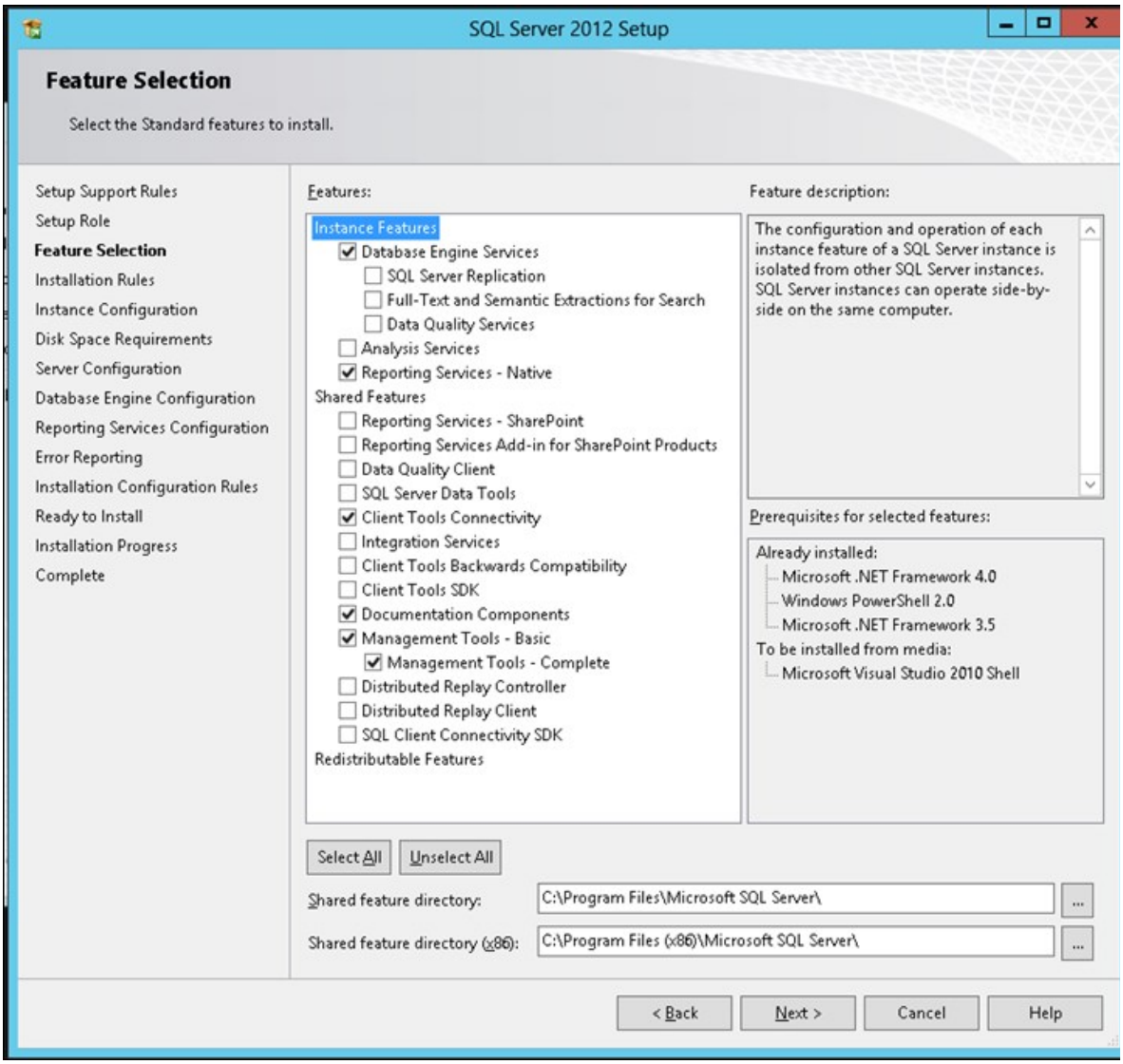
# Installing SQL Server 2012

In order to install SQL Server 2012 for use with SpeechMiner, you basically just run the normal setup wizard and follow the instructions in it. Below are instructions for the wizard screens for which SpeechMiner requires specific selections.

### To install SQL Server 2012:

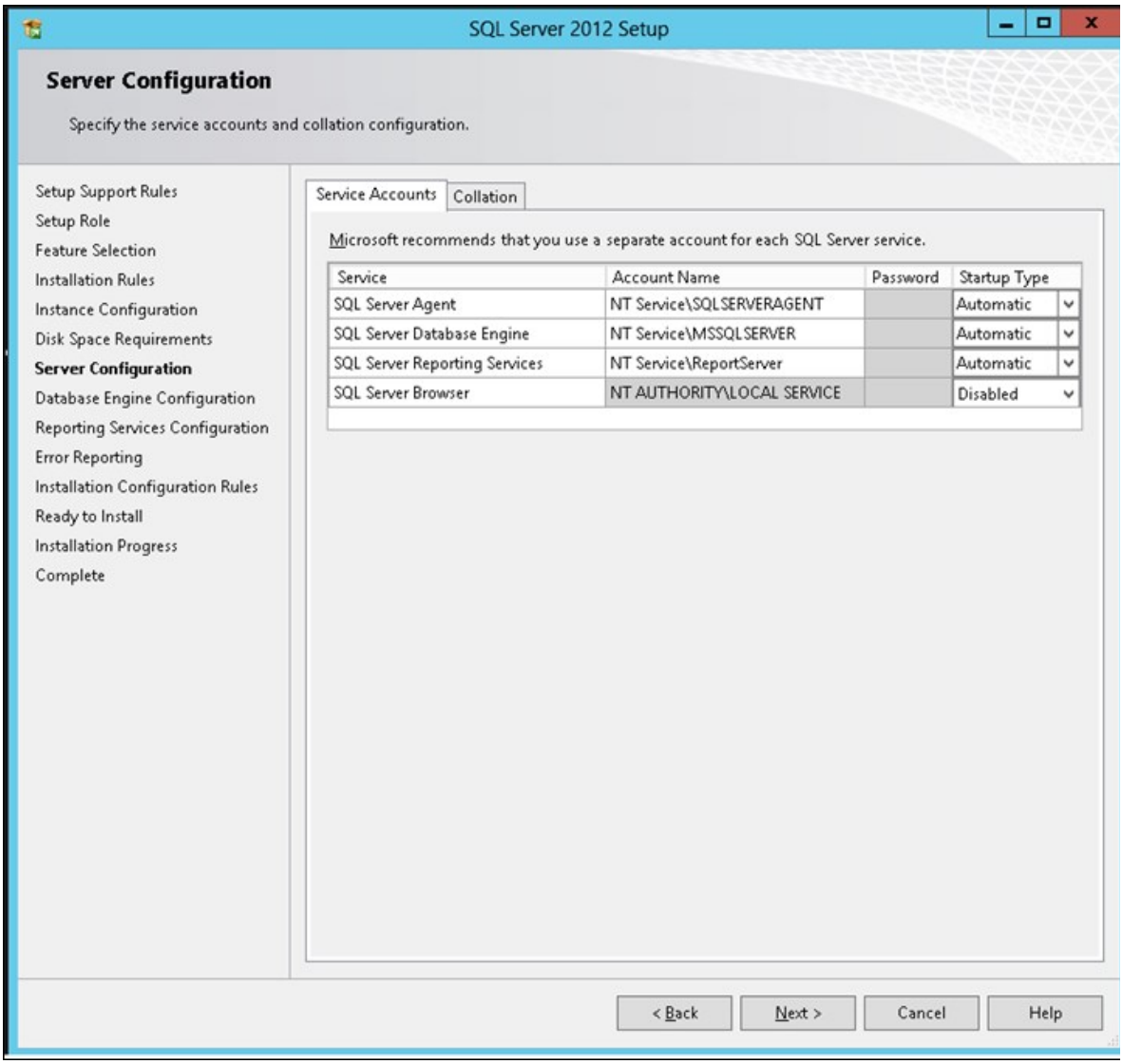
1. Run the installation program. the **SQL Server Installation Center** window opens, with the **Planning** screen open.
2. In the menu on the left, select **Installation**. The **Installation** screen opens. Select **New installation or add features to an existing installation**. The installation wizard opens.
3. Follow the on-screen instructions. When the screens mentioned below open, follow the instructions below to select the required settings and options for SpeechMiner.
4. In the **Setup Role** screen, select **SQL Server Feature Installation**.
5. In the **Feature Selection** screen, select the following options:

- Database Engine Services
- Reporting Services
- Client Tools Connectivity
- SQL Server Books Online
- Management Tools Basic
- Management Tools Complete



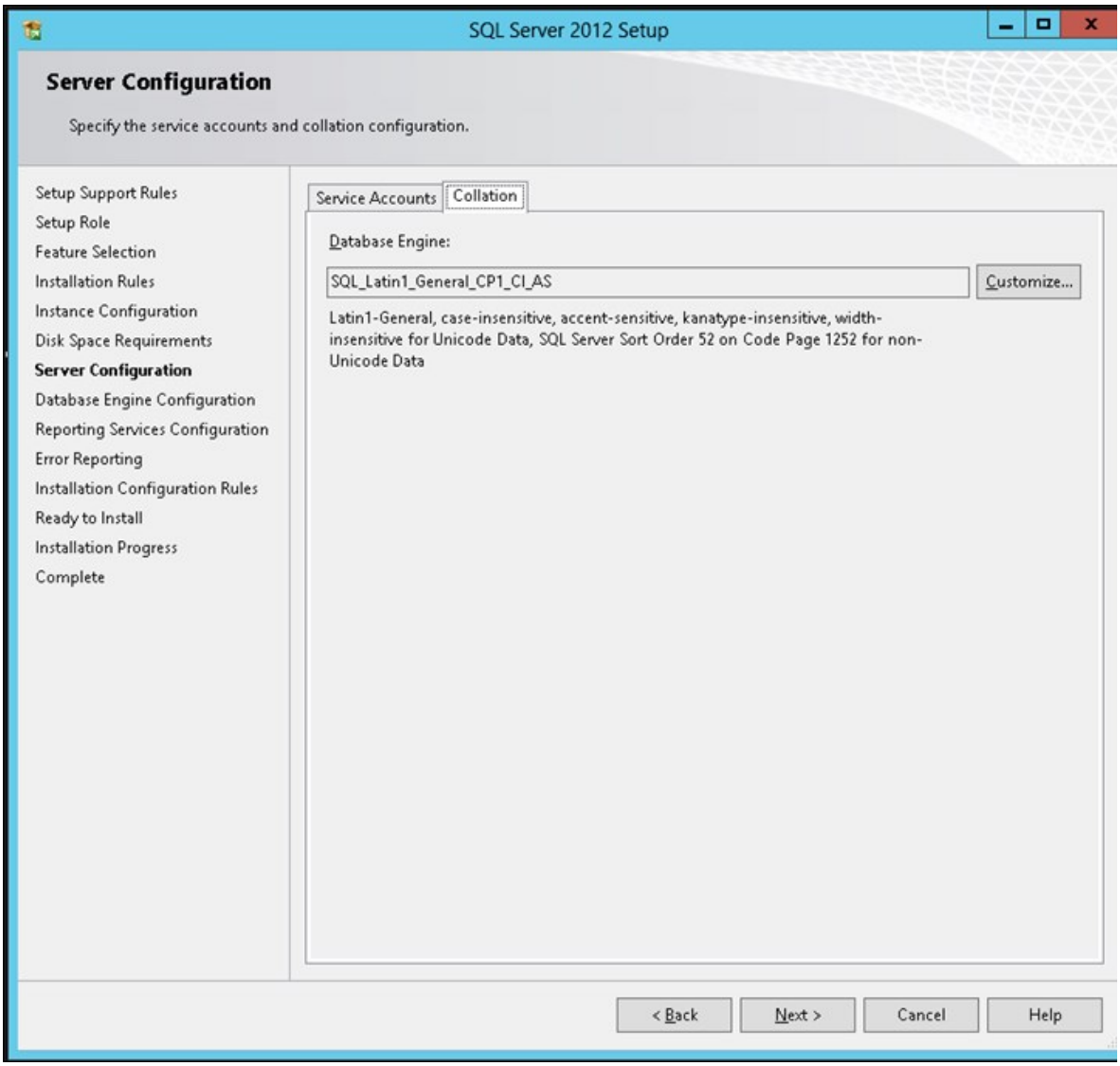

**Feature Selection screen**

6. In the **Server Configuration** screen, in the **Service Accounts** tab, for the **SQL Server Agent**, **SQL Server Database Engine**, and **SQL Server Reporting Services**, do the following:
   - Enter the user account and password of the service account.
   - Under **Startup Type**, select **Automatic**.



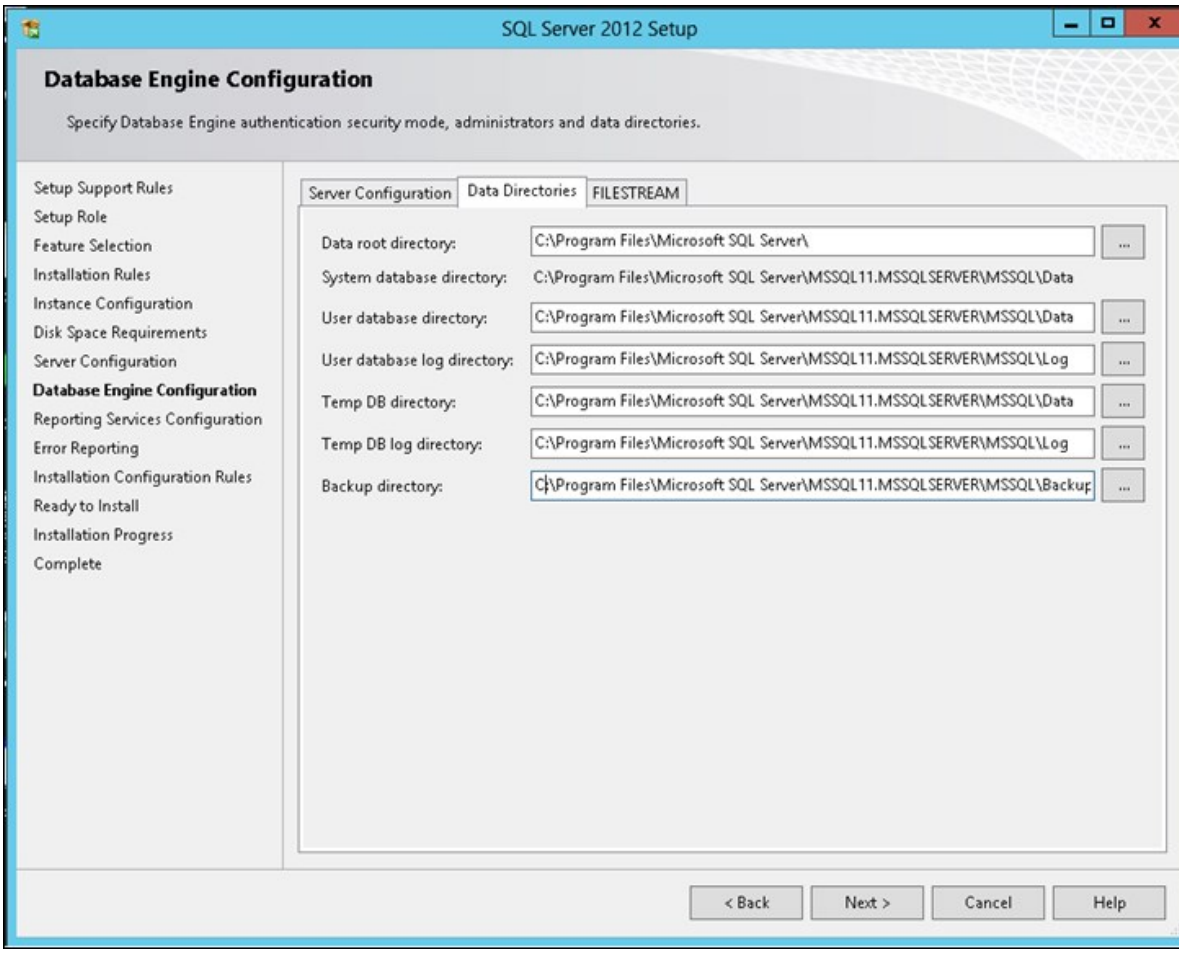

**Server Configuration screen, Service Accounts tab**

7. In the **Server Configuration** screen, in the **Collation** tab, under **Database Engine**, select **SQL_Latin1_General_CP1_CI_AS** (the default value).




**Server Configuration screen, Collation tab**

8. In the **Database Engine Configuration** screen, in the **Data Directories** tab, select the locations for the database folders. If possible, put the *User database directory*, the *Temp DB directory*, and the *Backup directory* on a separate drive from the ither folders.




**Database Engine Configuration screen, Data Directories tab**

9. In the **Reporting Services Configuration** screen, select **Install the native mode default configuration**.
10. When you finish installing the SQL Server, restart the machine on which you installed it.

## See also

Installing SQL Server 2008 R2
Configuring the SQL Server



# Configuring the SQL Server

Configuring the SQL server includes the following tasks:

- Configuring the SQL server itself
- Configuring the reporting services
- Optimizing the memory usage

**Note:** The illustrations in this section are from SQL Server 2008 R2, but the instructions are for both SQL Server 2008 R2 and SQL Server 2012.

**Note:** For information about enabling remote access through SQL Management Studio when Windows Firewall is on, see http://msdn.microsoft.com/en-us/library/ms175043.aspx. If you do not follow these instructions, you may not be able to connect remotely from your computer to the SQL server from SQL Management Studio.

### See also

Installing SQL Server 2008 R2
Installing SQL Server 2012
Configuring the SQL Server Settings
Configuring the Reporting Services
Setting the Maximum Memory Usage



# Configuring the SQL Server Settings

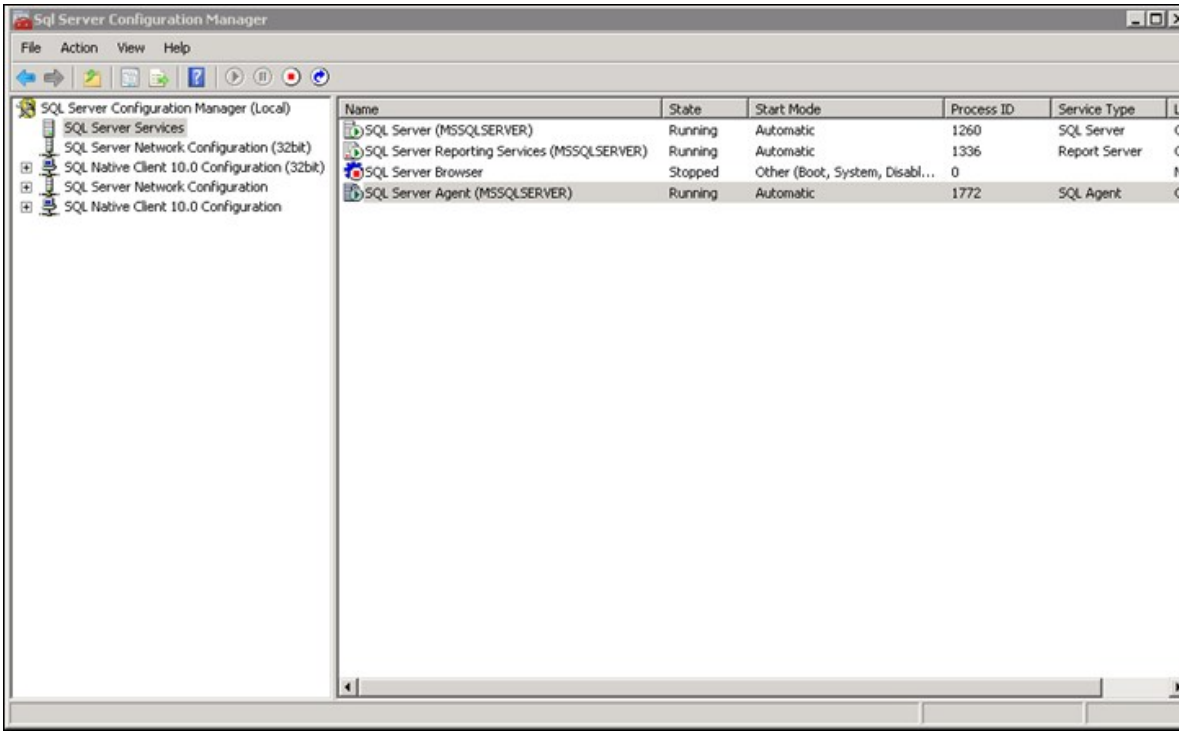
After the SQL server is installed, you should do the following:

- Ensure that the SQL server is running
- Configure the SQL server to start automatically
- Make sure both the TCP/IP and the Named Pipes protocols are enabled

**Note:** After you install SpeechMiner, you also have to deploy the CLR assembly and set its permissions. See Deploying the SQL CLR.

### To configure the SQL server and enable the required protocols:

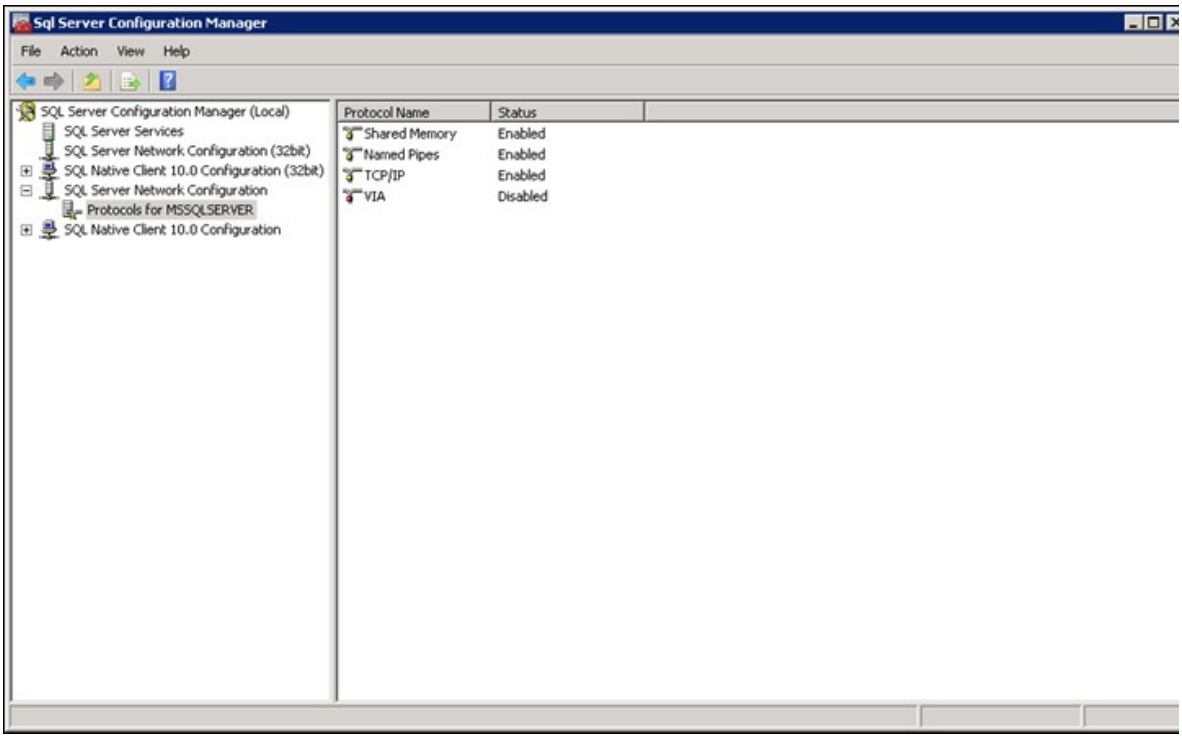
1. In the **Start** menu, go to **Microsoft SQL Server 2008 > Configuration Tools > SQL Server Configuration Manager**. The **SQL Server Configuration Manager** opens.
2. On the left side of the window, select **SQL Server Services**.




3. On the right side of the window, for **SQL Server Agent**, check that the **Status** is **Running**, and the **Start Mode** is **Automatic**.
4. If one or both of these values are not as they should be, do the following:
   - Double-click the row. The **Properties** window opens.

- In the **Service** tab, set the **Start Mode** to **Automatic**.
- If the service is not running, in the **Log On** tab, select **Start**.
- Click **OK** to implement the changes.

5. On the left side of the **SQL Server Configuration Manager** window, select **SQL Server Network Configuration > Protocols for MSSQLSERVER**.




6. On the right side of the window, for **TCP/IP** and for **Named Pipes**, check that the **Status** is **Enabled**.
7. For each of these protocols, if it is not enabled, do the following:
   - Double-click the row. The **Properties** window opens.
   - In the **Protocol** tab, under **Enabled**, select **Yes**.
   - Click **OK** to implement the changes.

## See also

Configuring the Reporting Services
Setting the Maximum Memory Usage



# Configuring the Reporting Services

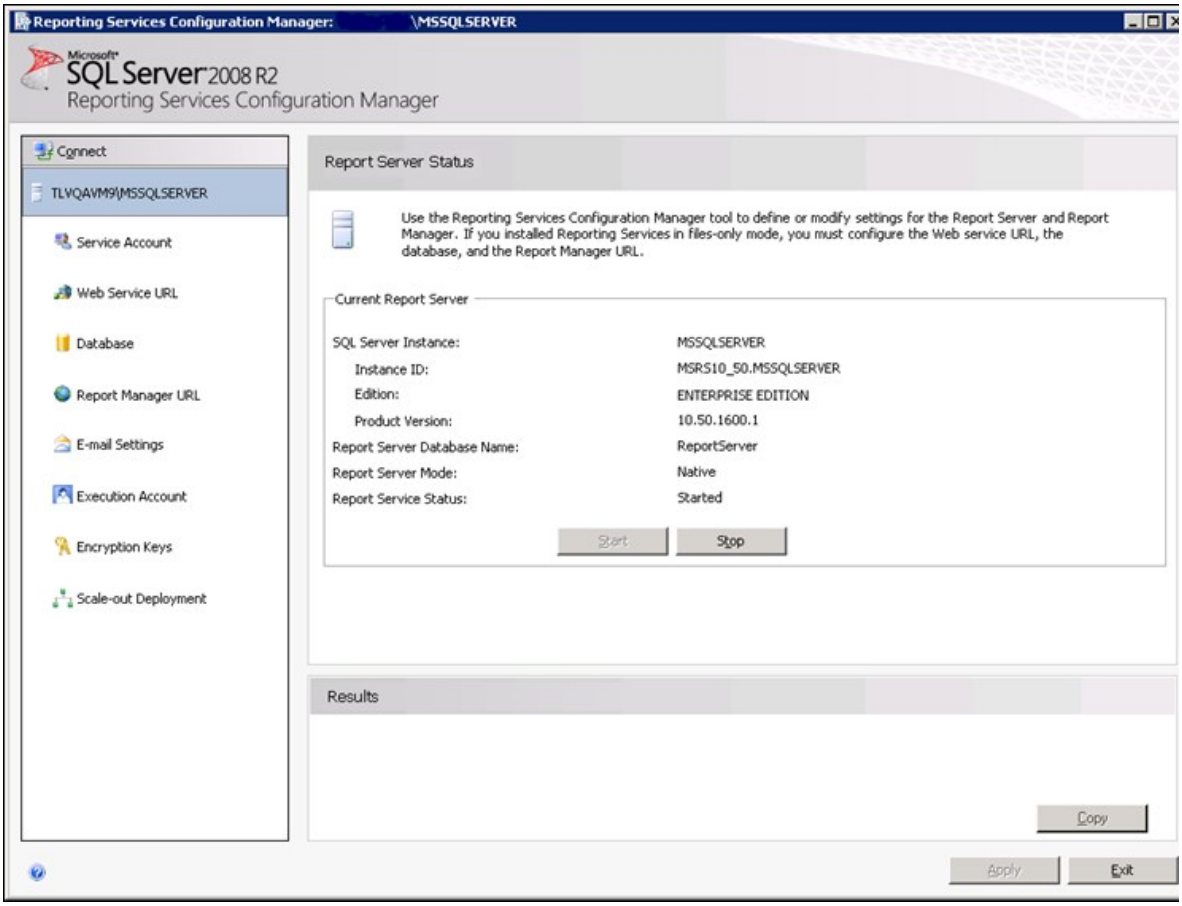
The SQL reporting services should be configured as explained below.

**Note:** You should also configure the role of the domain user account that will be used by SpeechMiner to connect to the report server (SMUSER), as explained under Configuring Permissions > For UPlatform (SMUSER).

### To configure the SQL reporting services:

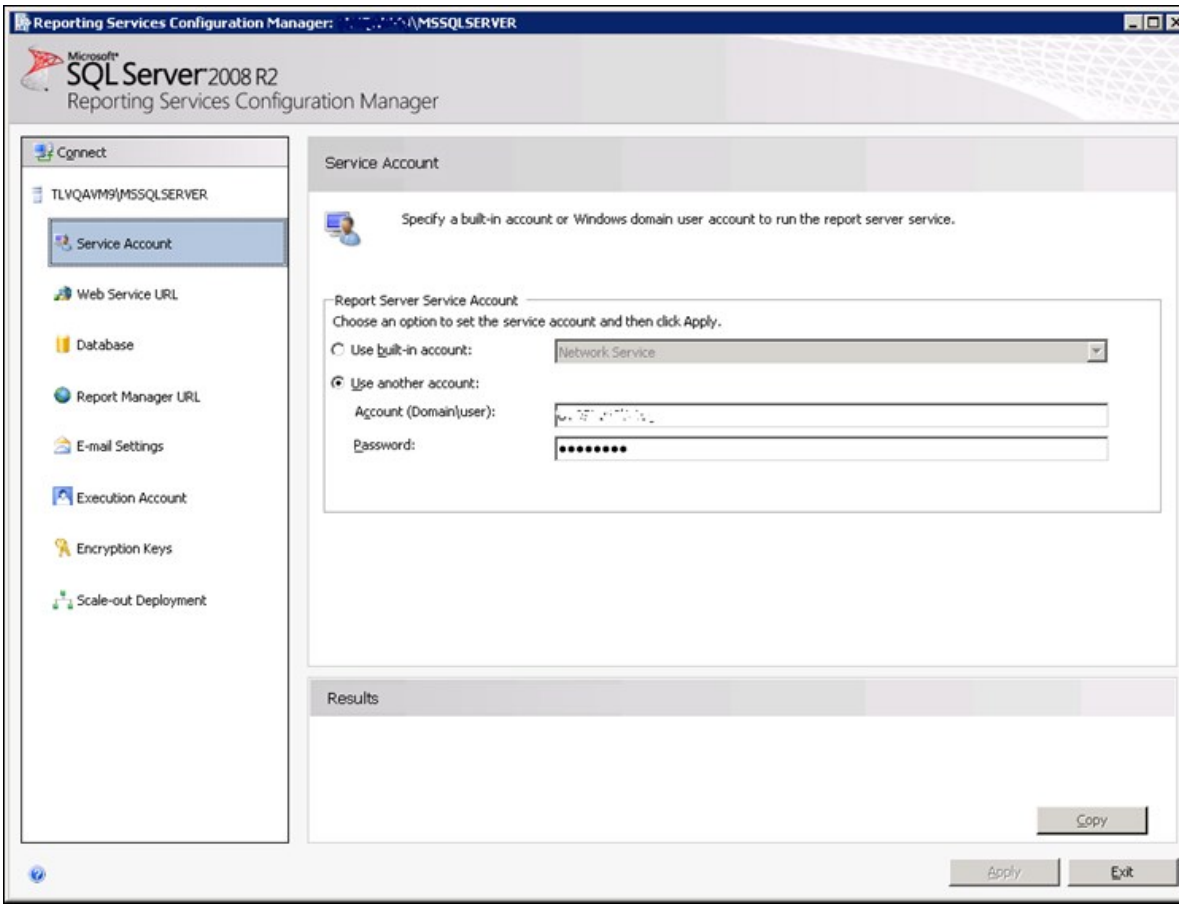
1. In the **Start** menu, under **All Programs**, select **SQL Server 2008 R2** > **Configuration Tools** > **Reporting Services Configuration Manager**. The **Reporting Services Configuration Connections** window opens.
2. Enter the report server name and the instance name (if they are not already there), and click **Connect**. **Reporting Services**

**Configuration Manager** opens, with the **Report Server Status** screen displayed.



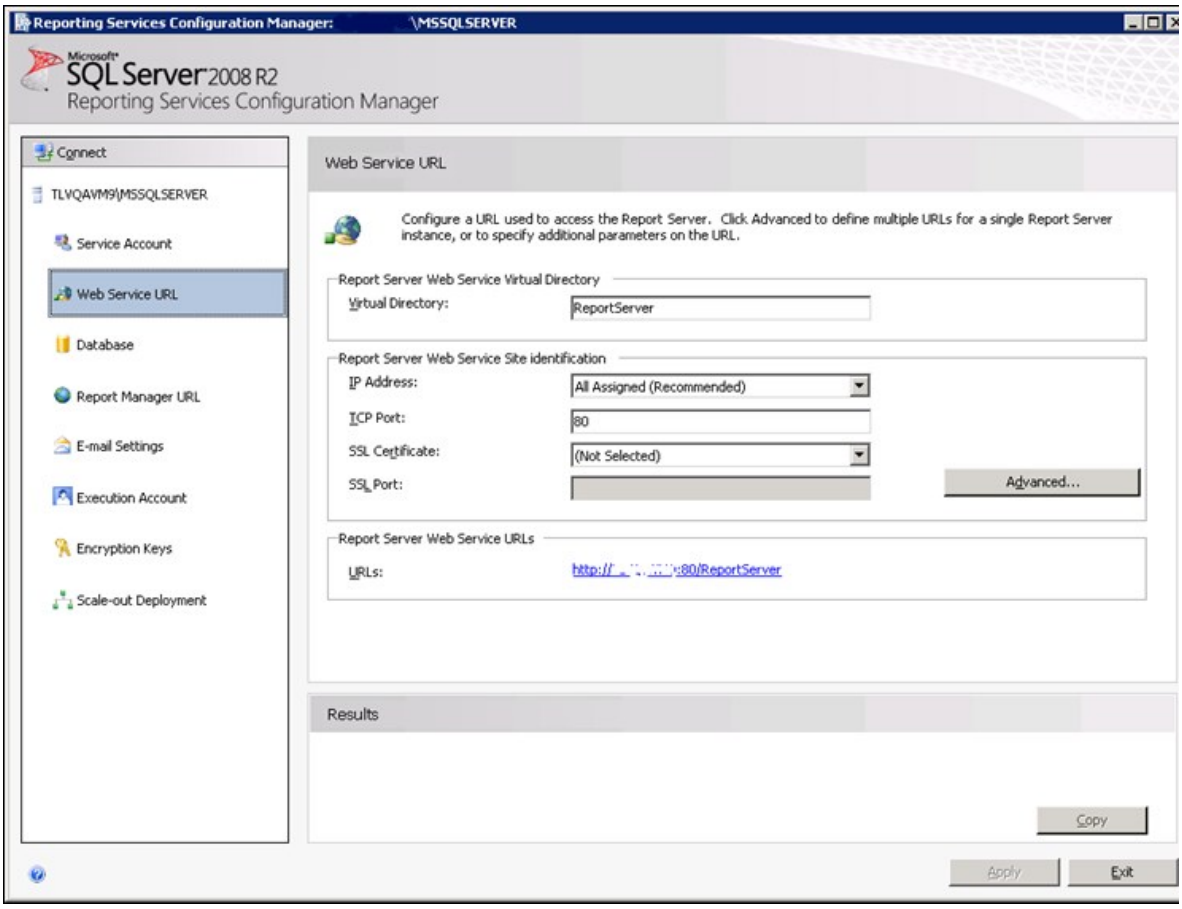

**Report Server Status screen**

3. Check whether the report server is running. If it is not, click **Start**.
4. On the left side of the window, select **Service Account**.



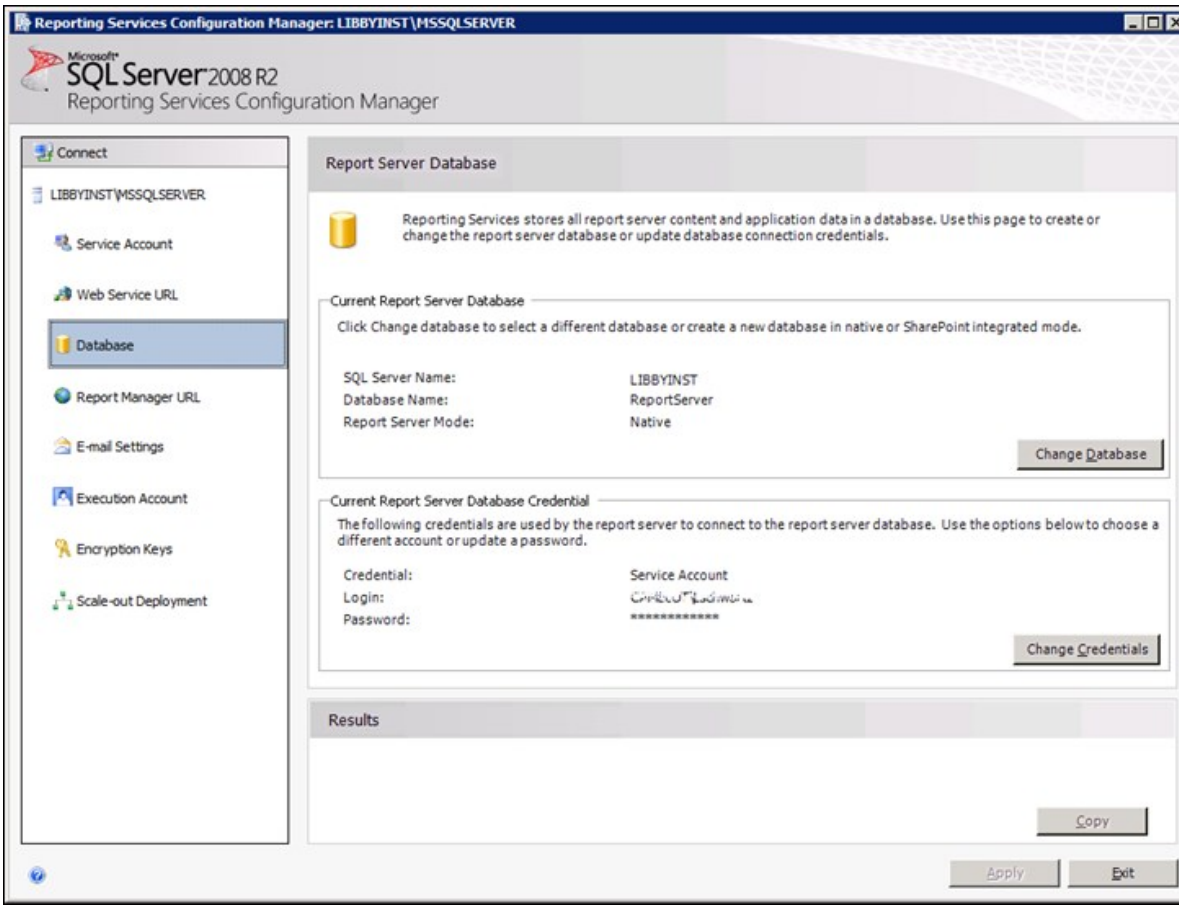

**Service Account screen**

5. Configure the account name and password of the service account that will be used to run the report-server service, as required. Use either a local administrator account or an account that can log in as a service and run services on the local machine.
6. On the left side of the window, select **Web Service URL**; make sure the settings in the screen match the settings in the illustration below:



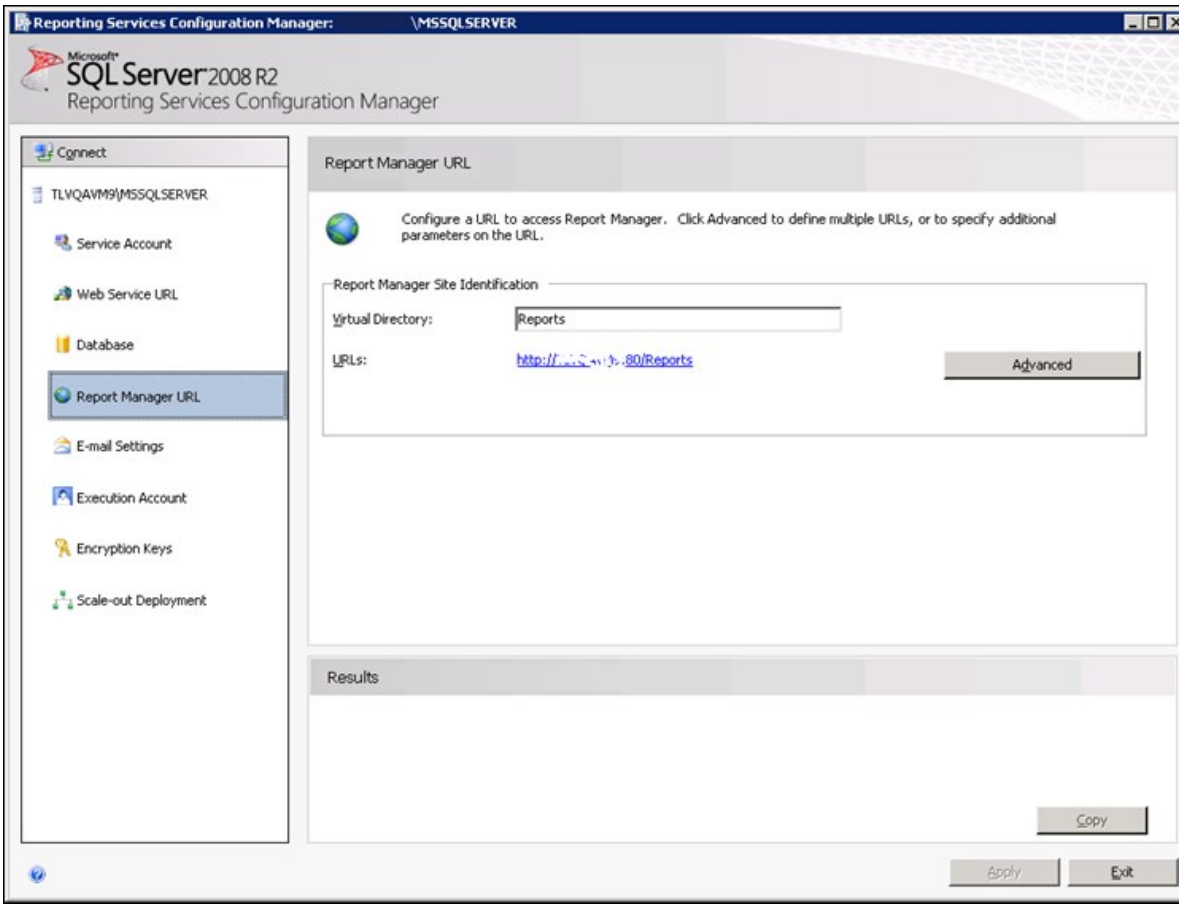

**Web Service URL screen**

7. On the left side of the window, select **Database**. If you created a report-server database when you installed SQL Server, it appears under **Current Report Server Database**. If you did not, follow the instructions below to create it now.



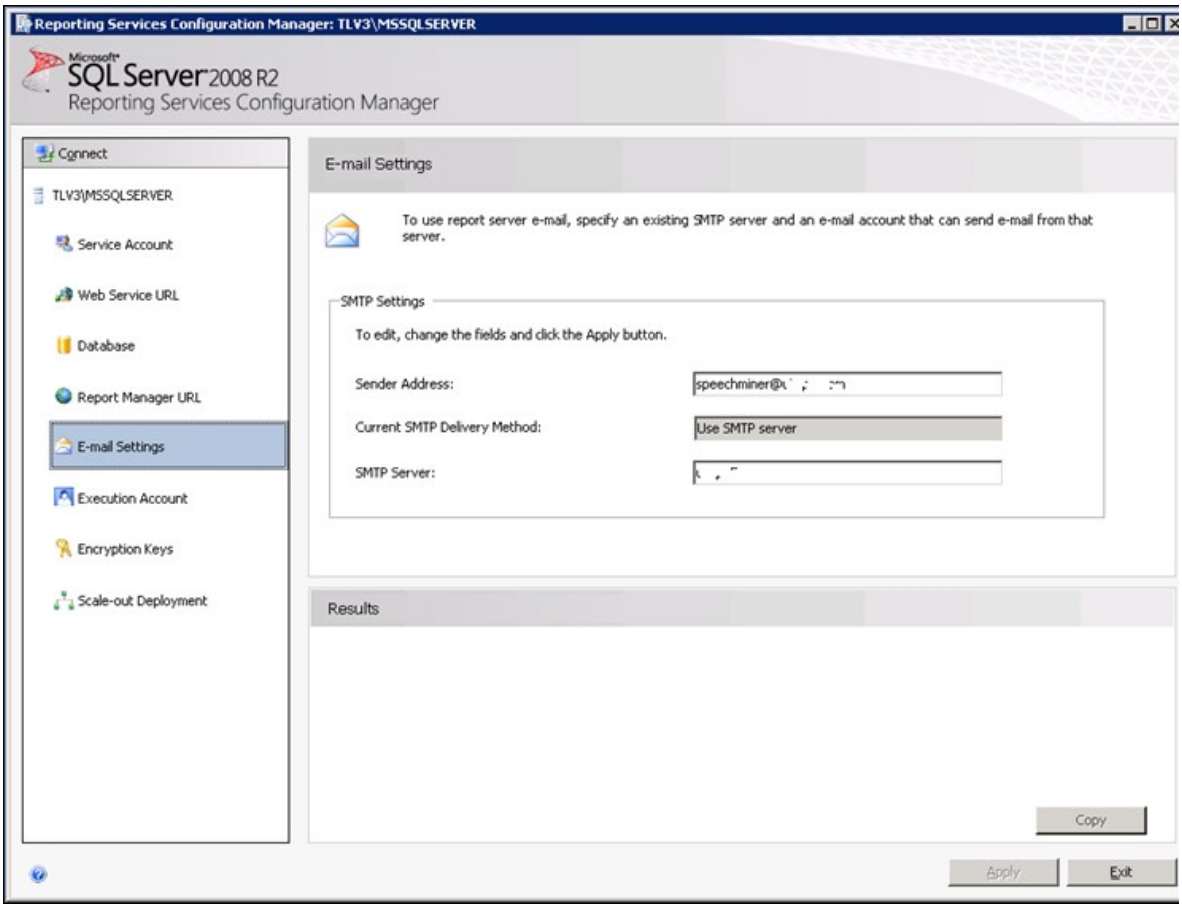

**Database screen**

8. On the left side of the window, select **Report Manager URL**; make sure the settings in the screen match the settings in the illustration below:




**Report Manager URL screen**

9. On the left side of the window, select **E-mail Settings**.
10. Enter the settings for the e-mail account you want the report server to use to send reports to SpeechMiner users.




**E-mail Settings screen**

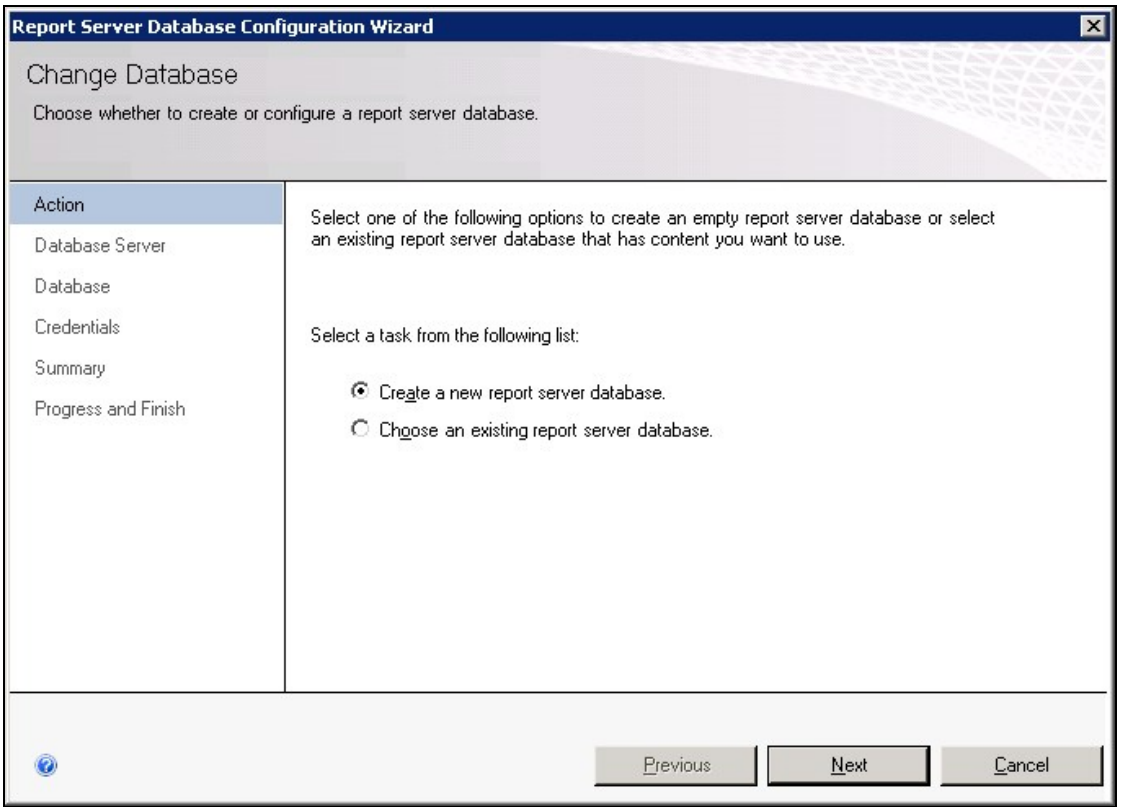
11. Click **Exit** to close the **Reporting Services Configuration Manager**.

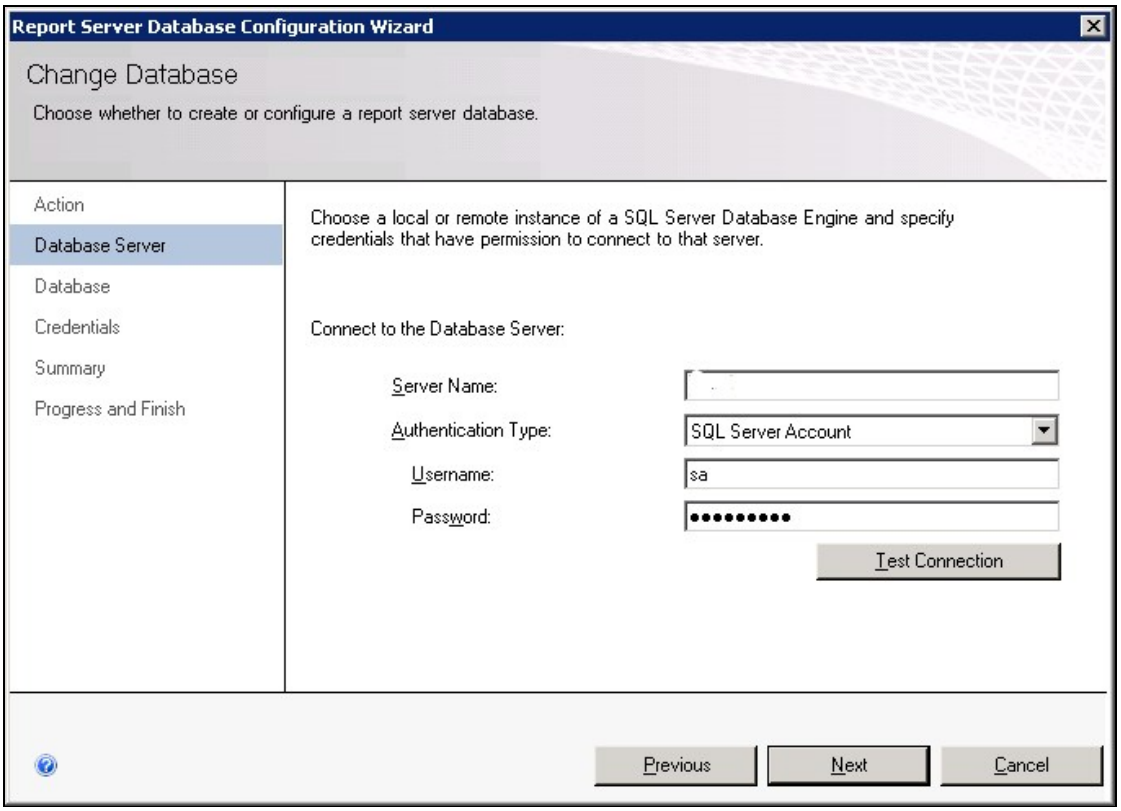
## Creating the Report-Server Database

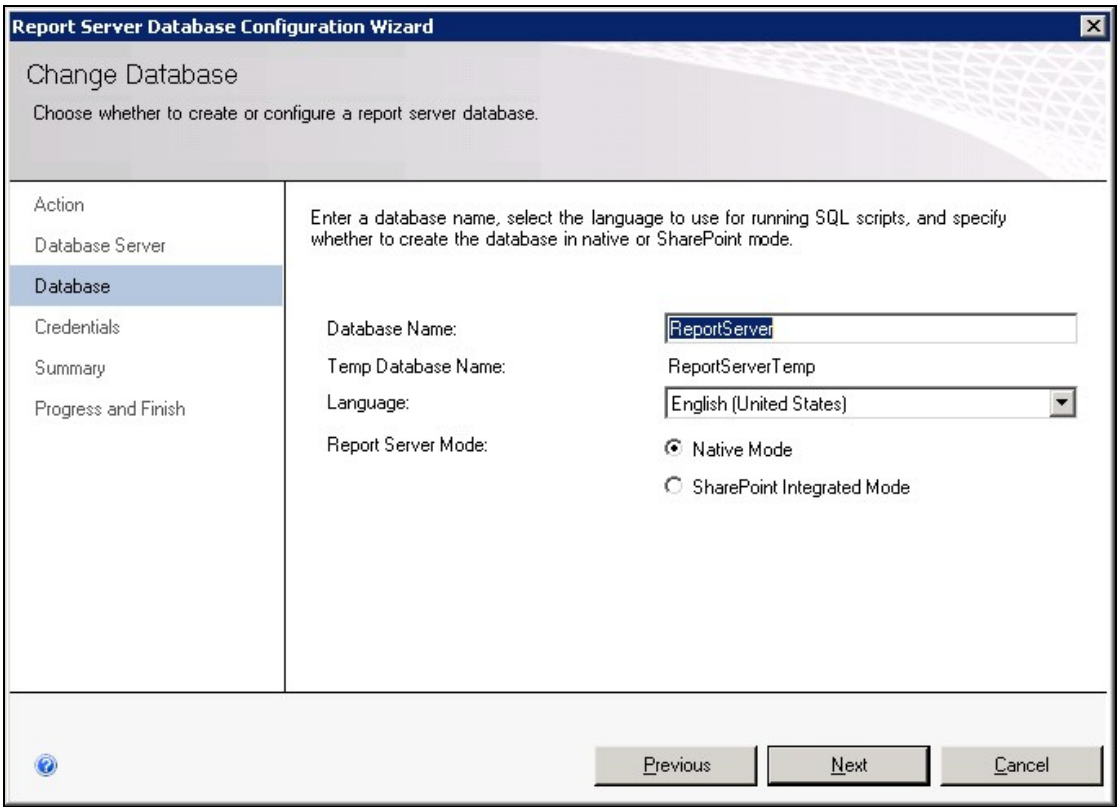
If the report-server database was not created automatically when you installed SQL Server, you can create it in the **Report Server Database Configuration Wizard**.

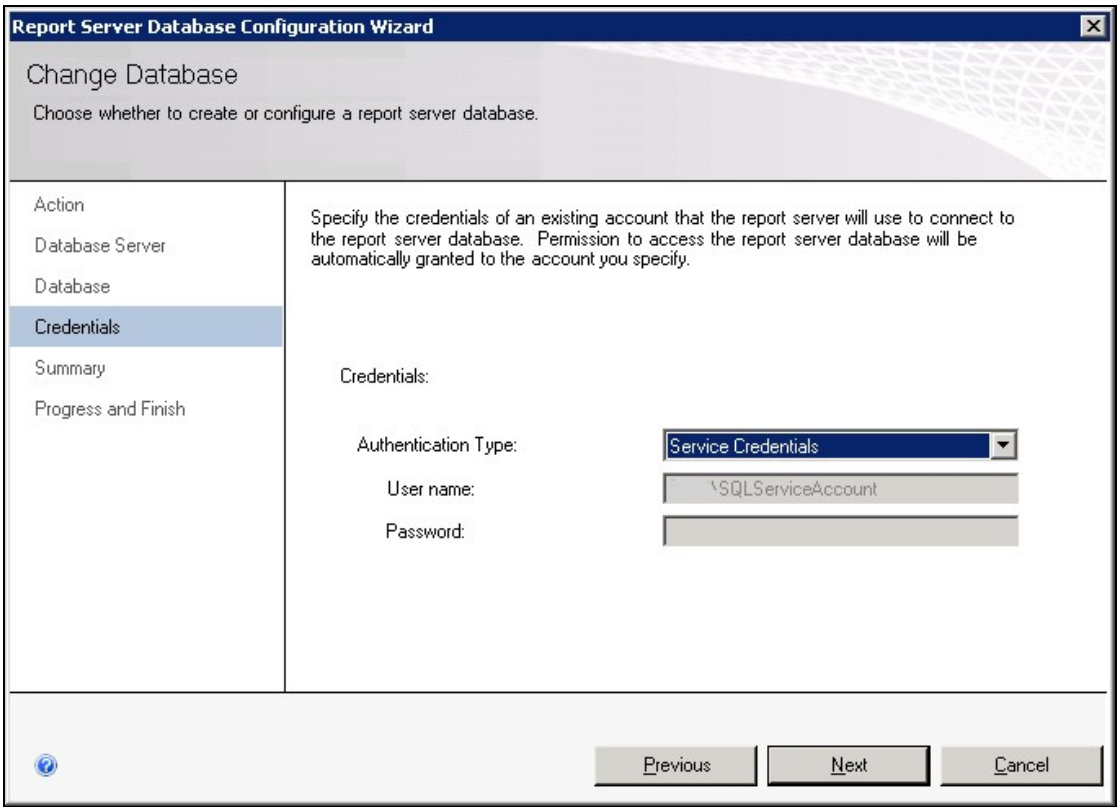
### To create the report-server database:

1. If the **Reporting Services Configuration Manager** is not open, follow the instructions above to open it.
2. In the **Database** screen, under **Current Report Server Database**, click **Change Database**. The **Report Server Database Configuration Wizard** opens.
3. In the wizard, fill in the fields as they are filled in in the samples below (except, of course, for the server name and the credentials, which you must specify as appropriate for your system). Click **Next** to progress from screen to screen until you have finished creating the database.


Report Server Database Configuration Wizard
Change Database
Choose whether to create or configure a report server database.
Action
Database Server
Database
Credentials
Summary
Progress and Finish
Select one of the following options to create an empty report server database or select an existing report server database that has content you want to use.
Select a task from the following list:
Create a new report server database.
Choose an existing report server database.
Previous
Next
Cancel


Report Server Database Configuration Wizard
Change Database
Choose whether to create or configure a report server database.
Action
Database Server
Database
Credentials
Summary
Progress and Finish
Choose a local or remote instance of a SQL Server Database Engine and specify credentials that have permission to connect to that server.
Connect to the Database Server:
Server Name:
Authentication Type:
SQL Server Account
Username:
sa
Password:
Test Connection
Previous
Next
Cancel


Report Server Database Configuration Wizard
Change Database
Choose whether to create or configure a report server database.
Action
Database Server
Database
Credentials
Summary
Progress and Finish
Enter a database name, select the language to use for running SQL scripts, and specify whether to create the database in native or SharePoint mode.
Database Name:
ReportServer
Temp Database Name:
ReportServerTemp
Language:
English (United States)
Report Server Mode:
Native Mode
SharePoint Integrated Mode
Previous
Next
Cancel


Report Server Database Configuration Wizard
Change Database
Choose whether to create or configure a report server database.
Action
Database Server
Database
Credentials
Summary
Progress and Finish
Specify the credentials of an existing account that the report server will use to connect to the report server database. Permission to access the report server database will be automatically granted to the account you specify.
Credentials:
Authentication Type:
Service Credentials
User name:
\SQLServiceAccount
Password:
Previous
Next
Cancel

## See also

# Setting the Maximum Memory Usage

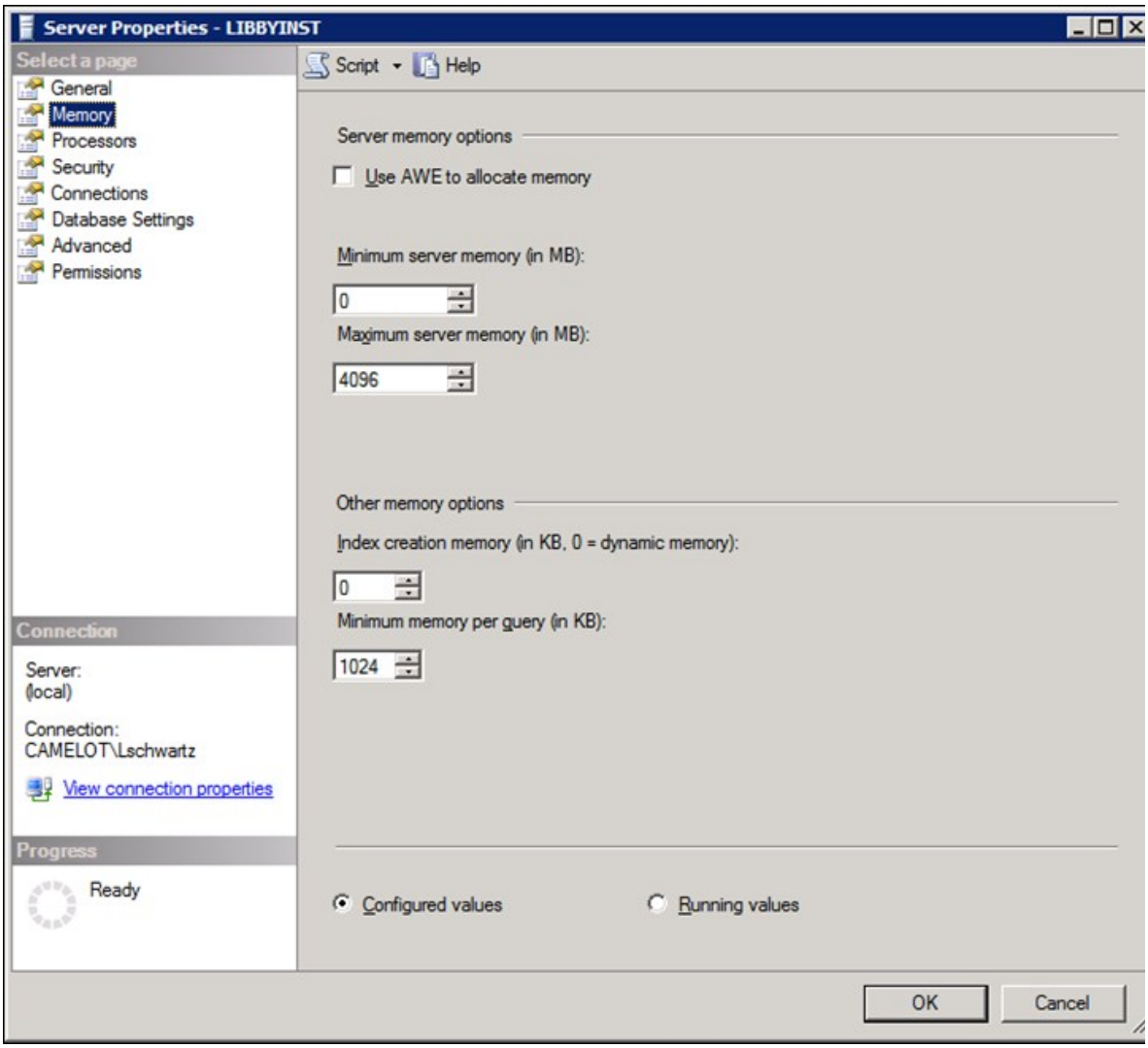
If the SQL-server's memory usage is not limited, it will consume all of the available memory. Therefore, it is recommended to limit the memory usage of the SQL Server by setting the **max server memory** value. Note that, in addition to the "server memory" that is limited by this value, the SQL server uses 2-4GB of other memory. For this reason, it is recommended to set the **max server memory** to a value that is 2-4GB lower than the maximum memory you want to allow the server to use.

For additional details, see http://msdn.microsoft.com/en-us/library/ms178067.aspx.

You can see the current **max server memory** value, and modify it as required, in the **SQL Server Management Studio**.

### To view or modify the max server memory value:

1. On the SQL server, open the **SQL Server Management Studio**. (For example, in the **Start** menu, under **All Programs**, select **Microsoft SQL Server 2008 R2** > **SQL Server Management Studio**.)
2. On the left side of the window, right-click the SQL server and then select **Properties**. The **Server Properties** window opens.




SQL Memory properties

3. On the left side of the window, select **Memory**. The memory settings are displayed.
4. Under **Maximum server memory (in MB)**, enter the value you want to use.
5. Click **OK**. The setting is implemented, and the window closes.

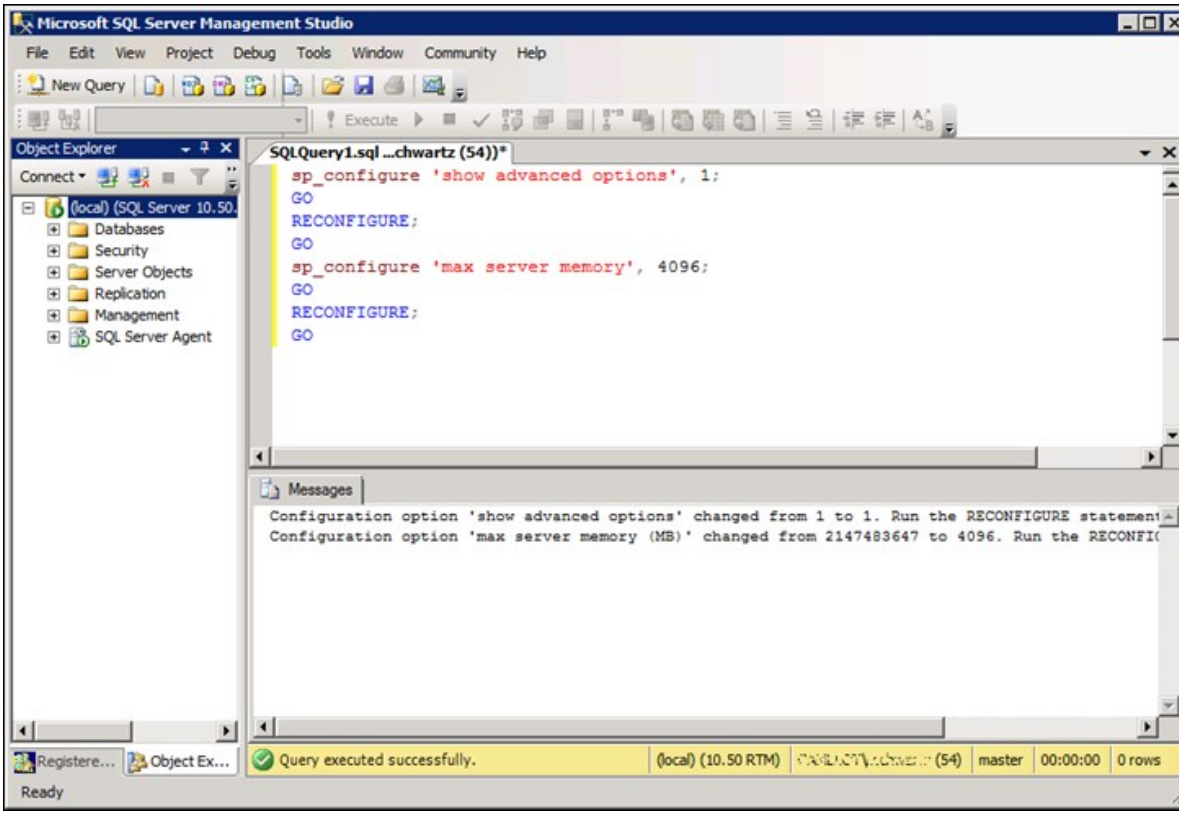
If you prefer, you can also set the max server memory property by executing a query:

### To set the max server memory by executing a query:

1. On the SQL server, open the **SQL Server Management Studio**. (For example, in the **Start** menu, under **All Programs**, select **Microsoft SQL Server 2008 R2** > **SQL Server Management Studio**.)
2. On the left side of the window, right-click the SQL server and then select **New Query**. A blank text area opens on the right side of the window.
3. Copy the following commands and paste them into the text area:

```
sp_configure 'show advanced options', 1;
GO
RECONFIGURE;
GO
sp_configure 'max server memory', 4096;
GO
RECONFIGURE;
GO
```

4. The code above sets the **max server memory** to 4GB (4096MB). If you want to set it to a different value, in the text area, change "4096" to the required value.
5. Above the text area, select **Execute**. The commands are executed. When the process is completed successfully, **Query executed successfully** appears at the bottom of the window.




**Commands executed successfully**

## See also

Configuring the SQL Server Settings
Configuring the Reporting Services



# Installing IIS on the Web Server or Interaction Receiver Server

The Internet Information Server (IIS) must be installed and operational on the servers that will be used to run the Speechminer Web and the Interaction Receiver. You can install and configure it as explained below:

- On Windows Server 2008
- On Windows Server 2012

**Notes:**

- The SpeechMiner and Interaction Receiver Application Pool must use .NET framework version 2.0. After you install the SpeechMiner web server, you should check that this is the version in use, as explained below.
- It is recommended to enable HTTP Compression on the IIS server. For additional information, see http://technet.microsoft.com/en-us/library/cc771003(v=ws.10).aspx.

For IIS of the Interaction Receiver server, an additional manual step is required before installing the Interaction Receiver:

- If IIS version is 7.5, install the Application Initialization module update from http://www.iis.net/downloads/microsoft/application-initialization. After the installation, verify that the Application Initialization is located under Control Panel > Programs and Features > Application Initialization 1.0 for IIS 7.5.
- If IIS version is 8, you can skip this step.

**See also**

Installing the .NET Framework
Setting Up the SQL Server
Installing Report Viewer
Disabling Simple File Sharing

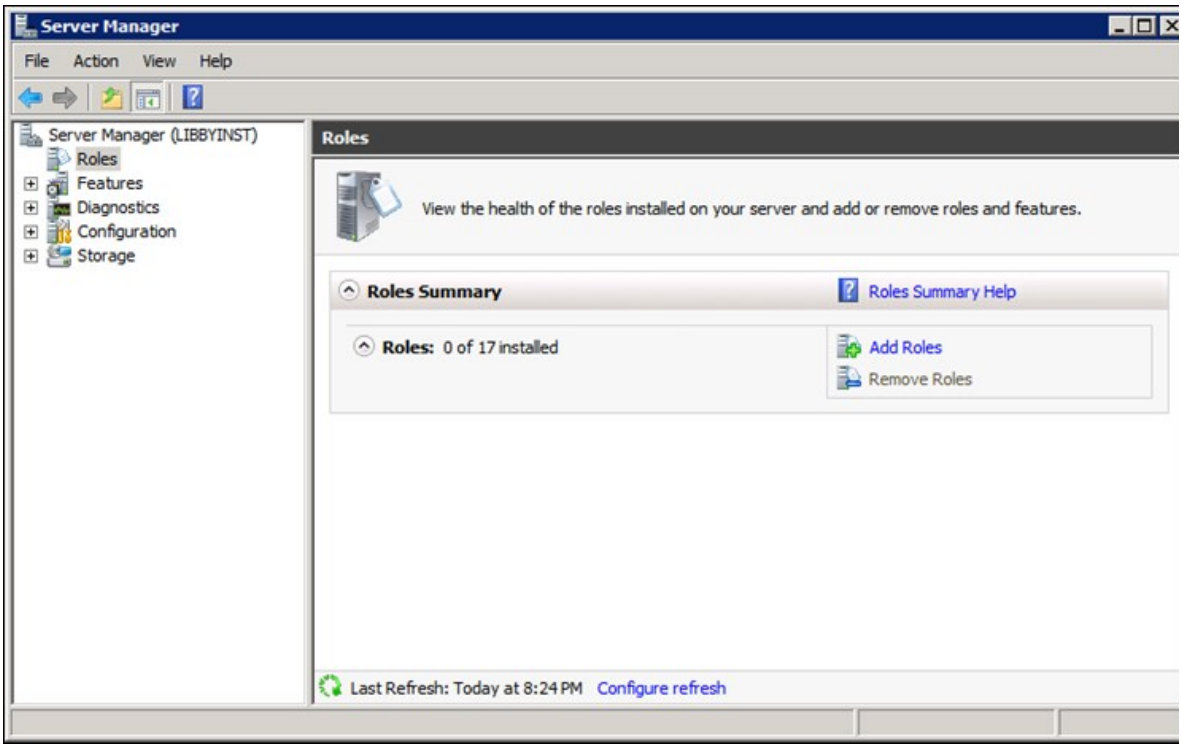


# On Windows Server 2008

On Windows Server 2008, you can install and configure the Internet Information Services (IIS) in the Server Manager.

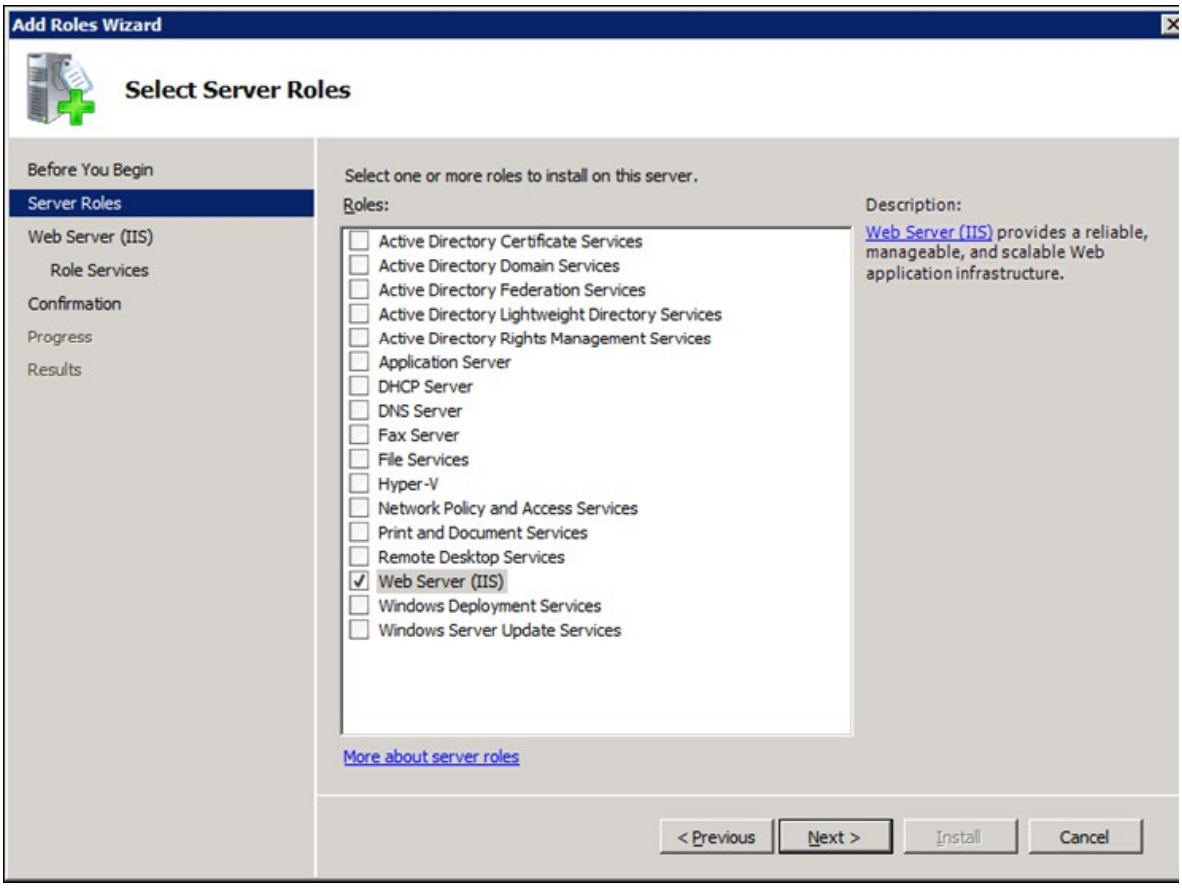
### To install and configure the IIS component:

1. In the **Start** menu, select **All Programs > Administrative Tools > Server Manager**. The **Server Manager** opens.
2. On the left side of the window, select **Roles**.



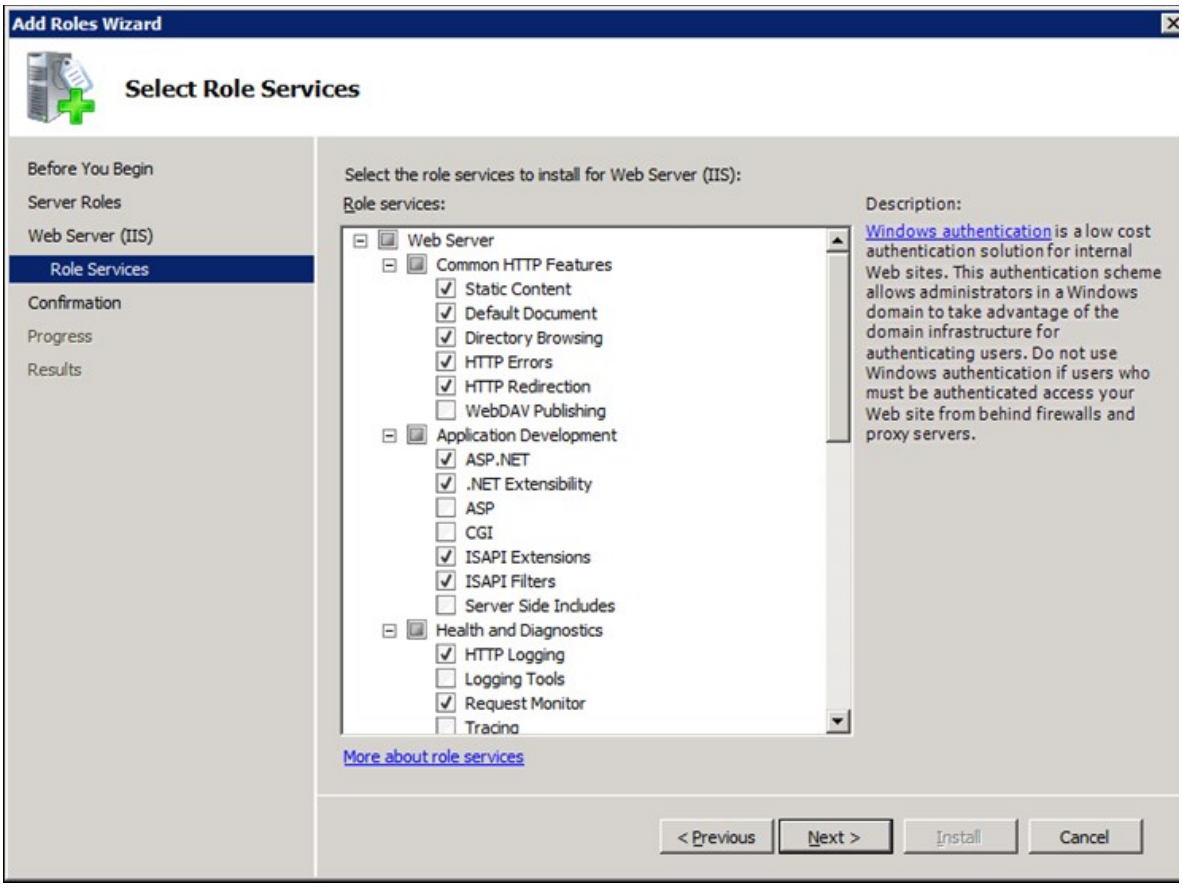

**Server Manager**

3. On the right side of the screen, select **Add Roles**. The **Add Roles Wizard** opens.




**List of roles, with Web Server (IIS) selected**

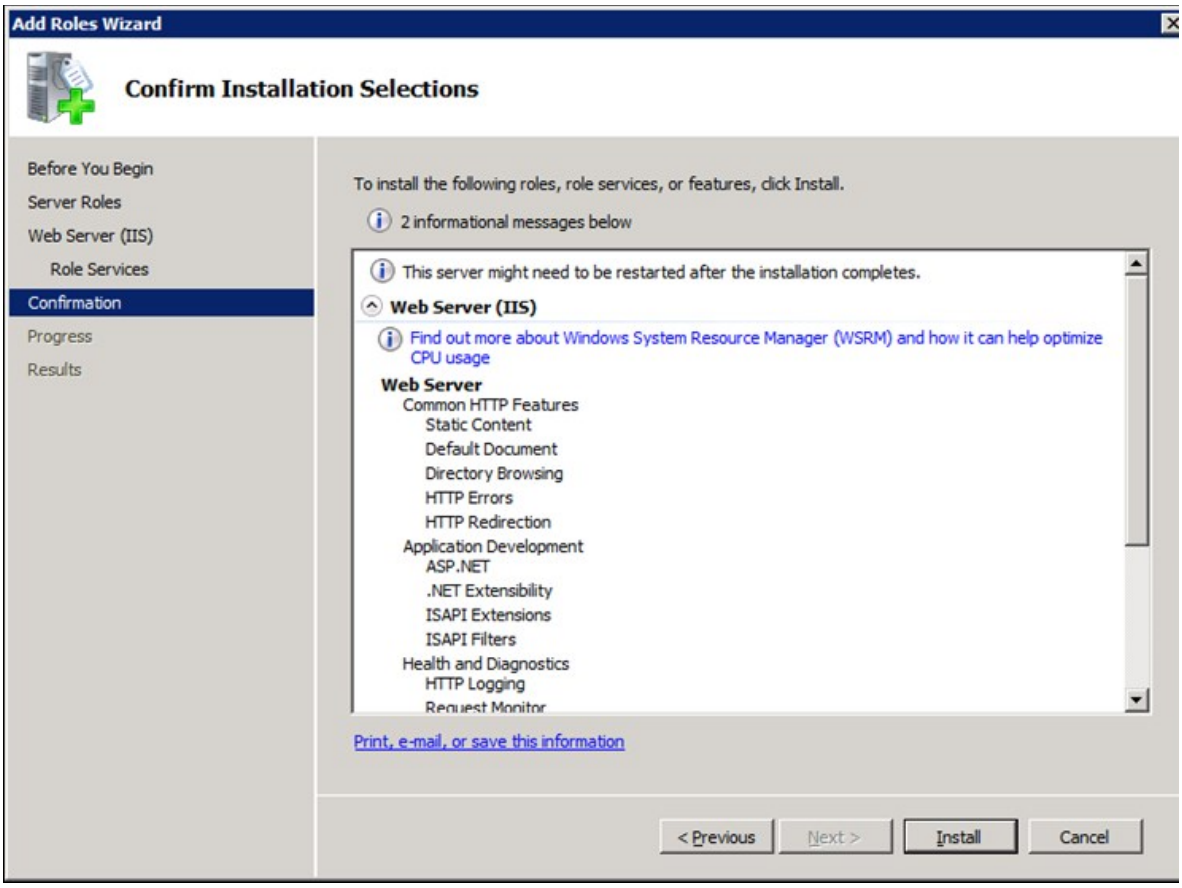
4. In the list of roles, select **Web Server (IIS)**, and then select **Next**. An **Introduction to the Web Server** is displayed.
5. Select **Next**. The **Role Services** screen opens.




**Role Services screen**

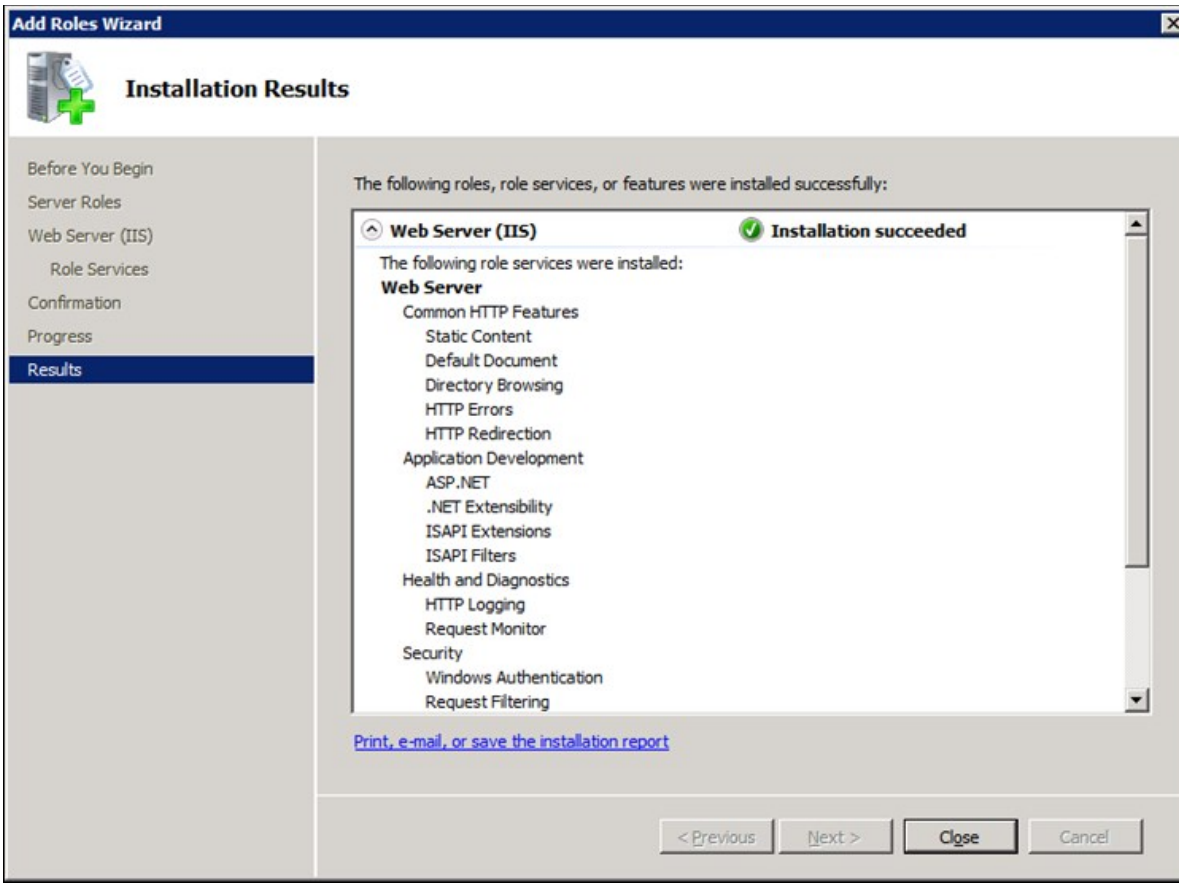
6. Under **Role Services**, make sure the following services are selected:
   a. Under **Common HTTP Features**:
      - **Static Content**
      - **Default Document**
      - **Directory Browsing**
      - **HTTP Errors**
      - **HTTP Redirection**
   b. Under **Application Development**:
      - **ASP.NET**
      - **ISAPI Extensions**
      - **ISAPI Filters**

      **Note:** When you select **ASP.NET**, a window pops up, asking you to confirm that you want to "Add role services required for ASP.NET." Select **Add required role services**.
   c. Under **Security**:
      - **Windows Authentication**
   d. Under **IIS 6 Management Compatibility**:
      - **IIS 6 WMI Compatibility**
      - **IIS 6 Metabase Compatibility**
7. Click **Next**. A **Confirm Installation Selections** screen opens.



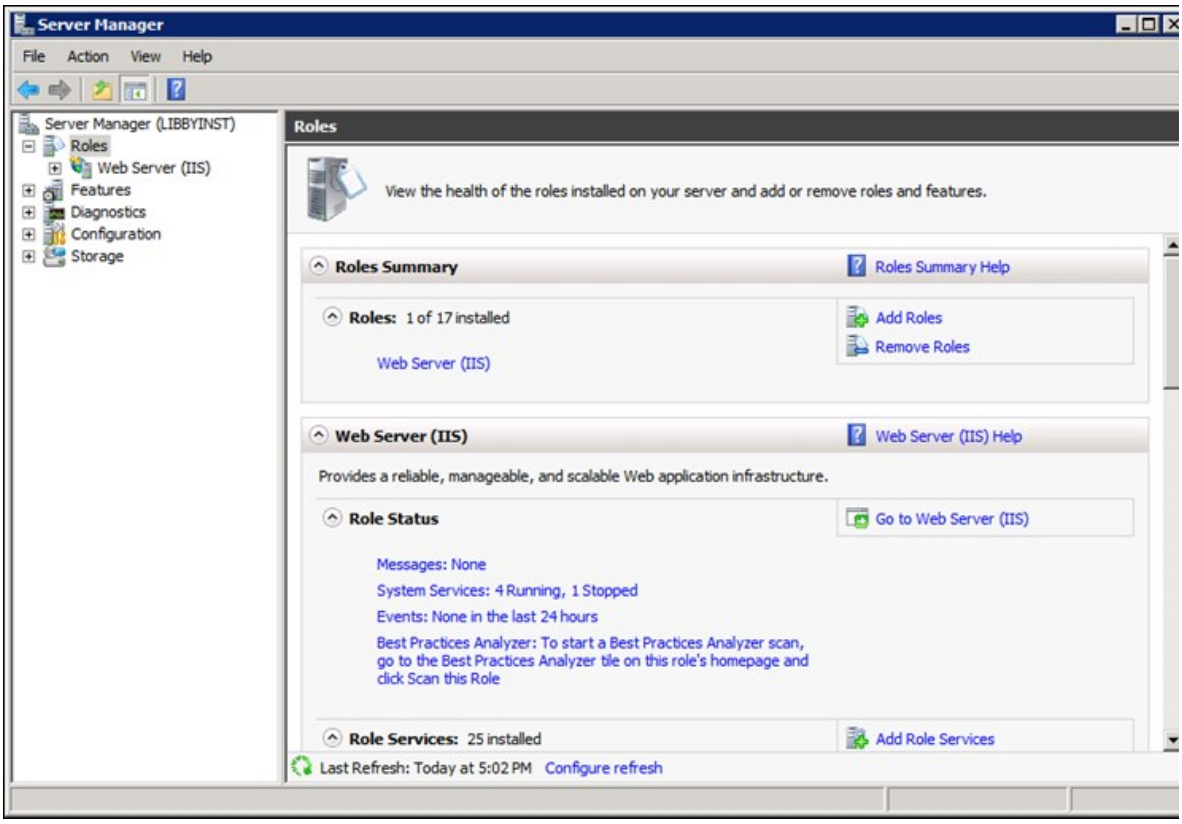

**Confirm Installation Selections screen**

8. Select **Install**. The installation process begins, and an **Installation Progress** screen is displayed. When the installation is completed, an **Installation Results** screen is displayed.



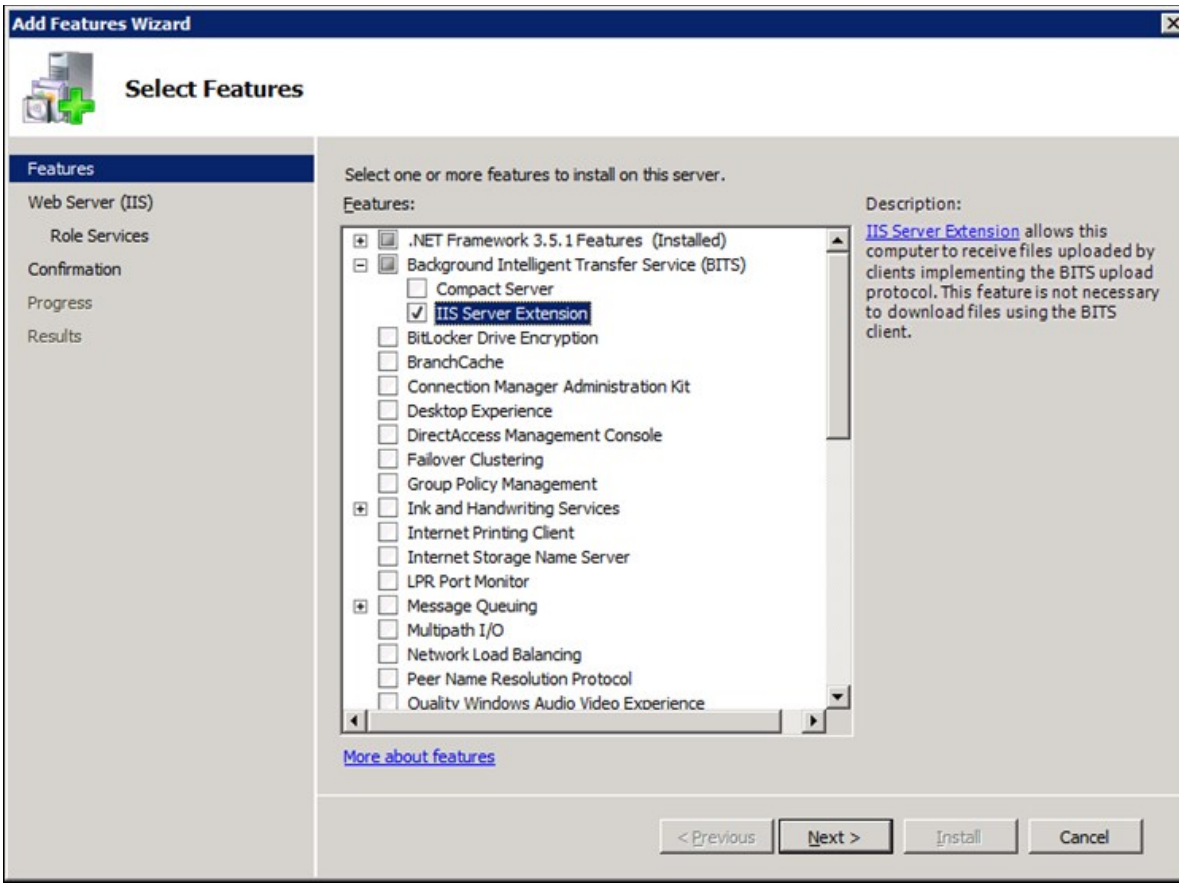

**Installation Results screen**

9. Click **Close**. The **Add Roles Wizard** closes, and the **Server Manager** lists the **Web Server (IIS)** role as installed.



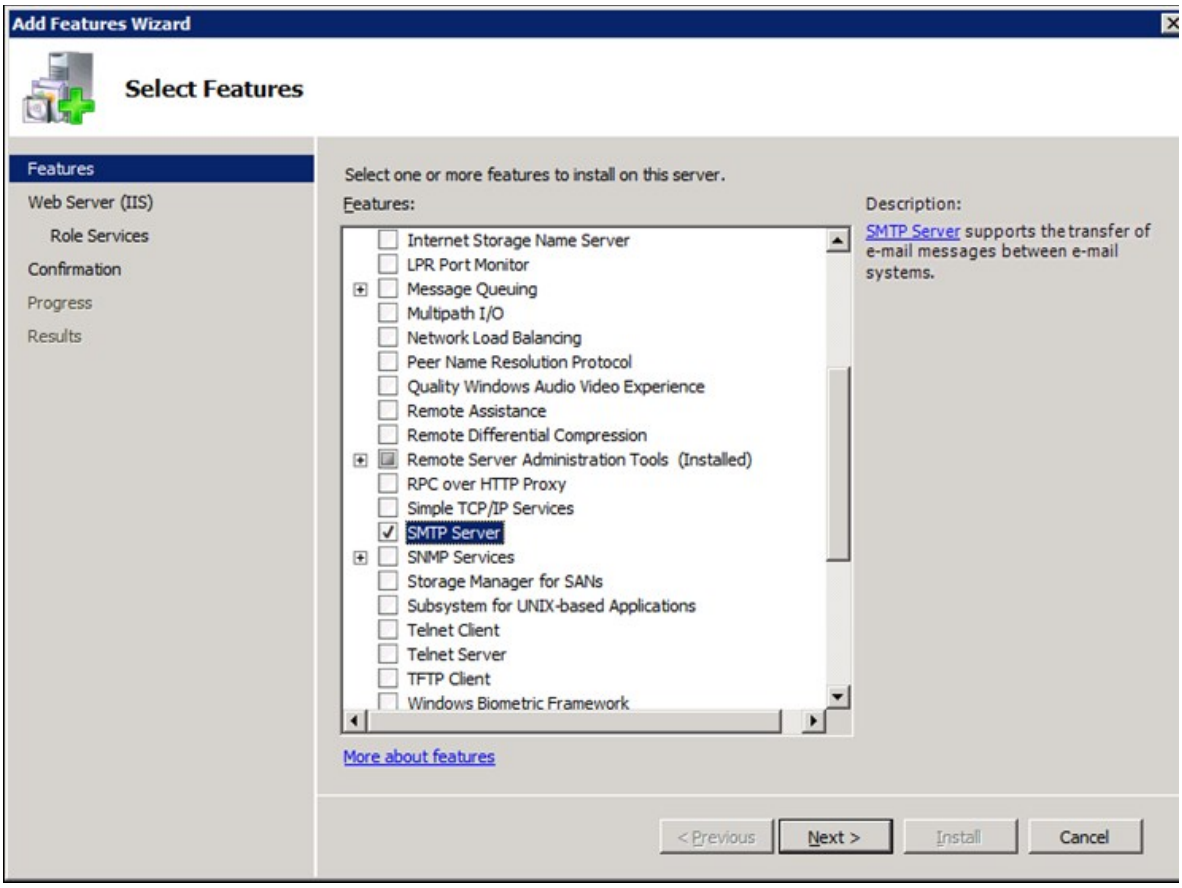

**Server Manager listing the Web Server (IIS) role as installed**

10. In the **Server Manager**, in the left pane, select **Features**, and then, in the right pane, select **Add Features**. The **Add Features Wizard** opens.
11. In the list of features, expand the **Background Intelligent Transfer Service (BITS)**, and then select **IIS Server Extension**. A window pops up, asking you to confirm that you want to "Add role services required for IIS Server Extension."



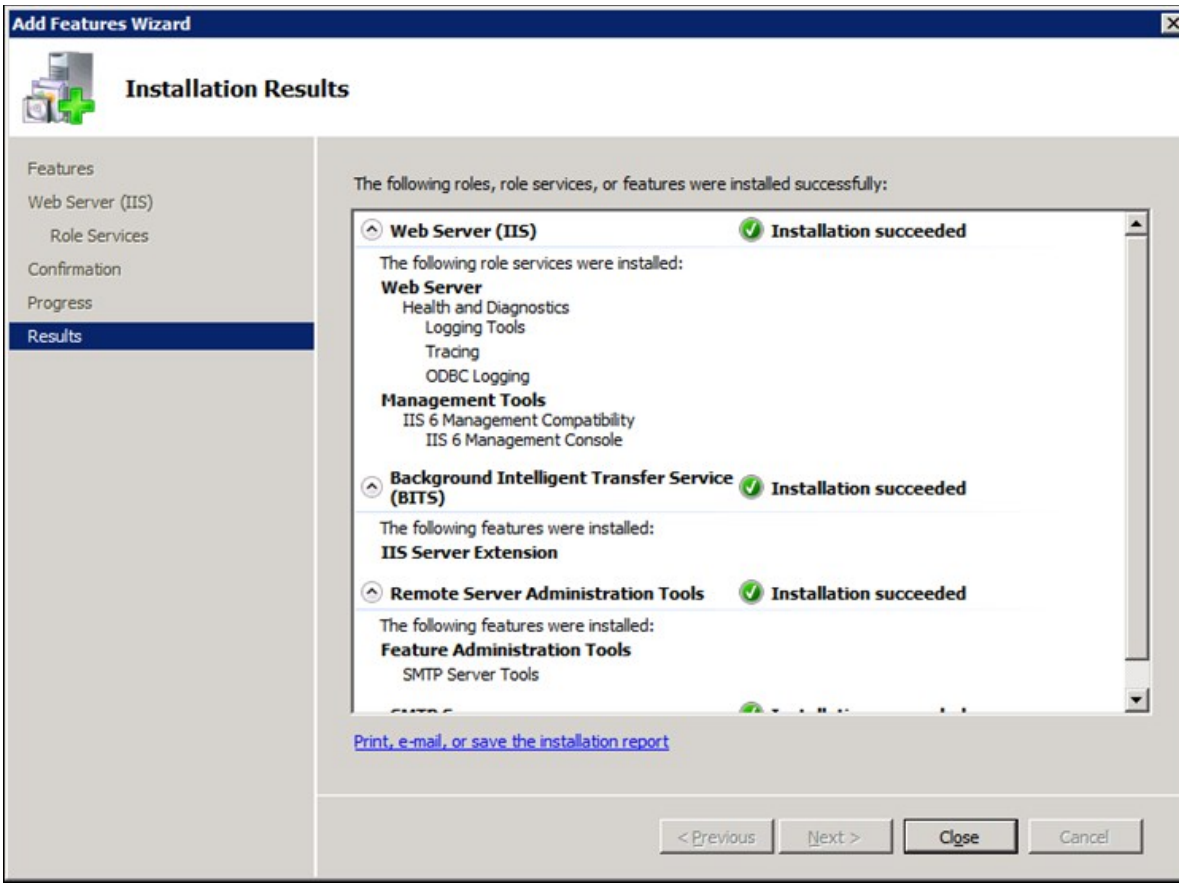

**Add Features Wizard with IIS Server Extension selected**

12. Select **Add required role services**. The window closes.
13. In the list of features, select **SMTP Server**. A window pops up, asking you to confirm that you want to "Add role services required for SMTP Server."



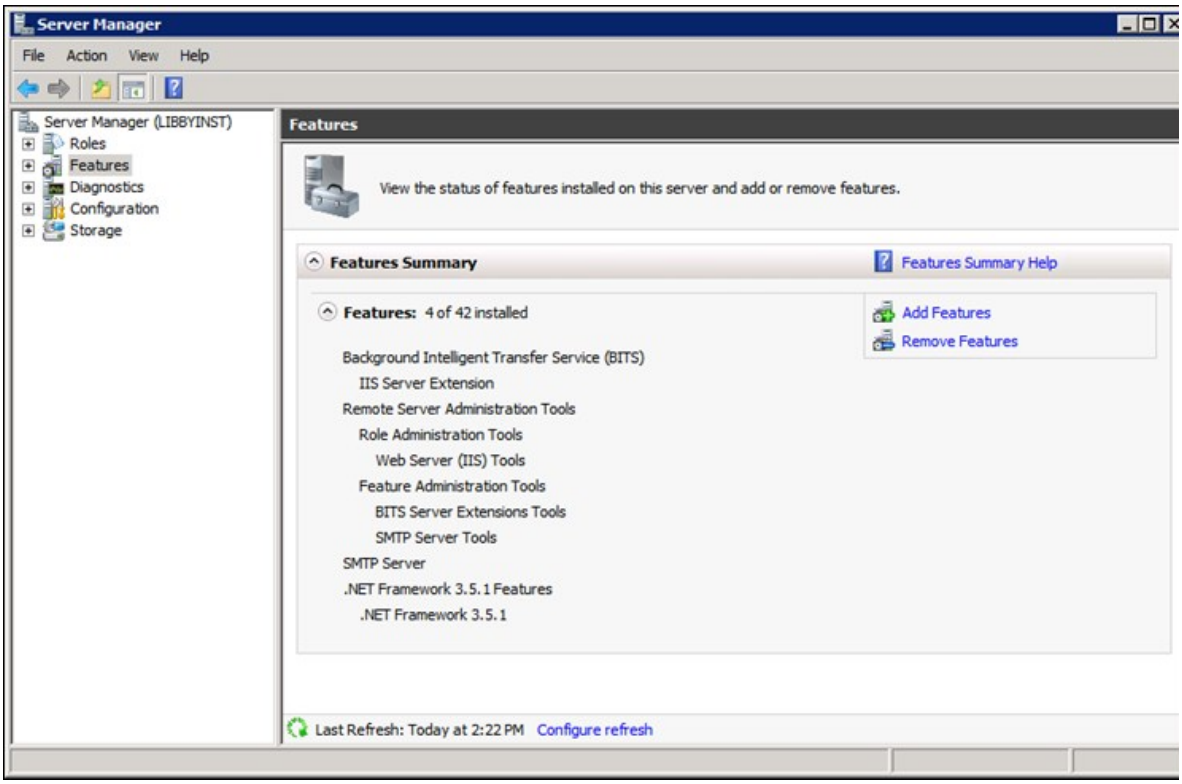

**Add Features Wizard with SMTP Server selected**

14. Select **Add required role services**. The window closes.
15. Click **Next** three times, and then click **Install**. The installation process begins, and an **Installation Progress** screen is displayed. When the installation is completed, an **Installation Results** screen is displayed.




**Installation Results showing the IIS Server Extension and the SMTP Server were installed**

16. Click **Close**. The **Add Features Wizard** closes, and the **Server Manager** lists the features you selected as installed.




**Server Manager showing installed features**

## See also

On Windows Server 2012

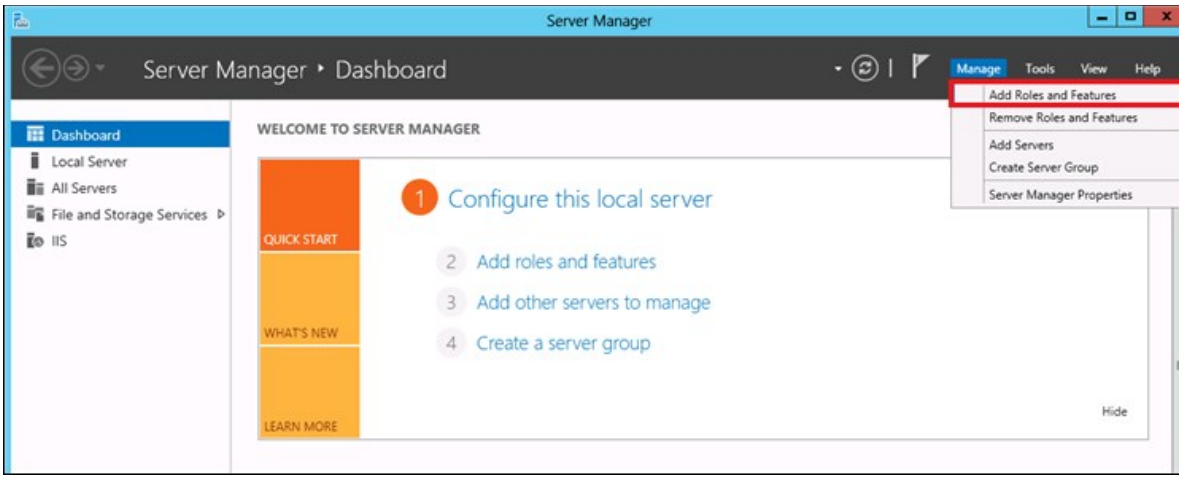


# On Windows Server 2012

On Windows Server 2012, you can install and configure the Internet Information Services (IIS), version 8, in the **Server Manager**.

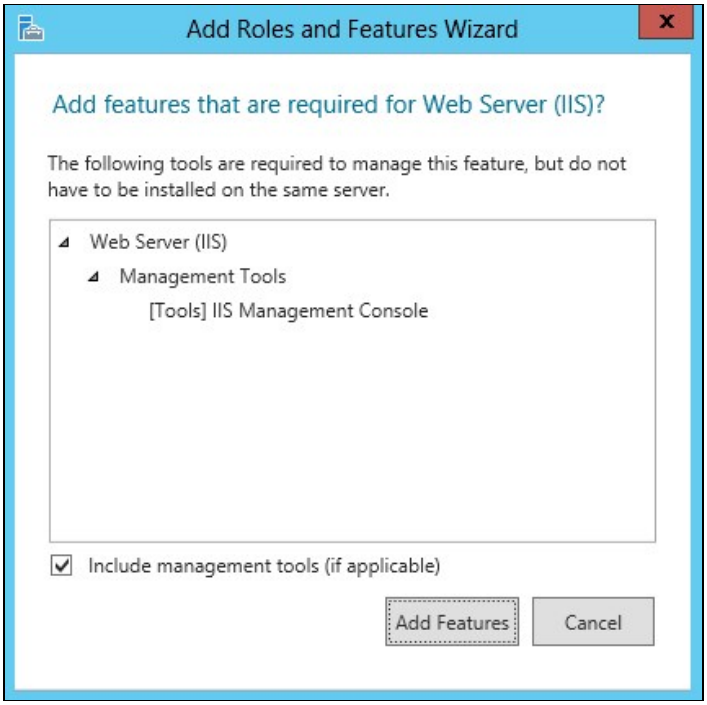
### To install and configure the IIS component:

1. Open the **Server Manager**.



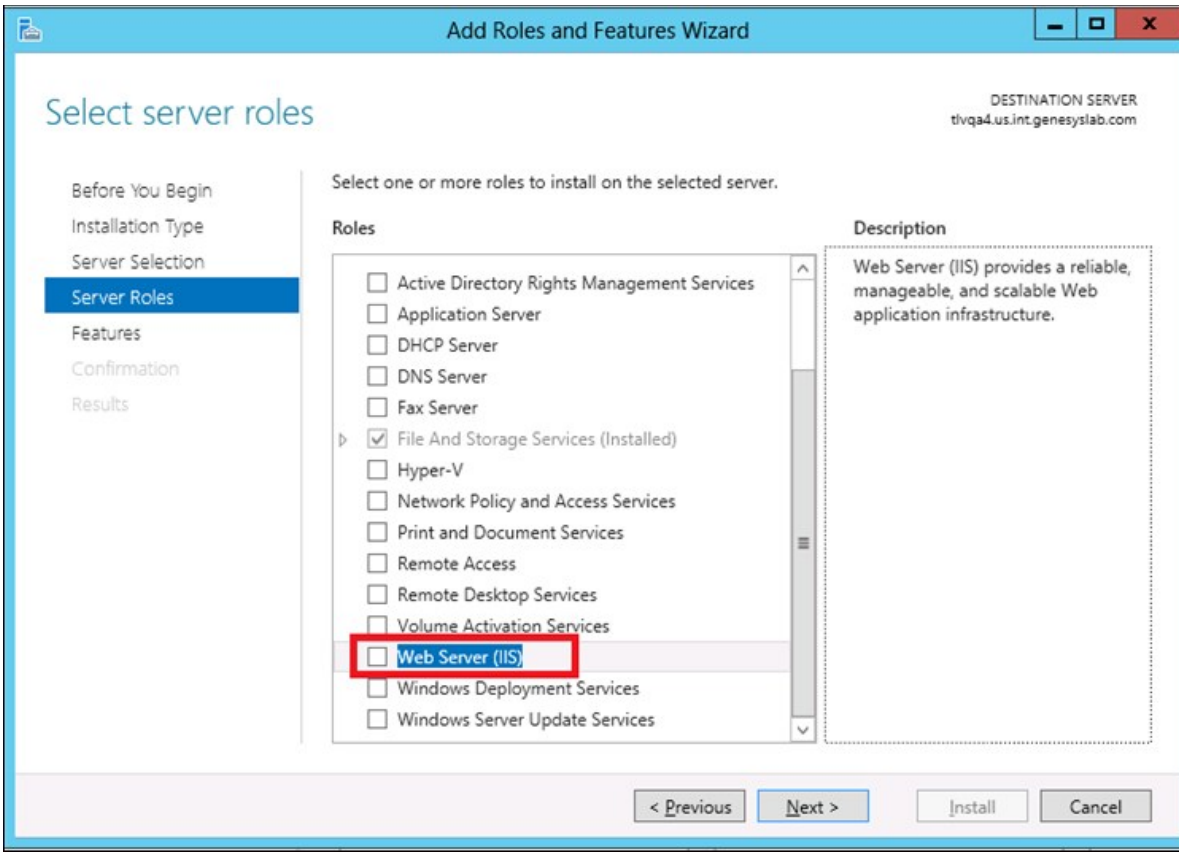

**Server Manager**

2. On the upper-right side of the window, in the **Manage** menu, select **Add Roles and Features**. The **Add Roles and Features Wizard** opens.



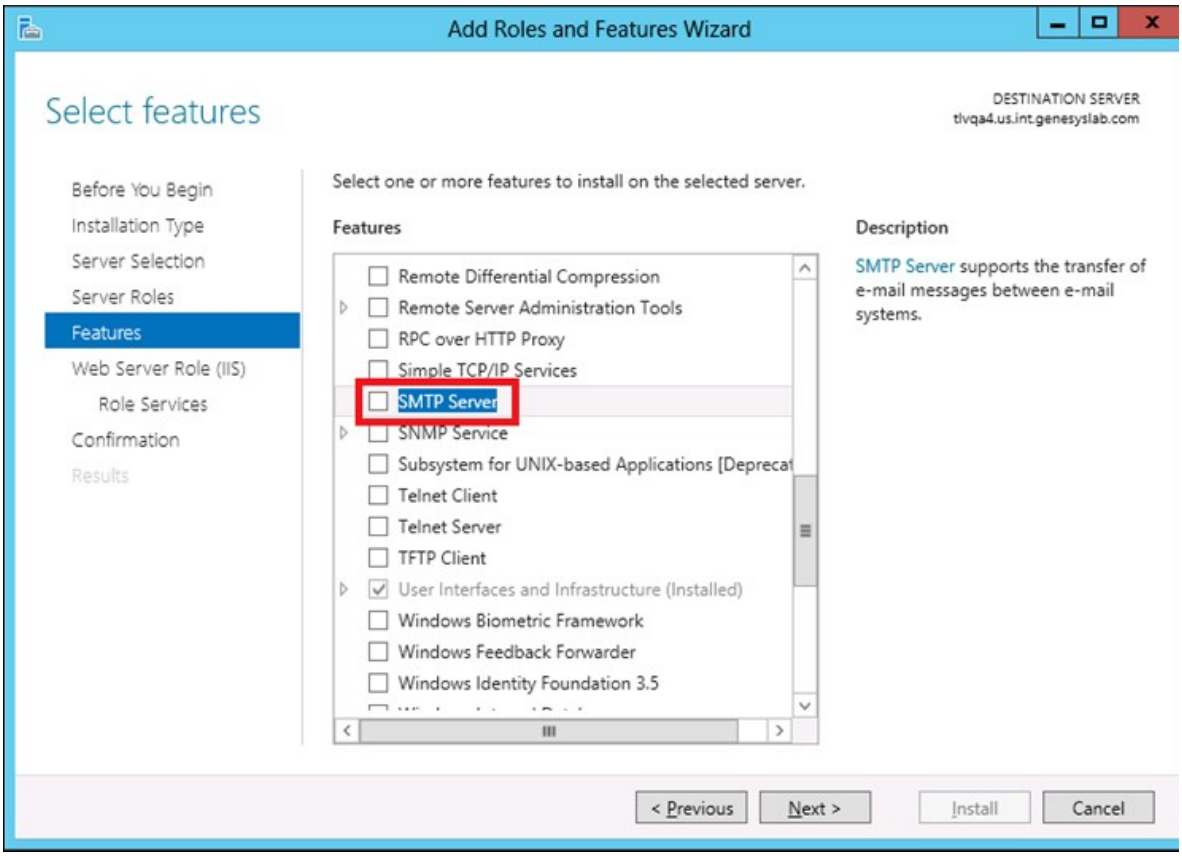

**Add Roles and Features Wizard**

3. Select **Include management tools (if applicable)**, and then select **Next**. The **Installation Type** screen opens.
4. Select **Role-based or feature-based installation**, and then select **Next**. The **Server Selection** screen opens.
5. Select the server on which you will be installing the SpeechMiner web server, and then select **Next**. The **Server Roles** screen opens.
6. In the list of roles, select **Web Server (IIS)**. A window pops up, and asks you to confirm that you want to add the role services required for the web server.



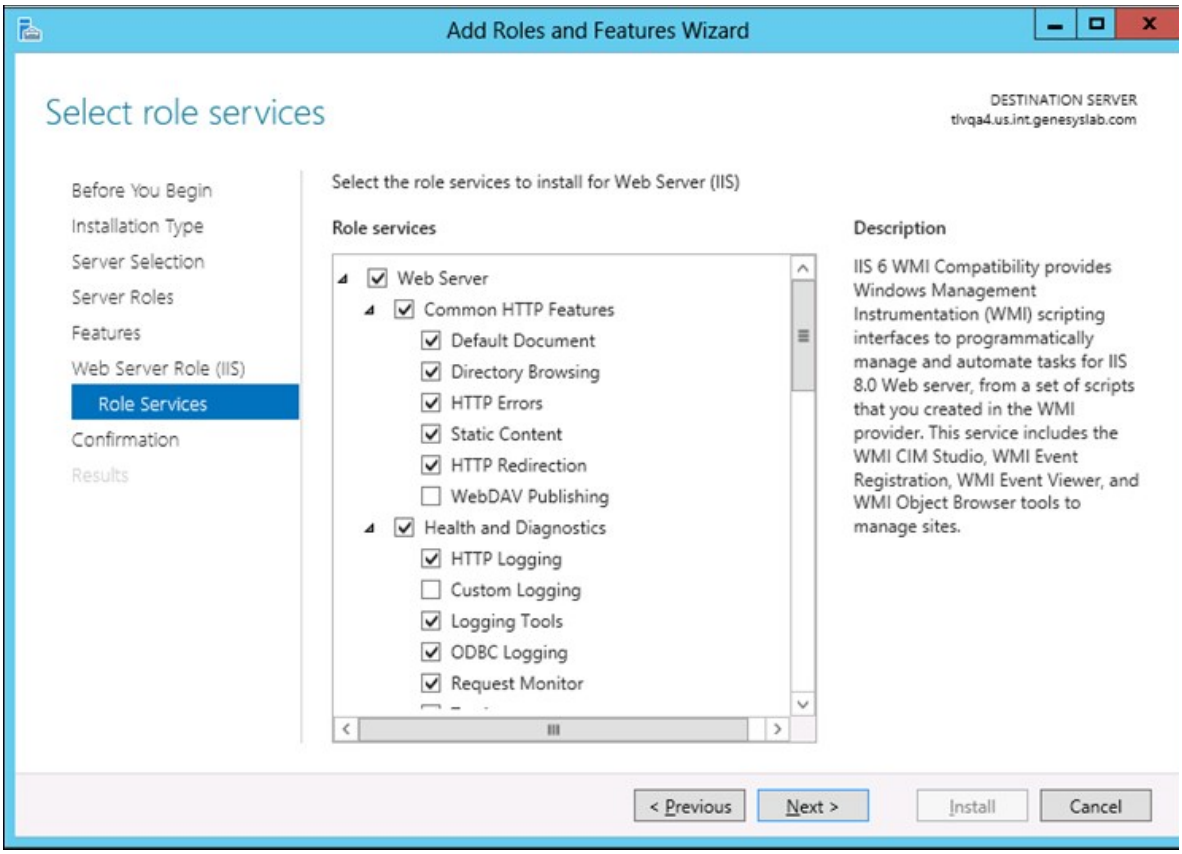

**Add Roles and Features Wizard, Server Roles screen**

7. In the popup window, select **Add Features**. The pop-up window closes.
8. Select **Next**. The **Features** screen opens.
9. In the list of features, expand **Background Intelligent Transfer Service**, and then select **IIS Server Extention**. A window pops up, and asks you to confirm that you want to add the role services required for the IIS server extension.
10. In the popup window, select **Add Features**. The pop-up window closes.
11. In the list of features, select **SMTP Server**. A window pops up, and asks you to confirm that you want to add the role services required for the SMTP server.




**Add Roles and Features Wizard, Features screen**

12. In the popup window, select **Add Features**. The pop-up window closes.
13. Select **Next**. The **Role Services** screen opens.




**Add Roles and Features Wizard, Role Services screen**

14. In the list of role services, make sure the following services are selected:
    a. Under Common HTTP Features:
        - Static Content
        - Default Document
        - Directory Browsing
        - HTTP Errors
        - HTTP Redirection
    b. Under Application Development:
        - ASP.NET
        - ASP.NET Extensibility
        - ISAPI Extensions
        - ISAPI Filters
    c. Under Security:
        - Windows Authentication
    d. Under IIS Management tools:
        - IIS 6 Management Compatibility
        - IIS Management Console
15. Select **Next**, and the select **Install**. The IIS server is installed with the roles and features you selected.

## See also

On Windows Server 2008

# Installing Report Viewer

SpeechMiner can be configured to use Microsoft's Report Viewer to run saved reports at night and cache their results. Using it can significantly reduce the time required to load the Views page of the SpeechMiner browser-based interface, if it contains a large number of reports. If you want to use this feature, you have to install it and then configure it to run the jobs you want it to run. You can download the installation file at http://www.microsoft.com/en-us/download/details.aspx?id=21916.

### See also

Installing the .NET Framework
Setting Up the SQL Server
Installing IIS on the Web Server or Interaction Receiver Server
Disabling Simple File Sharing

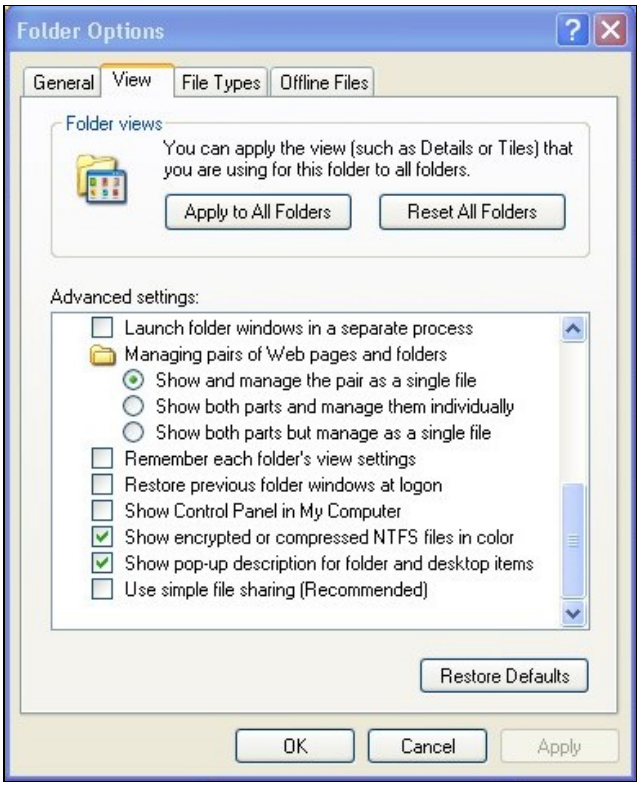


# Disabling Simple File Sharing

Simple file sharing should be disabled on all machines on which SpeechMiner components will run.

**To disable simple file sharing:**

1. From Windows Explorer or the Control Panel, open the **Folder Options**.
2. In the **View** tab, clear the **Use simple file sharing (Recommended)** checkbox.




**Folder Options**

3. Select **OK**.

### See also

Installing the .NET Framework
Setting Up the SQL Server
Installing IIS on the Web Server or Interaction Receiver Server
Installing Report Viewer



# Pre-installation Checklist

Before you begin installing SpeechMiner, ensure the following:

1. You have the required hardware (see Requirements).
2. You have received the following from Genesys:
    - SpeechMiner installation package
    - Licenses
3. **Space check:** The hard drives of the machines on which you are planning to install the system components have sufficient space available for those components (see System Requirements).
4. **OS check:** All machines have supported operating systems (see System Requirements).
5. **Machine connectivity:** All machines are functional and connected to the network.
6. **Admin user:** The user account that will be used to install the components has Administrator permissions on all machines on which components will be installed.
7. **.NET Framework:** Microsoft .NET Framework 3.5 SP1 is installed on all machines (see Installing the .NET Framework).
8. **SQL Server:** Microsoft SQL Server with Reporting Services (2008 or 2012) is installed and configured on the database server (see Installing the SQL Server).
9. **IIS installation:** The Internet Information Server component is installed and operational on the Web server and Interaction Receiver server (see Installing IIS on the Web Server).
10. **Report Viewer installation:** Optional Report Viewer is installed if it is required (see Installing Report Viewer).
11. **File sharing:** Simple file sharing is disabled on all machines (see Disabling Simple File Sharing).
12. **Audio capabilities**: Machines on which the SpeechMiner web application will run have functioning audio devices, and Windows Media Player version 10 or 11 installed (see Requirements).

### See also

Setting Up the Required Software



# Installing the Components

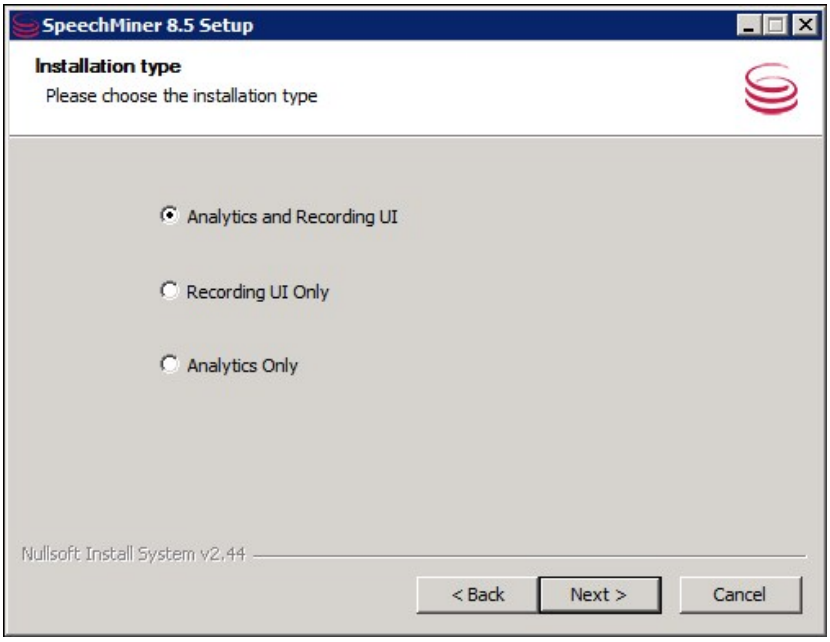
The setup wizard is used to install all SpeechMiner components. You can run it separately on each machine on which you are installing SpeechMiner components. If you are installing multiple SpeechMiner components on the same machine, you can install them at the same time. For example, if you are installing the database server and the web server on the same machine, you can select both of them in the setup wizard. In most systems, SMConfig is installed on all server machines.

The beginning and end of the installation process is the same regardless of which components you are installing: At the beginning, you start the wizard, accept the license agreement, select the mode (Analytics and Recording UI, Analytics Only, or Recording UI Only), and select the components you want to install on the current machine. At the end, you choose the installation folder, the installation is performed, and then you restart the machine. The steps in between depend on which components you are installing.

#### To install components using the setup wizard:

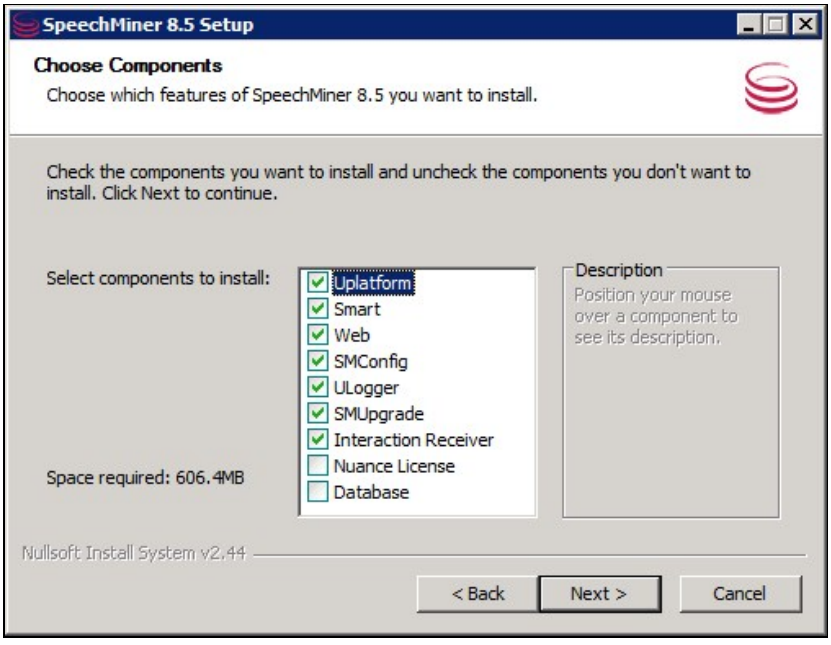
1. Open the installation package.
2. In the **FullInstaller** folder, run **SpeechMinerInstall.exe**. The setup wizard opens, with the Welcome screen displayed.
3. Click **Next**. The **License Agreement** screen opens.

4. Select **I accept the terms of the license agreement**, and then click **Next**. The **Installation Type** screen opens.




**Installation Type screen**

5. Select the installaion mode, as follows:
   - **Analytics and Recording UI:** SpeechMiner plays back, and analyzes the Genesys Interaction Recording recorded calls/interactions, and records of other interactions, and process the contents of these calls/interactions.
   - **Recording UI only:** SpeechMiner plays back the call audio and displays the other interactions, but the contents of the interactions are not processed by the speech-analytics system.
   - **Analytics only:** SpeechMiner imports recorded call audio and records of other interactions from any recording system, and uses its speech-analytics system to process the contents of the interactions.
6. Click **Next**. The **Choose Components** screen opens.

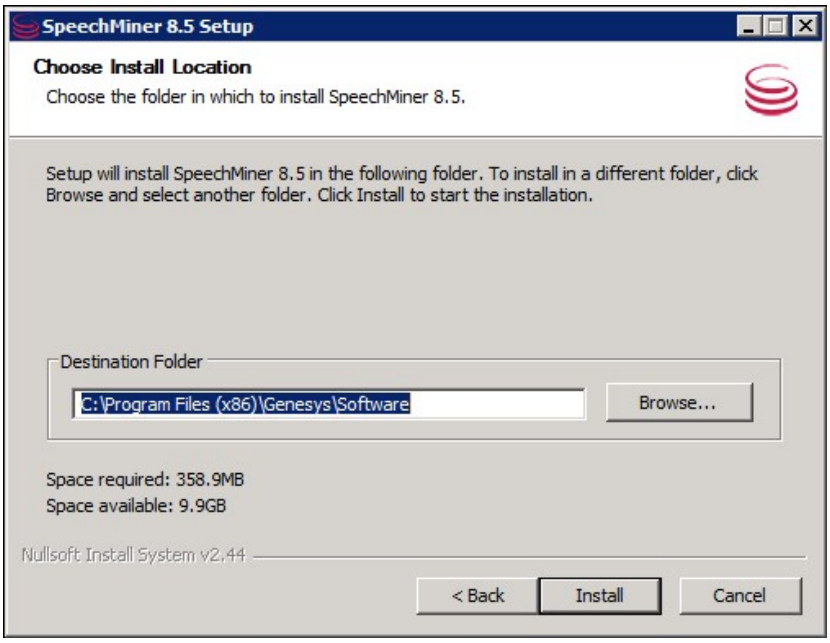



**Choose Components screen**

7. In the list of components, select the components you want to install on the machine, as follows:

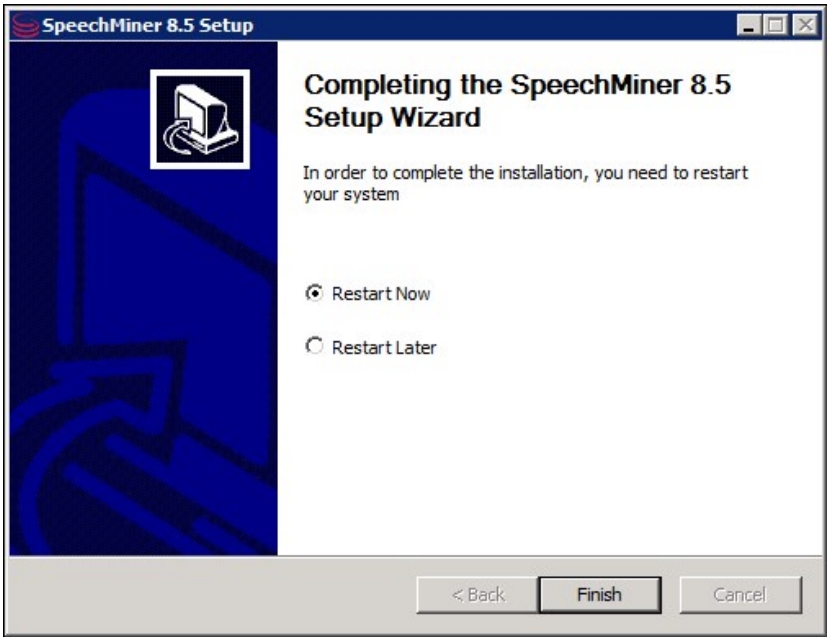
| Component | Description | Select |
|---|---|---|
| Database | The SpeechMiner database, which stores the interaction data and the results of interaction processing<br>**Note:** Usually installed on a dedicated machine. | **Required:** Database<br>**Optional:** SMConfig<br>**Note:** For additional information about installing the database server, see Installing the SpeechMiner Database . |
| Web | The SpeechMiner web site, which is the interface that enables users to view and work with the interaction data after it has been processed. | **Required:** Web, ULogger<br>**Optional:** SMConfig |
| Uplatform server | The UPlatform server, which manages all the processing tasks of SpeechMiner - fetching, recognition, categorization, exploration, compression, and indexing. | **Required:** Uplatform<br>**Optional:** Ulogger, Nuance License, SMConfig<br>**Note:** For additional information about installing the Uplatform server, see Installing the UPlatform Server. |
| Interaction Receiver | A web service which is installed just in the case of Recording+Analytics/Recording only modes. It handles the fetching of calls (audio and metadata) coming from Genesys Interaction Recording system. | **Required:** Interaction Receiver, ULogger |
| Nuance License server | The server that managers the Nuance engine. During installation, you need to either install a new instance of the Nuance License server, or provide the details of an existing server. | **Required:** Nuance License, ULogger |
| SMConfig | An application that is used by system administrators for configuring SpeechMiner.<br>**Note:** SMConfig is typically installed on all of the servers that are part of the SpeechMiner system. It can be installed on any machine that is connected to the network on which SpeechMiner is running. | **Required:** SMConfig, ULogger |
| SMART | The SpeechMiner Administration Tool (SMART), an application that enables users to configure the speech-analytics system to search interactions for specific topics and other characteristics.<br>**Note:** SMART should be installed on the work station of each user who will be using it. | **Required:** SMART, ULogger<br>**Note:** For additional information about installing the Uplatform server, see Installing SMART. |
| SMUpgrade | An application used to upgrade the SpeechMiner database from the previous version to current version. | **Required:** ULogger |

8. Click **Next**. Which screen you see next depends on the components you selected in the previous screen.
   - If you are installing the Uplatform, see Installing the UPlatform Server.
   - If you are installing SMART, see Installing SMART.
   - If you are installing the database, see Installing the SpeechMiner Database .
   - Otherwise, the **Choose Install Location** screen opens.



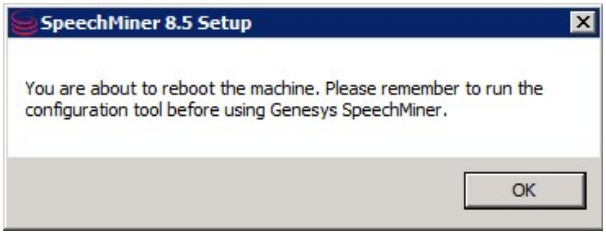

**Choose Install Location screen**

9. Modify the default installation location if necessary, and then click **Install**. The installation process begins. When the process is completed, the following screen appears:




**Installation completed**

10. Select **Restart Now**, and then click **Finish**. A warning message appears, and reminds you to configure SpeechMiner before you open it.




**Warning message**

11. Click **OK**. The server restarts.

### See also

System Requirements
What Is Installed
Ports Used by System Components
Before You Begin
Installing the SpeechMiner Database
Installing the SpeechMiner Web
Installing the Interaction Receiver
Installing the UPlatform Server
Installing SMART
Configuring Permissions
Configuring Internet Explorer



# Installing the SpeechMiner Database

The SpeechMiner database stores the interaction data and the results of interaction processing. It is usually installed on a dedicated machine. This section explains how to install the SpeechMiner database.

### See also

Running the Setup Wizard
Alternative Method for Installing the Database Server
Creating the Storage Partitions
Configuring the Database Maintenance Job
Deploying the SQL CLR
Configuing the Recovery Model
Configuring the Autogrowth

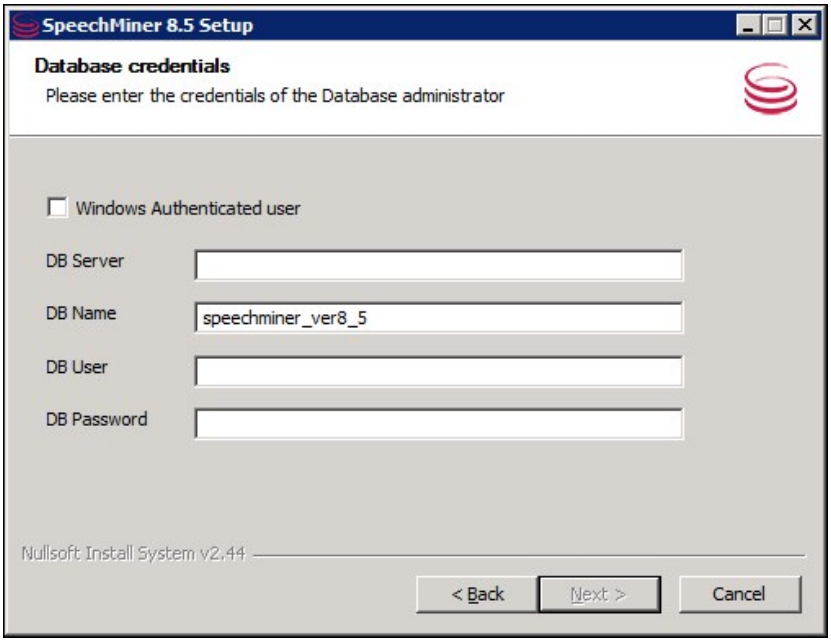
System Requirements
What Is Installed
Ports Used by System Components
Before You Begin
Installing the Components
Installing the SpeechMiner Web
Installing the Interaction Receiver
Installing the UPlatform Server
Installing SMART
Configuring Permissions
Configuring Internet Explorer

# Running the Setup Wizard

To begin the installation of the database server, run the setup wizard as described under Installing the Components.

### To install the database server:

1. On the database server machine, run the Setup Wizard, as described under Installing the Components.
2. Follow the instructions there, until the **Database Credentials** screen opens.



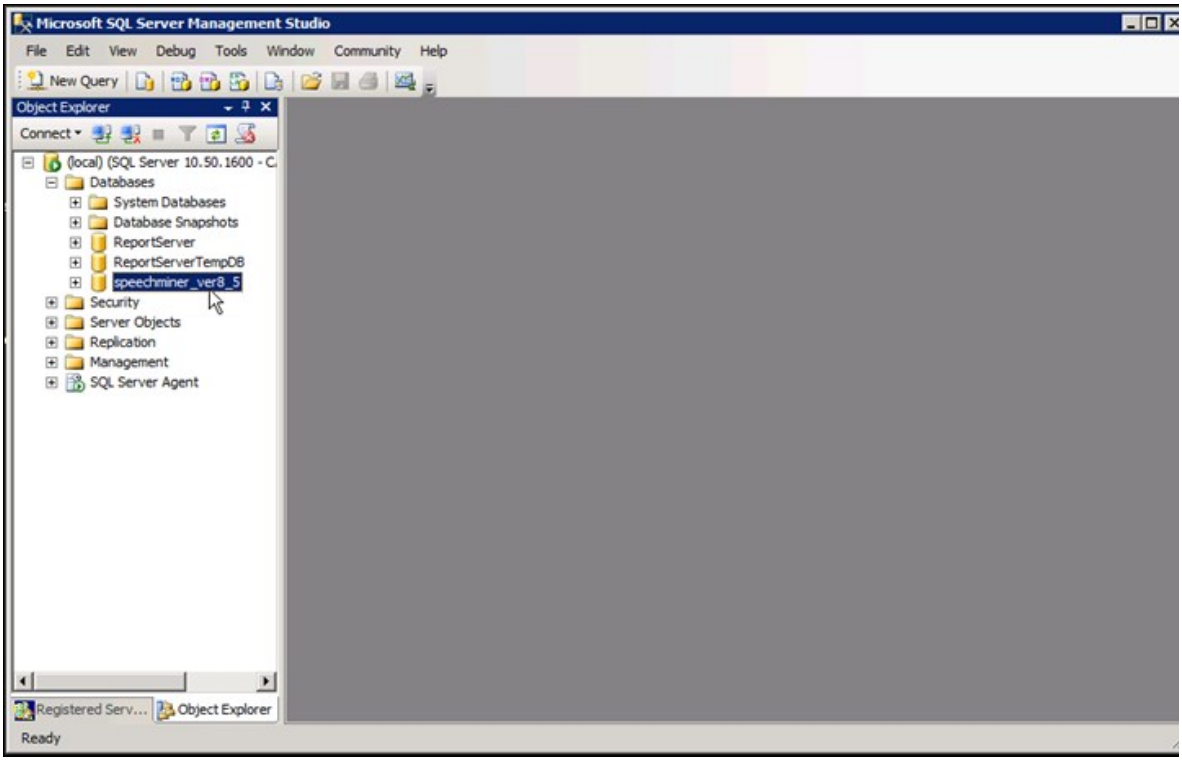

**Database credentials screen**

3. In the **Database Credentials** screen, fill in the fields as follows:

| Field | Description |
|---|---|
| Windows Authenticated User | Select this option to use the Windows username and passwword you used to log into the machine as the **DB User** and **DB Password**. When you select this option, the **DB User** and **DB Password** become unavailable. |
| DB Server | Enter the name of the server on which you want to install the SpeechMiner database. If you want to install the database on an SQL Named Instance, the server name should be entered as `server_name\instance_name`. |
| DB Name | Enter the name of the database in the format *`speechminer_verX_Y`* (e.g. *`speechminer_ver8_5`*). |
| DB User | Enter **SA**. (The credentials of the user name entered here will be used for the process of creating the SpeechMiner database.)<br>**Note:** This field is not available when **Windows Authenticated User** is selected above. |
| DB Password | Enter the password of the SA account.<br>**Note:** This field is not available when **Windows Authenticated User** is selected above. |

4. Click **Next**. The **Choose Install Location** screen opens.
5. Modify the default installation location if necessary, and then click **Install**. The installation process begins. When the process is completed select **Restart Now**, and then click **Finish**. A warning message appears.
6. In the warning message, click **OK**. The server restarts.
7. After the database-server installation is completed, check that the *speechminer_verX_Y* database is present. This can be done by opening **SQL Server Management Studio** on the SQL server (for example, in the **Start** menu, under **All Programs**,

select **Microsoft SQL Server 2008 R2** > **SQL Server Management Studio**) and reviewing the list of databases on the server.




**SpeechMiner database in SQL Server Management Studio**

## See also

Alternative Method for Installing the Database Server
Creating the Storage Partitions
Configuring the Database Maintenance Job
Deploying the SQL CLR
Configuing the Recovery Model
Configuring the Autogrowth



# Alternative Method for Installing the Database Server

An alternative way to perform the database-server installation is to use `data_ver8_1_sql2005.bak` (an SQL backup file) deployed in `C:\Program Files (x86)\Genesys\Software\Support` during any regular server install. Restore this backup on the SQL server and choose settings based on the settings in the steps above. After restoration is complete, update the database properties as follows:

- For both the Data and Log files, change **Options\Recovery Mode** to **Simple** and change the **Files\Autogrowth\File Growth** parameter to **10%**.

In addition, run the following commands to create the dbuser user:

- **On the master database:** `create login [dbuser] with password='dbuser',check_policy=OFF`
- **On the new database:** `EXEC sp_change_users_login 'Auto_Fix', 'dbuser'`

## See also

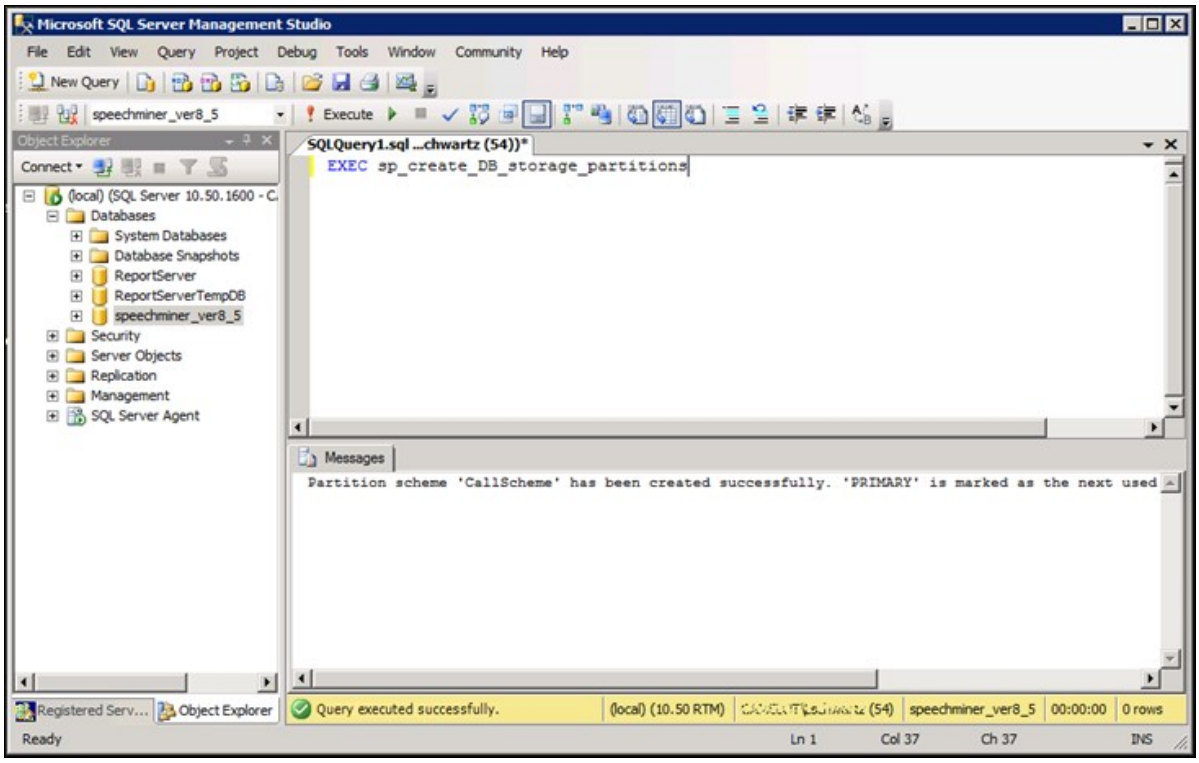
Running the Setup Wizard
Creating the Storage Partitions
Configuring the Database Maintenance Job
Deploying the SQL CLR
Configuing the Recovery Model
Configuring the Autogrowth



# Creating the Storage Partitions

If the database server is an Enterprise Edition, you must create the storage partitions on the database. To do this, after you install the database server, run the following SQL query on the SpeechMiner database:

```
EXEC sp_create_DB_storage_partitions
```




**Query run successfully on SpeechMiner database**

**Note:** For information about how to open **SQL Server Management Studio** and run a query, see Setting the Maximum Memory Usage.

## See also

Running the Setup Wizard
Alternative Method for Installing the Database Server
Configuring the Database Maintenance Job
Deploying the SQL CLR

Configuring the Recovery Model
Configuring the Autogrowth

Home > Installing SpeechMiner > Installing the SpeechMiner Database > Configuring the Database Maintenance Job

# Configuring the Database Maintenance Job

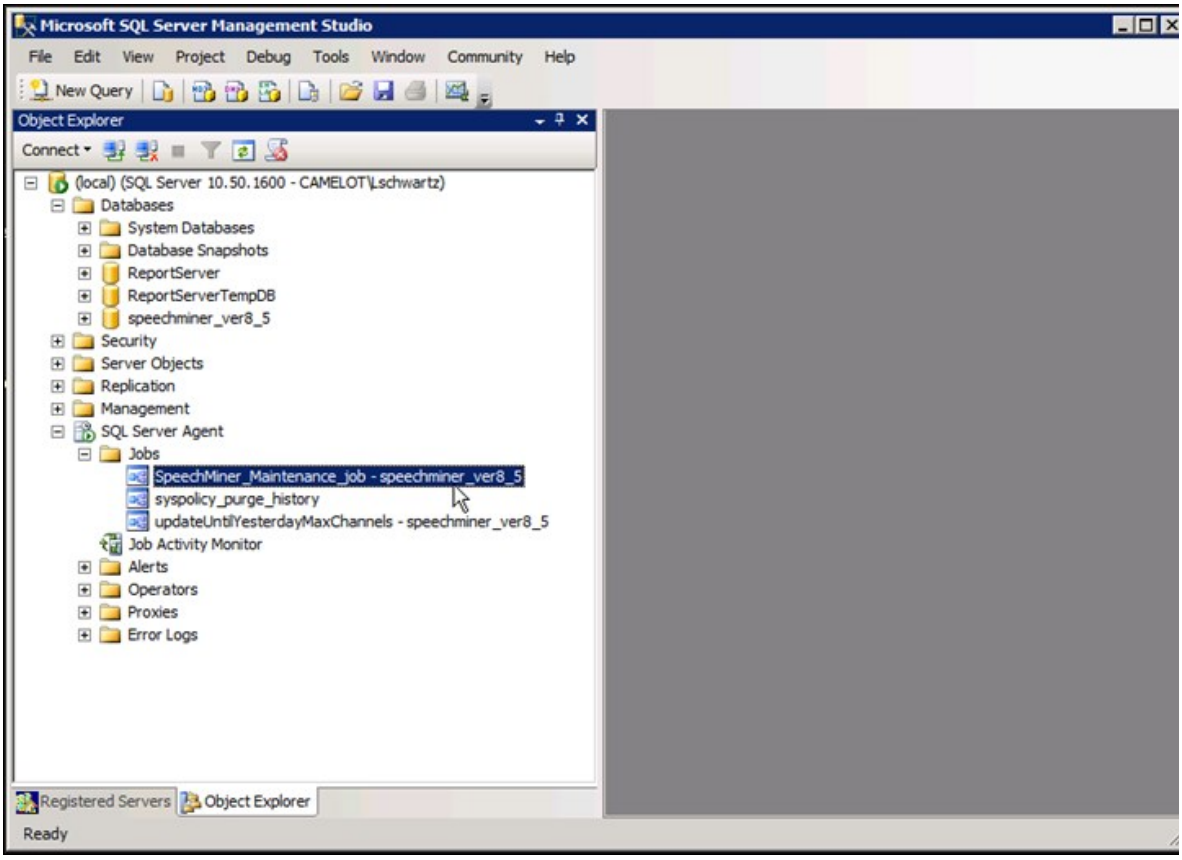
When the database was installed, a database maintenance job was automatically created. The job's name is **SpeechMiner_Maintenance_job - <database>**. You should schedule it to run daily or weekly at a time when call volume is expected to be low. In addition to scheduling the job to run, you can also modify it to suit your requirements.

By default, the maintenance job does the following:

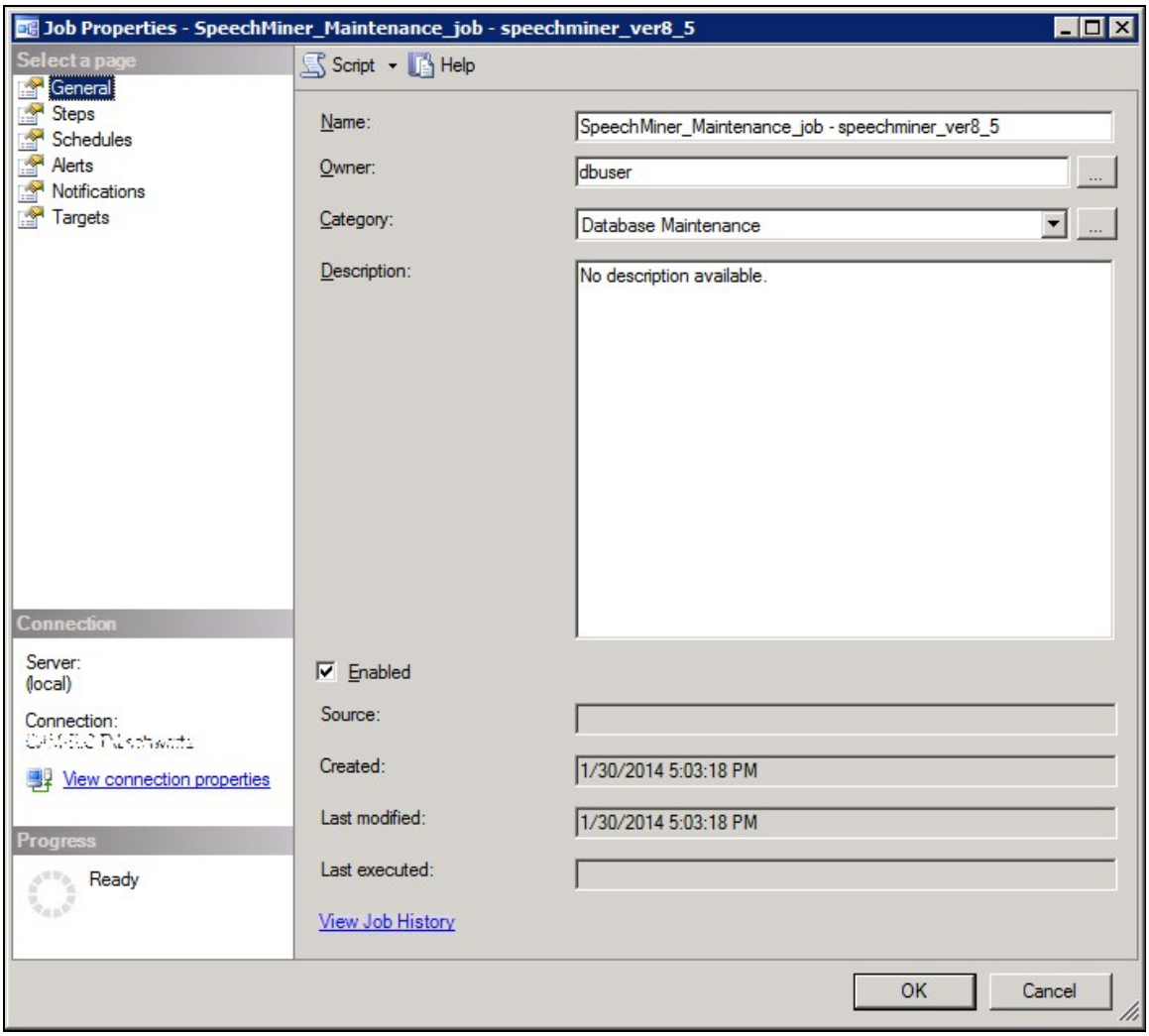
1. Shuts down the system
2. Rebuilds fragmented database table indexes
3. Restarts the system
4. Purges logs of messages that are older than one month
5. Purges logs of user events that are older than one year
6. Purges the report agent filter by removing entries that are older than 30 days and creating a new list of agents

### To open the maintenance-job script:

- In **SQL Server Management Studio**, under **Databases** > **SQL Server Agent** > **Jobs**, double-click the job.




**Jobs listed under SQL Server Agent**




**SpeechMiner maintenance job script**

The job may optionally include the **updateUntilYesterdayMaxChannels** and **sp_agentFilterCleanByDays** jobs. In addition, any procedure that rebuilds indexes and purges old calls should be added as a step in the maintenance job.

**Note:** If information about the agents and their hierarchy is not available through the UConnector, you can include the **sp_createAgentsFromPartitions** job in this job.

## Changing the Job Owner to SA

If you include the **updateUntilYesterdayMaxChannels** job in the maintenance job, you must enter **SA** credentials in the job's **Owner** field.

### To enter SA credentials into the Owner field:

1. Under **Databases** > **SQL Server Agent > Jobs** double-click the **updateUntilYesterdayMaxChannels** job. The **Properties** window opens.
2. In the **General** section, in the **Owner** field, replace `dbuser` with `sa`.
3. Click **OK**. The change is implemented.

## See also

Running the Setup Wizard
Alternative Method for Installing the Database Server

# Deploying the SQL CLR

After you install the database, you should deploy the SQL Common Language Runtime (CLR) assembly on the SQL server. To do this, on the Master, you must set the permissions of the `XmlSerializers.dll` and enable `xp_cmdshell` and CLR integration, as explained below.

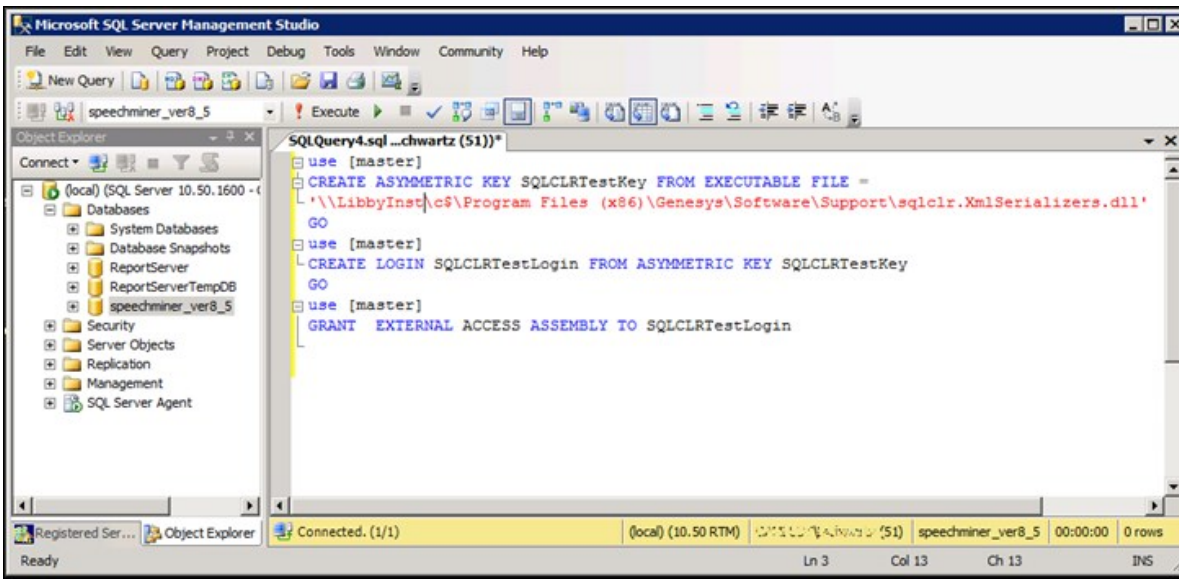
**Note:** In order to set the permissions, the user running the SQL services must have *modify* permissions on `sqlclr.XmlSerializers.dll`.

### To deploy the SQL CLR:

1. On the SQL server, open the **SQL Server Management Studio**. (For example, in the **Start** menu, under **All Programs**, select **Microsoft SQL Server 2008 R2** > **SQL Server Management Studio**.)
2. On the left side of the window, right-click the SQL server and then select **New Query**. A blank text area opens on the right side of the window.
3. Copy the following commands and paste them into the text area:

```
use [master]
CREATE ASYMMETRIC KEY SQLCLRTestKey FROM EXECUTABLE FILE =
'\\<Machine_Name>\c$\Program Files
(x86)\Genesys\Software\Support\sqlclr.XmlSerializers.dll'
GO
use [master]
CREATE LOGIN SQLCLRTestLogin FROM ASYMMETRIC KEY SQLCLRTestKey
GO
use [master]
GRANT  EXTERNAL ACCESS ASSEMBLY TO SQLCLRTestLogin
```

4. In the text area, change `<Machine_Name>` to the name of the machine on which the SpeechMiner database was installed.




Query ready to run

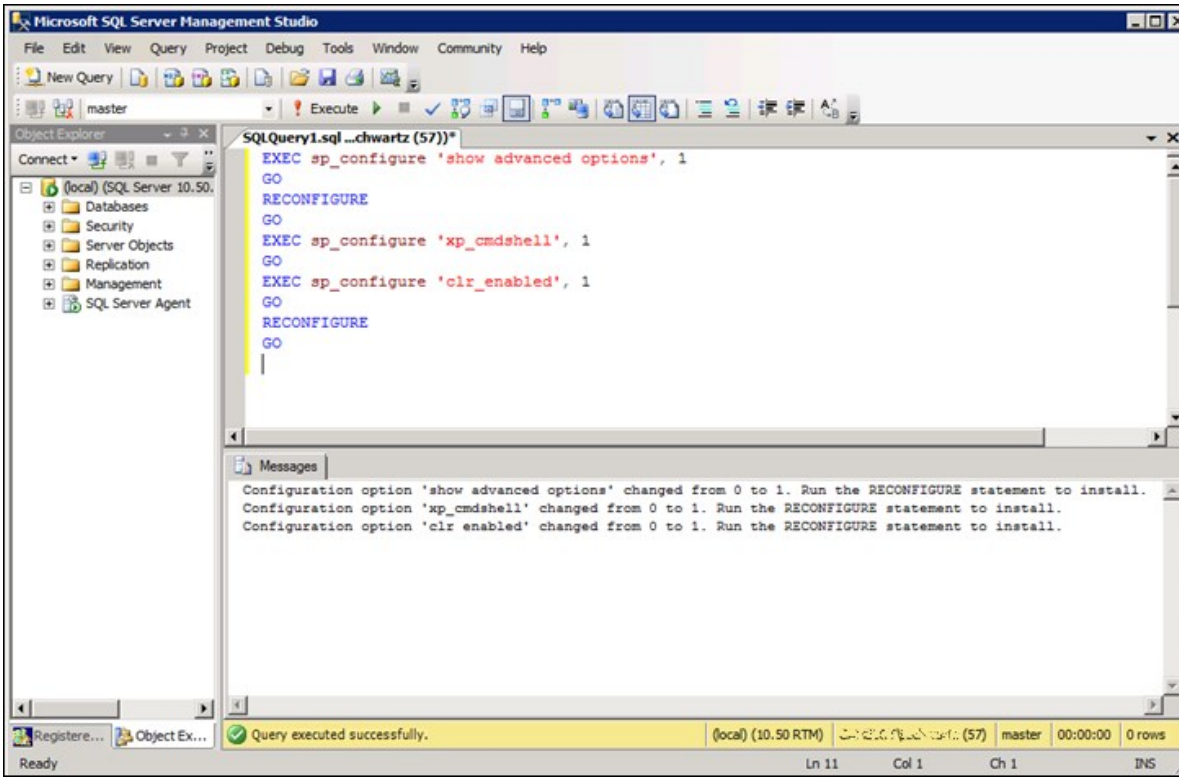
5. Above the text area, select **Execute**. The commands are executed. When the process is completed successfully, **Query executed successfully** appears at the bottom of the window.

**Note:** If you get an error message that says, "The certificate, asymmetric key, or private key file does not exist or has invalid format," try changing the path to point at the local drive, e.g. `C:\Program Files (x86)\Genesys\Software\Support\sqlclr.XmlSerializers.dll`

6. Open another New Query.
7. Copy the following commands and paste them into the New Query text area:

```
EXEC sp_configure 'show advanced options', 1
GO
RECONFIGURE
GO
EXEC sp_configure 'xp_cmdshell', 1
GO
EXEC sp_configure 'clr_enabled', 1
GO
RECONFIGURE
GO
```

8. Above the text area, select **Execute**. The commands are executed. When the process is completed successfully, `xp_cmdshell` and CLR integration are enabled, and **Query executed successfully** appears at the bottom of the window.




**Query executed successfully**

## See also

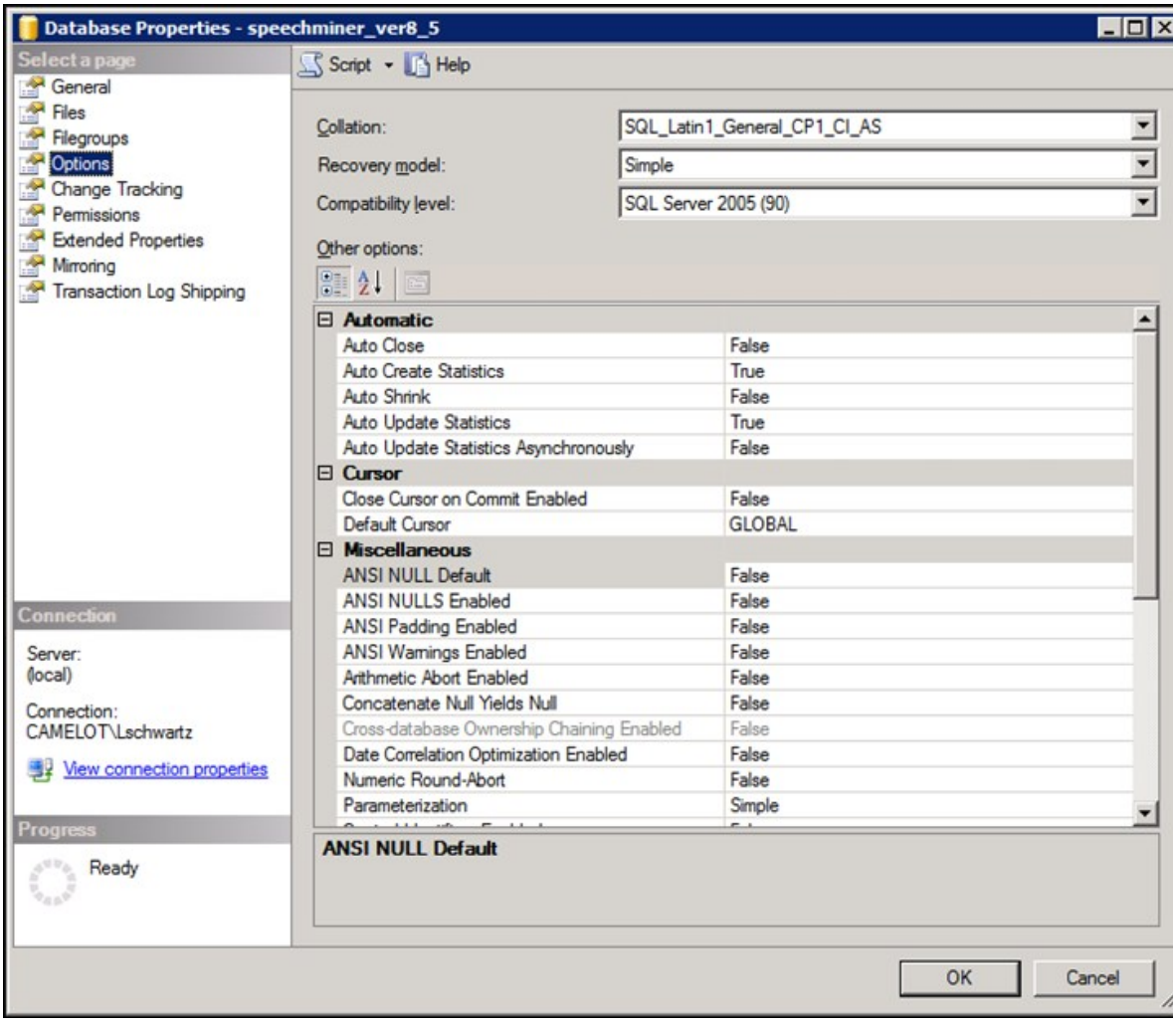
Running the Setup Wizard
Alternative Method for Installing the Database Server
Creating the Storage Partitions
Configuring the Database Maintenance Job
Configuing the Recovery Model
Configuring the Autogrowth

# Configuing the Recovery Model

In order to save disk space, it is recommended to set the recovery model of the SpeechMiner database to *Simple*.

### To set the recovery model to Simple:

1. On the SQL server, open the **SQL Server Management Studio**. (For example, in the **Start** menu, under **All Programs**, select **Microsoft SQL Server 2008 R2** > **SQL Server Management Studio**.)
2. On the left side of the window, right-click the database and then select **Properties**. The **Database Properties** window opens.
3. On the left side of the window, select **Options**.
4. On the right side of the screen, under **Recovery model**, select **Simple**.




**Data Properties window with Options screen displayed**

5. Click **OK**. The setting is implemented, and the window closes.

## See also

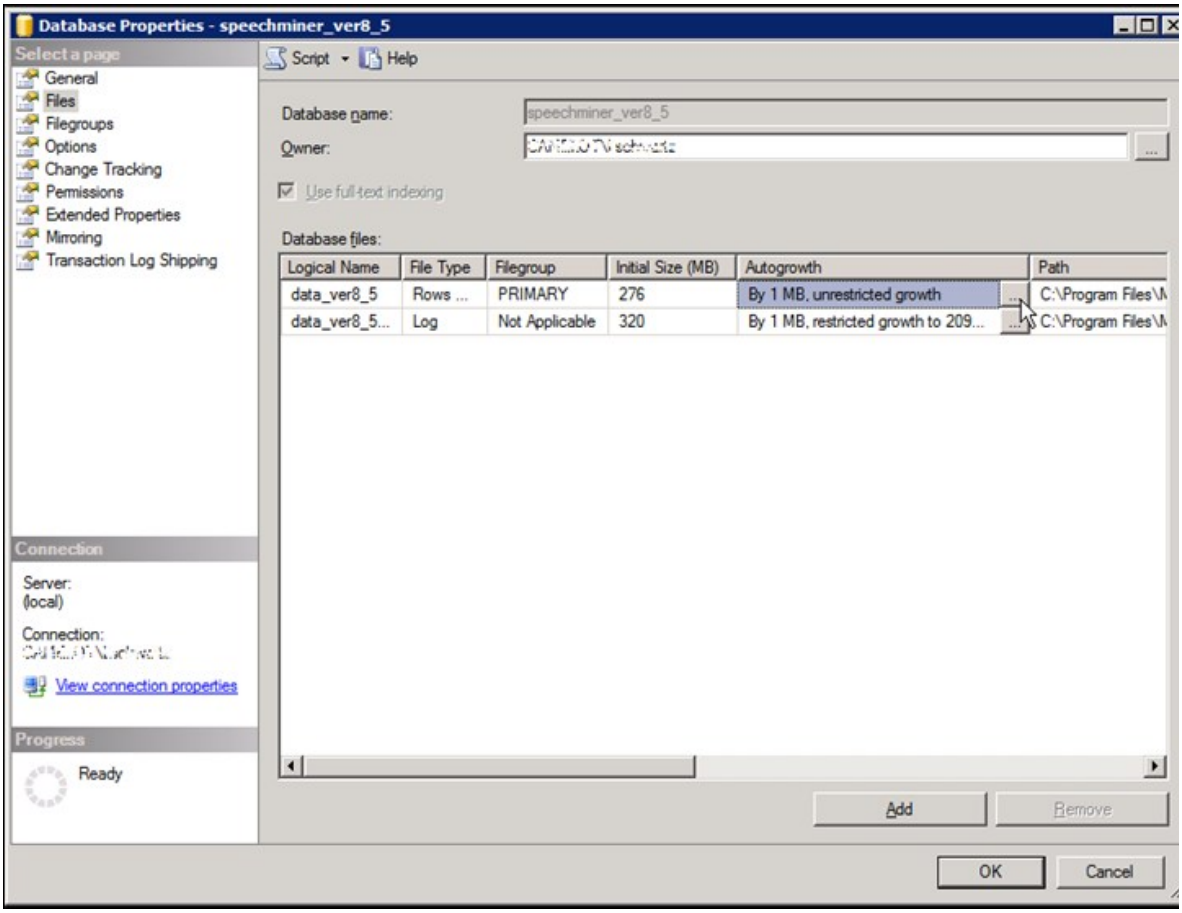
Running the Setup Wizard
Alternative Method for Installing the Database Server

# Configuring the Autogrowth

By default, autogrowth for the SpeechMiner database file is enabled for file growth, and set to 1 MB. It is recommended to keep autogrowth for file growth enabled, but to change the setting to 5% or 10%.

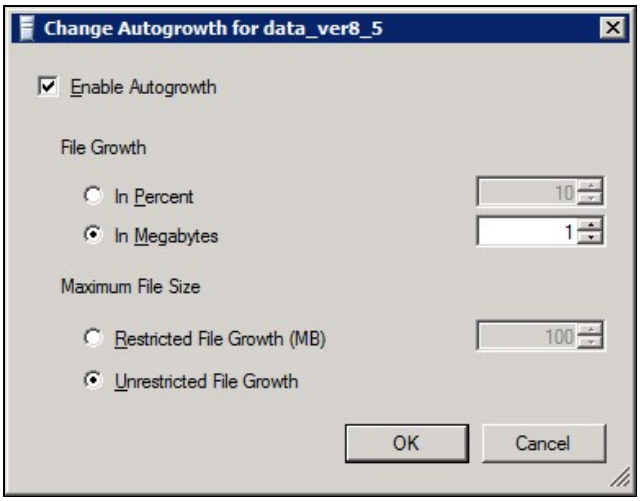
### To modify the autogrowth settings:

1. On the SQL server, open the **SQL Server Management Studio**. (For example, in the **Start** menu, under **All Programs**, select **Microsoft SQL Server 2008 R2** > **SQL Server Management Studio**.)
2. On the left side of the window, right-click the database and then select **Properties**. The **Database Properties** window opens.
3. On the left side of the window, select **Files**.



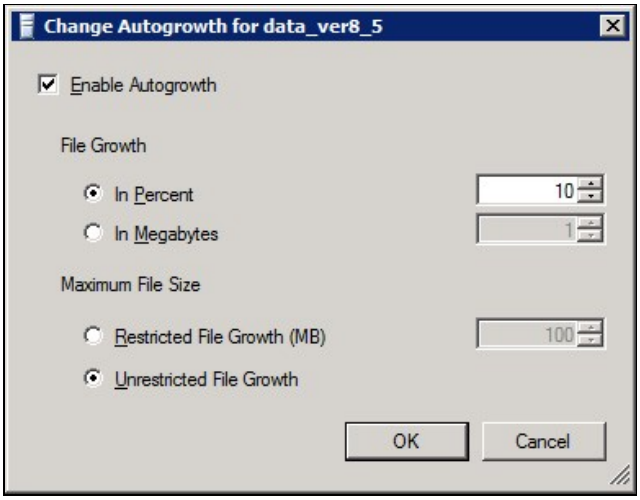

**Database Properties: Files screen**

4. On the right side of the screen, in the **PRIMARY** file group, under **Autogrowth**, select ... . The **Change Autogrowth** dialog box opens.



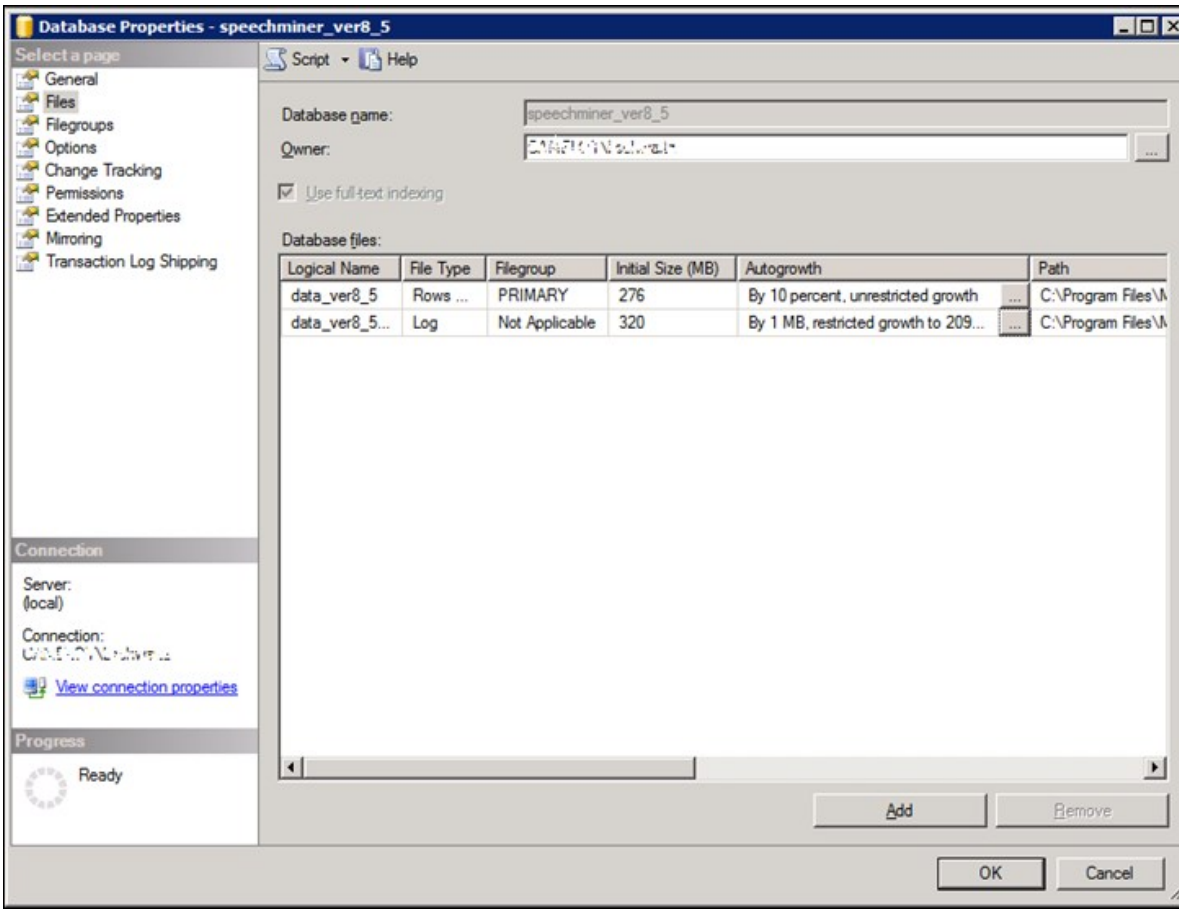

**Change Autogrowth dialog box: "In Megabytes" selected**

5. Under **File Growth**, select **In Percent**, and then, in the text box on the right, specify the percentage.




**Change Autogrowth dialog box: "In Percent" selected**

6. Click **OK**. The setting is changed in the **Properties** window.
7. In the **Properties** window, click **OK**. The setting is implemented, and the window closes.




**Database Properties: Autogrowth set to 10%**

## See also

Running the Setup Wizard
Alternative Method for Installing the Database Server
Creating the Storage Partitions
Configuring the Database Maintenance Job
Deploying the SQL CLR
Configuing the Recovery Model



# Installing the SpeechMiner Web

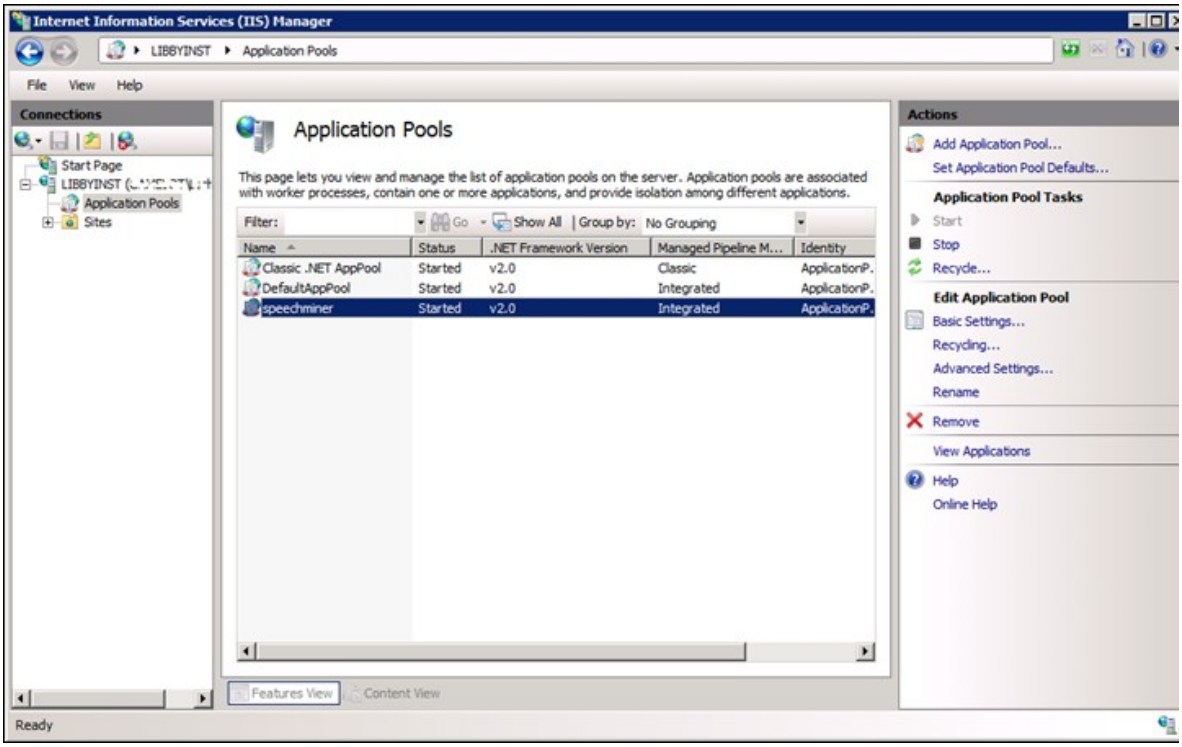
The SpeechMiner web  runs the  interface that enables users to view and work with the interaction data after it has been processed. You can install the web server on one or more machines in your system, as required. To install the web server, run the Setup Wizard, as described under Installing the Components.

**Note:** Once SpeechMiner is installed and configured, users can open the web-based interfaces from their browsers at **http://<webserver_name>/speechminer** (where **<web server>** is the name of a machine on which the SpeechMiner is installed.

The SpeechMiner application pool uses v2.0 of the .Net framework, and not a later version. After you install the SpeechMiner web server on a machine, you should check that this setting is correct.

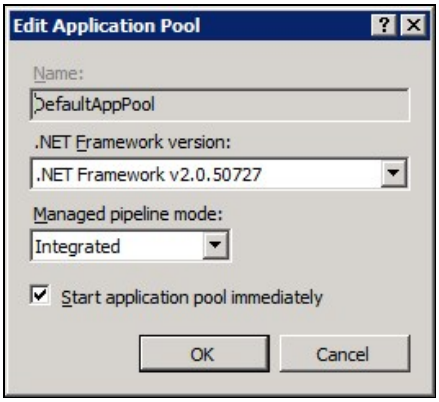
**To check the settings of the SpeechMiner application pool:**

1. In the **Start** menu, select **Administrative Tools > Internet Information Server (IIS) Manager**. The **Internet Information Server (IIS) Manager** opens.
2. In the left pane, expand the server name, and select **Application Pools**. The currently defined application pools are listed in the middle pane.




**IIS Manager: Application Pools**

3. Under **.NET Framework Version**, check the version number listed for the SpeechMiner application pool. If the number is "2.0," you do not have to make any changes. If it is not, double-click the version number. The **Edit Application Pool** dialog box opens.
4. Under **.NET Framework version**, select v2.0.




**Edit Application Pool dialog box**

5. Click **OK**.

## See also

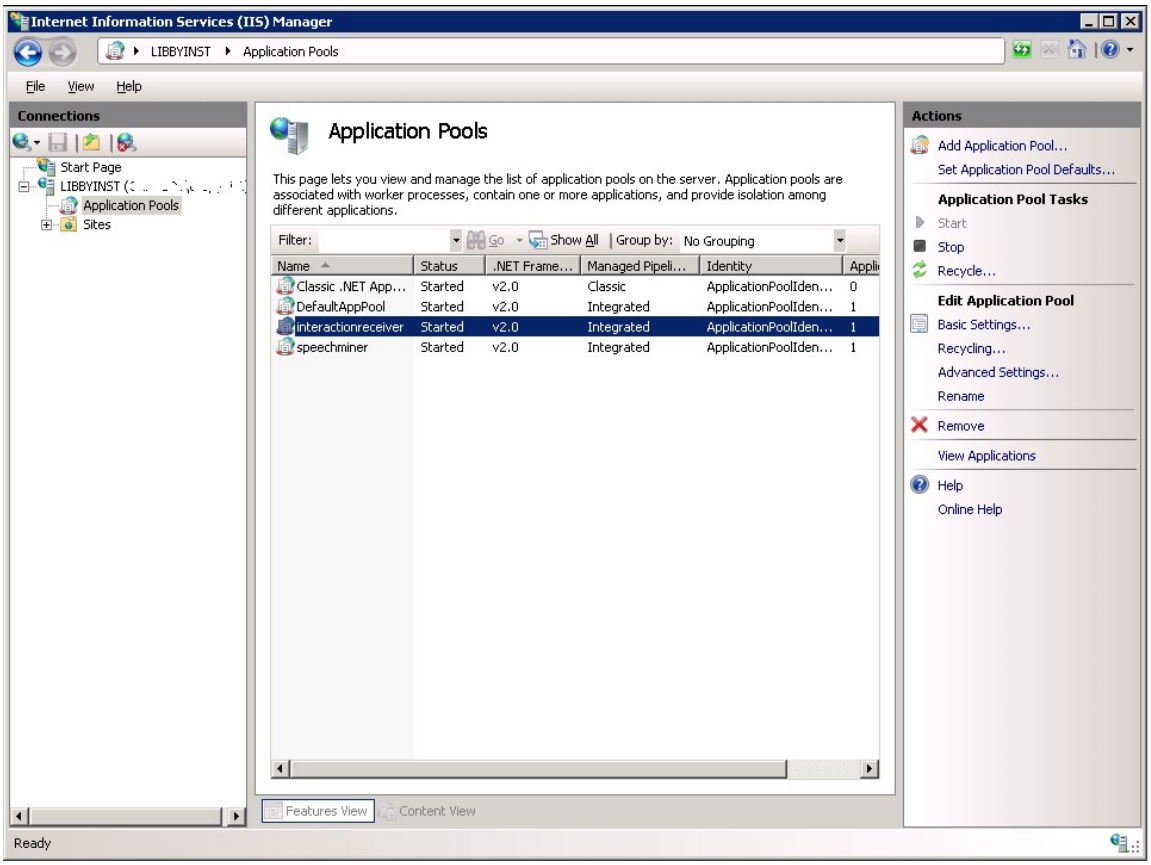
# Installing the Interaction Receiver

The SpeechMiner Interaction Receiver runs the service that fetches the calls (audio and metadata) from the Genesys Interaction Recording system. To install the Interaction Receiver, run the Setup Wizard, as described under Installing the Components.

The Interaction Receiver application pool uses v2.0 of the .Net framework, and not a later version. After you install the SpeechMiner Interaction Receiver on a machine, you should check that this setting is correct.

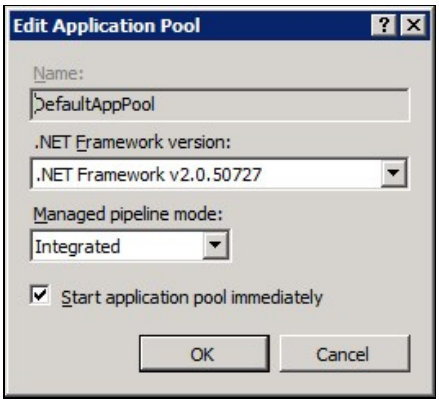
### To check the settings of the Interaction Receiver application pool:

1. In the **Start** menu, select **Administrative Tools > Internet Information Server (IIS) Manager**. The **Internet Information Server (IIS) Manager** opens.
2. In the left pane, expand the server name, and select **Application Pools**. The currently defined application pools are listed in the middle pane.



IIS Manager: Application Pools

3. Under **.NET Framework Version**, check the version number listed for the SpeechMiner application pool. If the number is "2.0," you do not have to make any changes. If it is not, double-click the version number. The **Edit Application Pool** dialog box opens.
4. Under **.NET Framework version**, select v2.0.




Edit Application Pool dialog box

5. Click **OK**.

## See also

System Requirements
What Is Installed
Ports Used by System Components
Before You Begin
Installing the Components
Installing the SpeechMiner Database
Installing the SpeechMiner Web
Installing the UPlatform Server
Installing SMART
Configuring Permissions
Configuring Internet Explorer



# Installing the UPlatform Server

The UPlatform server manages all the processing tasks of SpeechMiner - fetching, recognition, categorization, exploration, compression, and indexing. This section explains how to install the SpeechMiner UPlatform server. It should be installed on all machines on which SpeechMiner processing tasks take place. You can install the UPlatform server on one or more machines in your system, as required.

**Note:** After you have installed the UPlatform server and created the required folders, it is recommended to turn off error reporting on the server. For additional information, see http://technet.microsoft.com/en-us/library/cc754364.aspx.

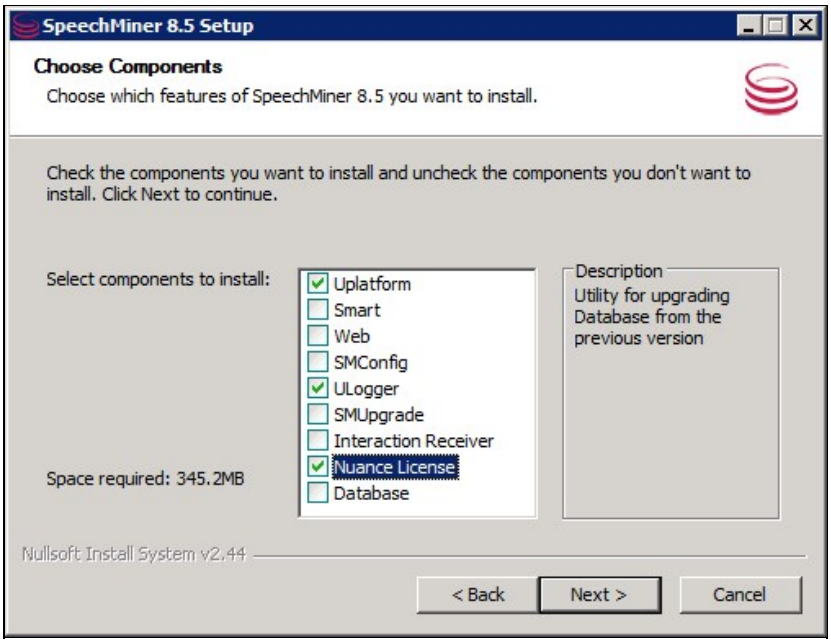
## See also

# Running the Setup Wizard

To begin the installation of the Uplatform server, run the setup wizard as described under Installing the Components.

### To install the Uplatform server:

1. On the Uplatform server machine, run the Setup Wizard, as described under Installing the Components.
2. Follow the instructions there, until the **Choose Components** screen opens.



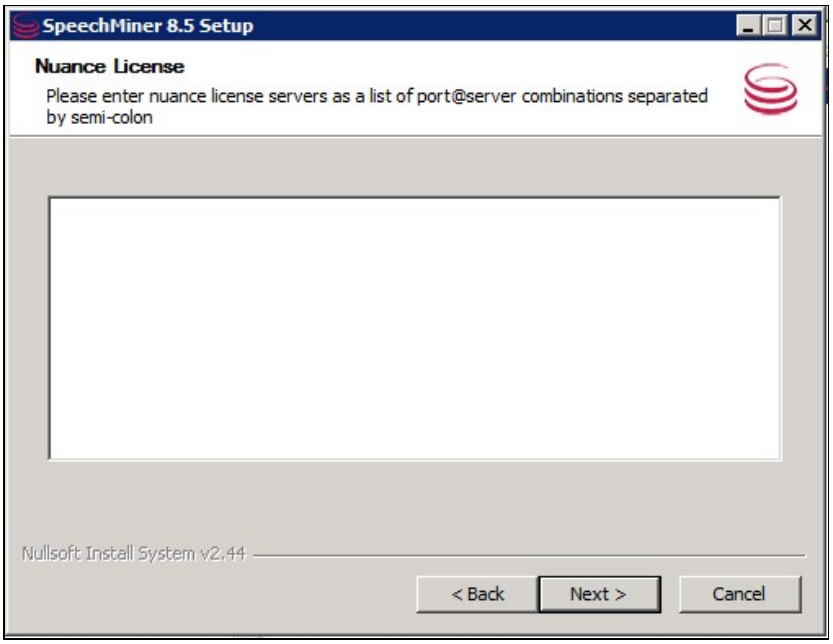

**Choose Components screen**

3. In the **Choose Components** screen, select the components as follows:

| Component | Comments |
|---|---|
| Uplatform | |
| ULogger | It is recommended to install ULogger on any machine on which Uplatform is installed. |
| Interaction Receiver | If you are installing SpeechMiner in either Analytics and Recording UI mode, or Recording UI Only mode, select this option. You can also install this component on a separate server. |

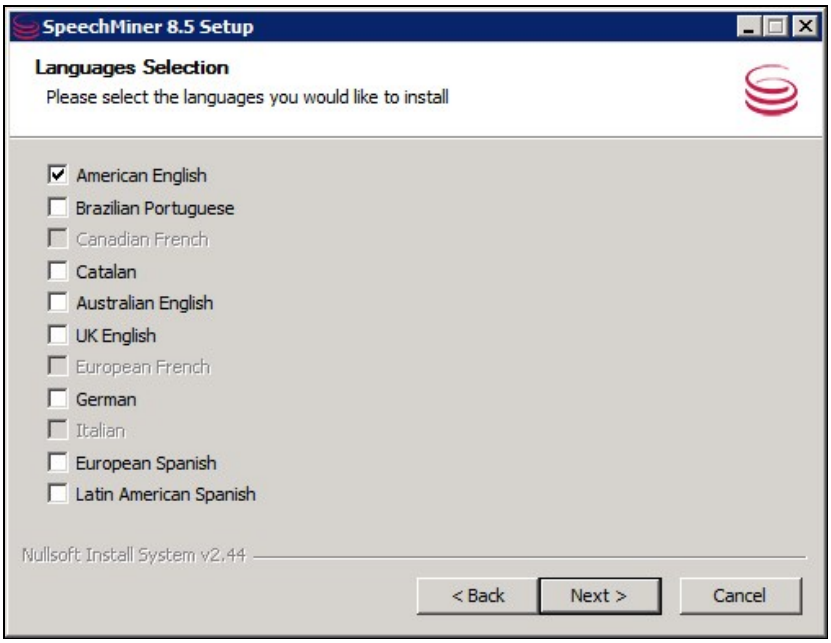
| | |
|---|---|
| Nuance License | If you are installing SpeechMiner in either Analytics and Recording UI mode, or Analytics Only mode, Uplatform must have access to a Nuance license server. You can install the license server anywhere in your network. If you want to install the Nuance license server on this machine, select this.<br>If you do not select **Nuance License**, and you are installing SpeechMiner in either Analytics and Recording UI mode, or Analytics Only mode, you will be prompted, in the next screen, to enter the name of one or more existing Nuance license servers. |
| SMConfig | If you want to use SMConfig on the machine, select it. |

4. Click **Next**.
   - If you included **Nuance License** in the components you selected, the **Language Selection** screen opens. Skip the next step.
   - If you did not include **Nuance License**, the **Nuance License** screen opens.
5. In the **Nuance License** screen, enter the names of one or more Nuance license servers you want to use, as explained in the screen, and then click **Next**.




**Nuance License screen**

6. In the **Language Selection** screen, select the languages you want to install.




**Language Selection screen**

7. Click **Next**. The **Choose Install Location** screen opens.
8. Modify the default installation location if necessary, and then click **Install**. The installation process begins. When the process is completed select **Restart Now**, and then click **Finish**. A warning message appears.
9. In the warning message, click **OK**. The server restarts.

## See also

Creating the Required Folders



# Creating the Required Folders

After you install the UPlatform server, manually create the shared folders listed below. These folders will be used by SpeechMiner to store the audio, index, and backup files used by the system; ensure that enough storage space is available for these purposes on the machines on which you create the folders. All SpeechMiner machines should have access to these shared folders, and they should be shared with all groups and users that require access to them. It is recommended to create the folders on the same LAN as the SpeechMiner system components.

The folder names listed below are recommended, for convenience, but you can actually use any names you choose. In addition, you can create multiple folders for most of the folder types, as explained below. For information about configurating SpeechMiner to use these folders, see Sites & Machines.

**Note:** When you configure the shares, make sure to specifically give write permissions to the user installing SpeechMiner and to the system user (SMUSER), both under *Sharing* and under *Security*.

| Folder Name | Description | Quantity |
|---|---|---|
| **Input** | Folder in which interactions data and metadata will be placed by Uconnector when it retrieves them from the recording system; fetchers collect the data from `input` folders, prepare it for processing by SpeechMiner, and then place it into `store` folders | One folder for each fetcher task; if there are multiple recording systems, or multiple storage media used for storing the unprocessed data, a fetcher task must be created for each data source and for each `input` folder. For information about deciding how many fetchers to create, see Configuring Machines and Tasks. |

| | | |
|---|---|---|
| **Interaction Receiver Input** | Folder in which the audio files that are received from the Genesys Interaction Recording solution will be placed, and later processed by the Interaction Receiver.<br>**Note:** This is a different folder than the Input folder which is used by fetchers. | |
| **Store** | Folder in which interactions will be placed by fetchers to await processing by SpeechMiner | The system can have multiple `store` folders - for example, if there are multiple storage media used for storing the processed data, you can create a folder on each of them. |
| **Filtered** | Folder in which interactions with non-existant or inactive Programs will be placed | One for each site in the system |
| **Grammar** | The "package" folder, in which the rules for processing voice interactions, including those defined in SMART, are stored | One for the entire system<br>**Note:** If you want to have more than one copy of the folder, you can create additional folders and configure SpeechMiner to use them. If you do this, SpeechMiner will save the same content in each of the folders, so that you will have backups. |
| **Index** | Folder in which the system will store an index of calls, metadata, and events, so that they can be found quickly during searches | One for the entire system |
| **Backup** | Folder in which SpeechMiner will store backups of SMART definition sets (Program, Topic, and Category definitions) | One for the entire system<br>**Note:** If you want to have more than one copy of the folder, you can create additional folders and configure SpeechMiner to use them. If you do this, SpeechMiner will save the same content in each of the folders, so that you will have backups. |

### See also

Running the Setup Wizard

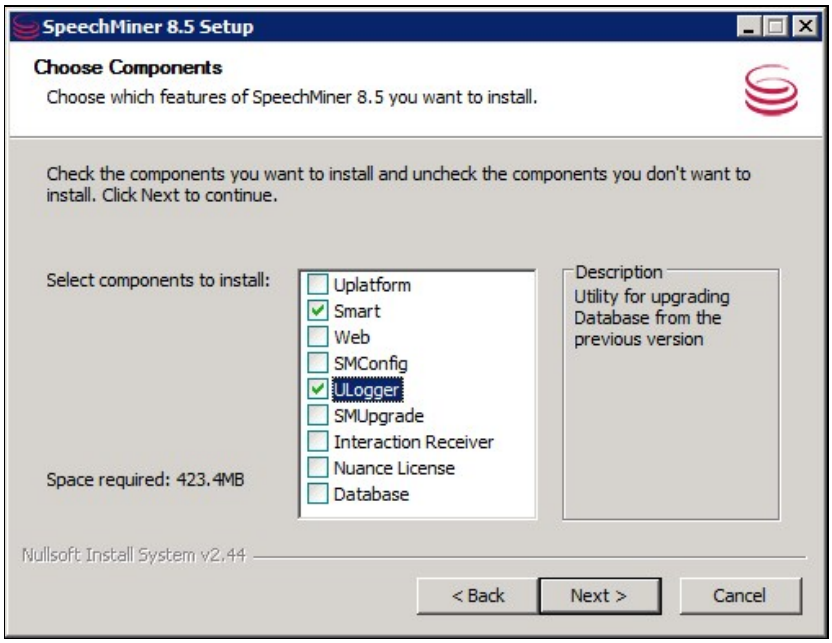


# Installing SMART

The SpeechMiner Administration Tool (SMART) is an application that enables users to configure the Speech Analytics system to search interactions for specific topics and other characteristics. SMART should be installed on the work station of each user who will be using it.

**To install SMART on a user's computer:**

1. On the Uplatform server machine, run the Setup Wizard, as described under Installing the Components.
2. Follow the instructions there, until the **Choose Components** screen opens.

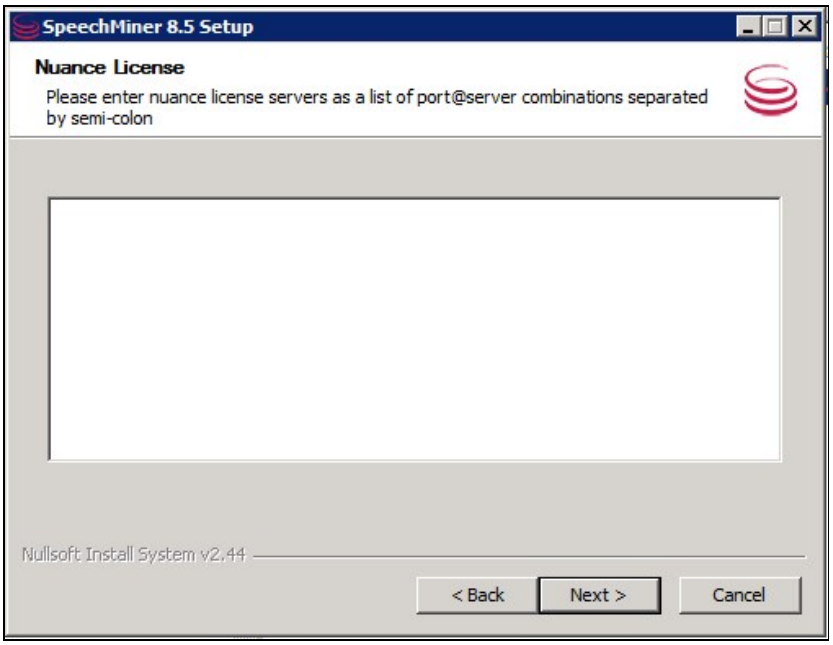



**Choose Components screen**

3. In the **Choose Components** screen, select the components as follows:

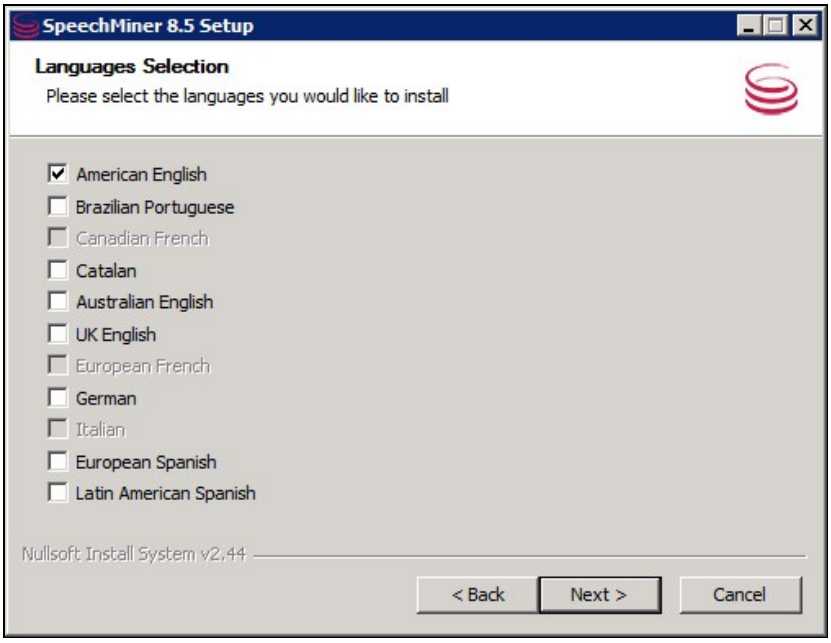
| Component | Comments |
|---|---|
| Smart | |
| ULogger | It is recommended to install ULogger on any machine on which Uplatform is installed. |
| Nuance License | If you are installing SpeechMiner in either Analytics and Recording UI mode, or Analytics Only mode, Smart must have access to a Nuance license server. You can install the license server anywhere in your network. If you want to install the Nuance license server on this machine, select this.<br>If you do not select **Nuance License**, and you are installing SpeechMiner in either Analytics and Recording UI mode, or Analytics Only mode, you will be prompted, in the next screen, to enter the name of one or more existing Nuance license servers. |
| SMConfig | If you want to use SMConfig on the machine, select it. |

4. Click **Next**.
   - If you included **Nuance License** in the components you selected, the **Language Selection** screen opens. Skip the next step.
   - If you did not include **Nuance License**, the **Nuance License** screen opens.
5. In the **Nuance License** screen, enter the names of one or more Nuance license servers you want to use, as explained in the screen, and then click **Next**.




**Nuance License screen**

6. In the **Language Selection** screen, select the languages you want to install.




**Language Selection screen**

7. Click **Next**. The **Choose Install Location** screen opens.
8. Modify the default installation location if necessary, and then click **Install**. The installation process begins. When the process is completed select **Restart Now**, and then click **Finish**. A warning message appears.
9. In the warning message, click **OK**. The server restarts.

## See also

System Requirements

# Configuring Permissions

This section describes the permissions that must be set for the functional SpeechMiner domain user (SMUSER) and for users of SMART.

### See also





# For UPlatform (SMUSER)

SpeechMiner uses a a domain user account as the credentials for all the registered SpeechMiner services. Your IT department should be able to create this account for you. The domain user should be assigned permissions on all machines on which the UPlatform service will run, as described below. The user account should be created and assigned the required permissions before you begin configuring SpeechMiner.

**Note:** In this guide, ths functional user account will be called *SMUSER*.

### Groups

SMUSER should be added to the following groups:

- Power Users
- Performance Monitor Users (if this group exists on the machine)

### Folder Properties

In the Properties of the following folders, assign permissions to SMUSER as follows:

**Note: Tab** indicates the tab in the **Properties** dialog box in which the permission can be assigned.

| Folder | Tab | Permission | Comments |
|---|---|---|---|
| Genesys installation folder | Security | Modify | Usually `C:\Program Files (x86)\Genesys\Software` |
| Genesys data folders | Security | Modify | E.g. `C:\data` - where the `data\input` and `data\filtered` folders are located |
| Genesys data folders | Sharing | Change | E.g. `C:\data` - where the `data\input` and `data\filtered` folders are located |
| `C:\Program Files (x86)\Genesys\Software\utopy\product\WEB\App_Data` | Security | Read/Write | This is for the impersonation user specified in the `web.config` file. |

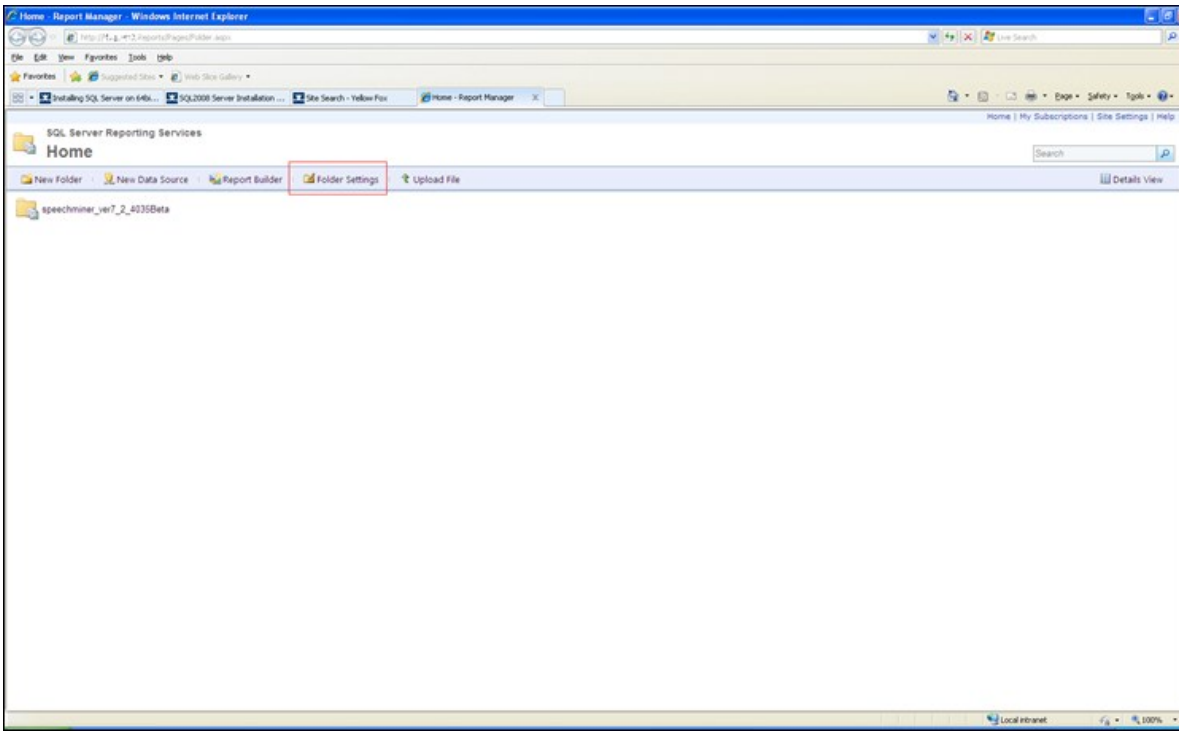
## Report Server

On the report server, assign the Content Manager role to SMUSER, as follows:

### To assign the Content Manager role to SMUSER:

1. On the database server, open a browser, and navigate to `//<database server name>/reports`. The SQL Server Reporting Services manager opens.

   **Note:** If the Windows UAC (User Account Control) is active on the server, open the browser by right-clicking it's icon and then selecting **Run as administrator**.

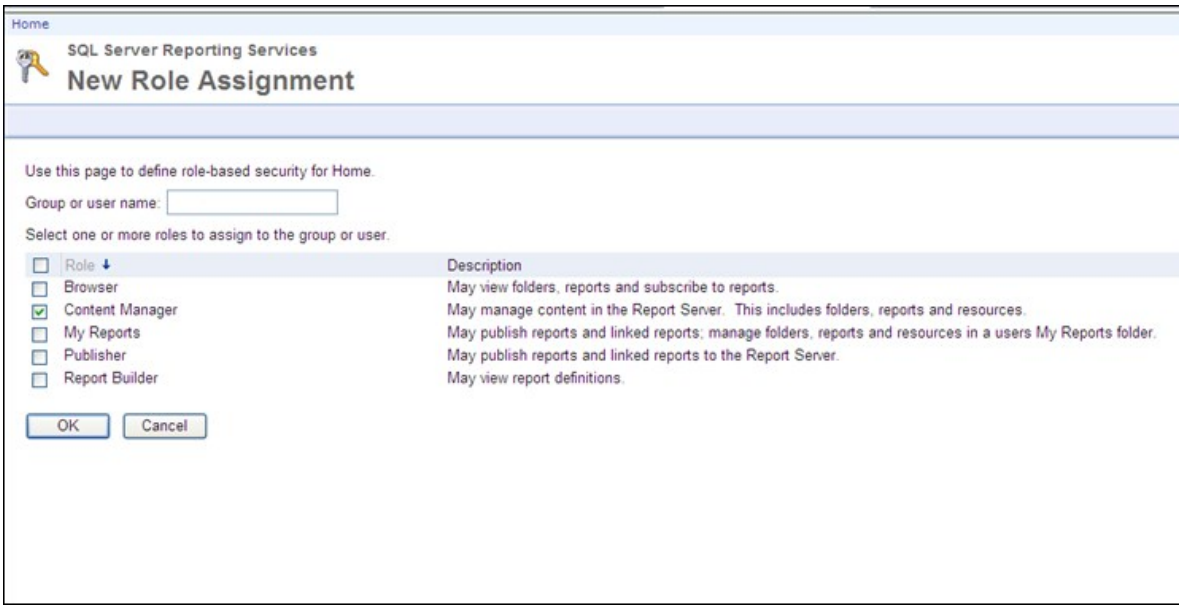



SQL Server Reporting Services manager

2. Select the **Folder Settings** tab.

**Note:** If you cannot access this folder, because you are repeatedly asked for your credentials, and then the screen turns blank, do the following: In `rsreportserver.config`, remove the value **RSWindowsNegotiate** and ensure that **RSWindowsNTLM** is specified. (For more information about this problem, and some other solutions, see http://blogs.msdn.com/b/lukaszp/archive/2008/03/26/solving-the-reporting-services-login-issue-in-the-february-ctp-of-sql-server-2008.aspx)

3. If SMUSER is not on the list, click **New Role Assignment** and add it. If it is on the list, click **Edit** to edit the existing account settings.
4. Select **speechminer database** > **sme**.
5. In the **Security** tab, click **New Role Assignment**.The New Role Assignment tab opens.
6. Under **Group or user name**, enter the user name (SMUSER).
7. Select the **Content Manager** checkbox.




**New Role Assignment tab**

8. Click **OK**. The Content Manager role is assigned to SMUSER.

### Directories Used by ASP.NET

Give SMUSER access permissions to the IIS metabase and other directories used by ASP.NET. To do this, an administrator can run this command:

```
aspnet_regiis.exe -ga "{domain}\{user}"
```

### See also

For UConnector
For SMART
For the Web Server



# For UConnector

A functional UConnector user should be assigned the permissions listed below. Note that you can use SMUSER for this purpose; it is not necessary to create a dedicated domain user for this.

- **Recording-system shared folder:** Read permissions

- **SpeechMiner input folder:** Read/write permissions

### See also

For UPlatform (SMUSER)
For SMART
For the Web Server



# For SMART

Any user who will run SMART should have the following permissions:

| Folder | Permission | Comments |
|---|---|---|
| SpeechMiner installation folder | Read/write | Usually `C:\Program Files (x86)\Genesys\Software` |
| Package Root Path | Read/write | The path configured in the **Packages folders** text box in the **Sites and Machines** section. |
| Nuance installation folder | Read/write | E.g., `C:\Program Files\Nuance` |

In addition, all SMART users should have permission to use .net encryption. To add this, an administrator can run the following command:

```
aspnet_regiis -pa "NetFrameworkConfigurationKey" "{domain}\{user}"
```

### See also

For UPlatform (SMUSER)
For UConnector
For the Web Server



# For the Web Server

Once you have installed the SpeechMiner web server, you should set the following permissions:

- On the folder **`C:\Windows\Microsoft.NET\Framework\v2.0.50727\Temporary ASP.NET Files`**, give "Modify" permissions to the domain user that SpeechMiner will impersonate (SMUSER - see For UPlatform, above).
- Set read/write/modify permissions to the IIS user/group (IUSR_XXX in Windows XP or Network Service group in Windows Server 2003 and above) and the operational domain user (SMUSER) on the SpeechMiner installation folder.
- Set read/write/modify permissions to the IIS user/group (IUSR_XXX in Windows XP or Network Service group in Windows Server 2003 and above) on the windows temp folder.

### See also

For UPlatform (SMUSER)
For UConnector
For SMART

# Configuring Internet Explorer

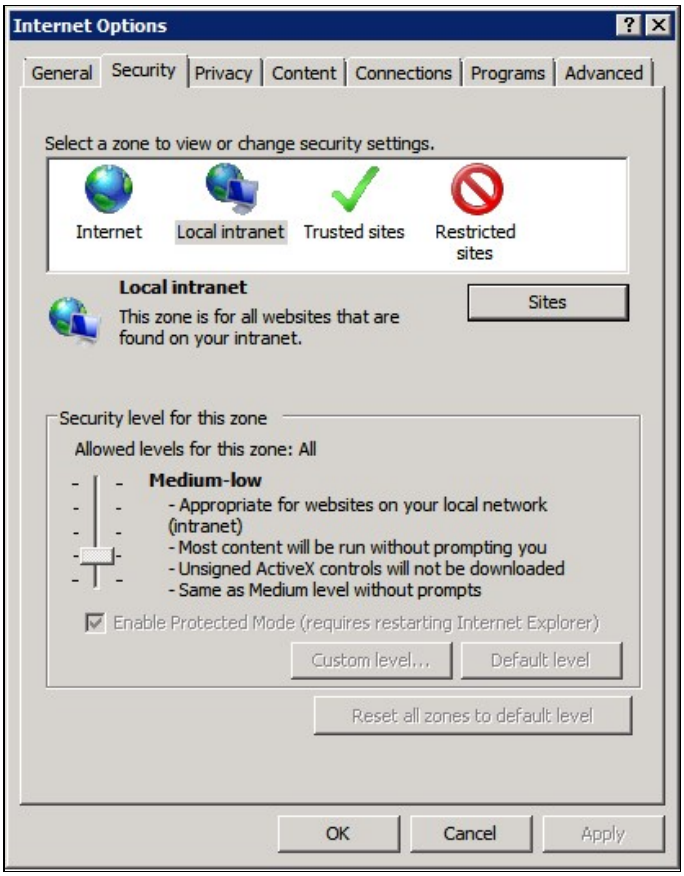
End users of SpeechMiner access its browser-based interface from Internet Explorer, which connects to the SpeechMiner Web server via the local network. In order for the SpeechMiner interface to work properly, you must configure each user's Internet Explorer as explained below. The configuration changes that must be implemented are to allow pop-ups from the SpeechMiner domain, to treat the SpeechMiner domain as part of the local intranet (or as a trusted site), and to enable automatic updating of cached of web pages. In addition, if Internet Explorer is running on a Windows Server 2008 machine, the Enhanced Security Configuration feature should be turned off.

**Note:** If the SpeechMiner domain is treated as part of the local intranet, **Local intranet** should appear in the Status Bar at the bottom of the Internet Explorer window whenever the browser is displaying a SpeechMiner page.


"Local intranet" in Status Bar of Internet Explorer

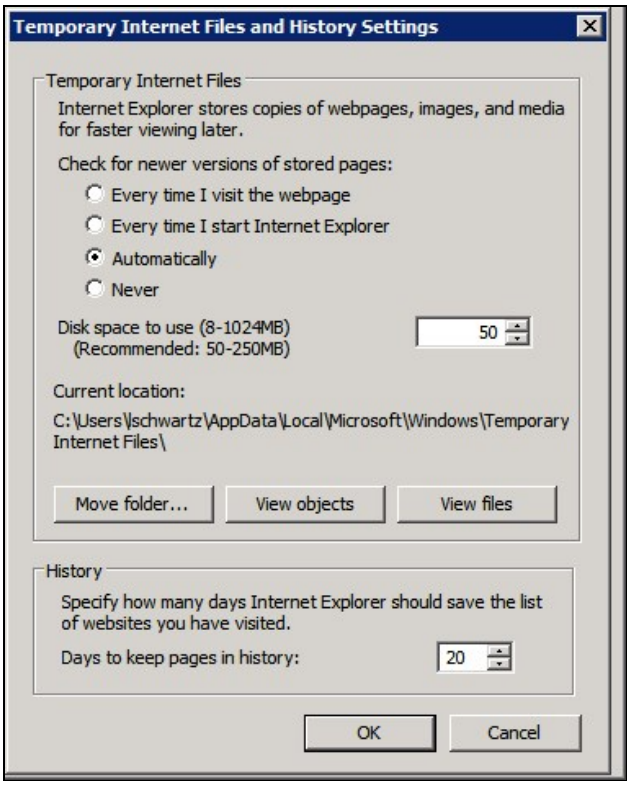
### To configure Internet Explorer:

1. In the **Internet Options** dialog box, **i**n the **Security** tab, select **Local Intranet**.




Security tab with Local Intranet selected

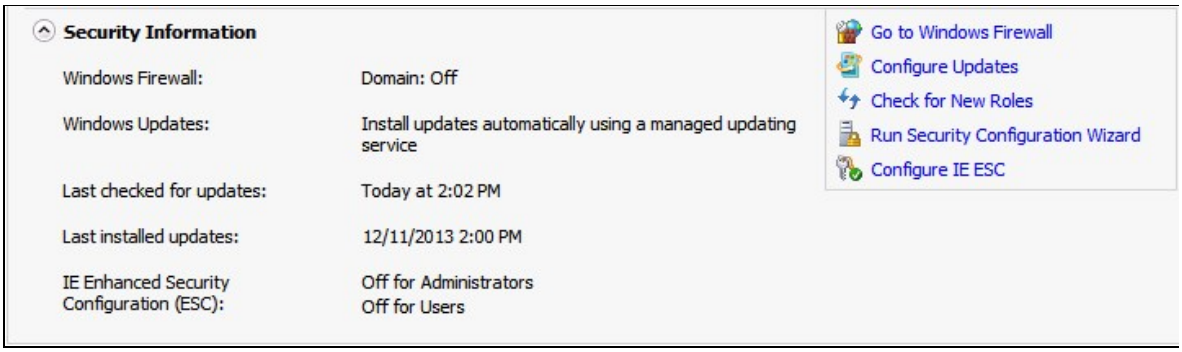
2. Add the SpeechMiner domain to the list of web sites in the Local Intranet zone.
3. In the **Privacy** tab, add the SpeechMiner domain to the list of web sites that are permitted to open pop-ups.
4. In the **General** tab, under **Browsing history**, select **Settings**.
5. Under **Check for newer versions of stored pages**, select **Automatically**.




"Check for newer versions of stored pages" set to "Automatically"

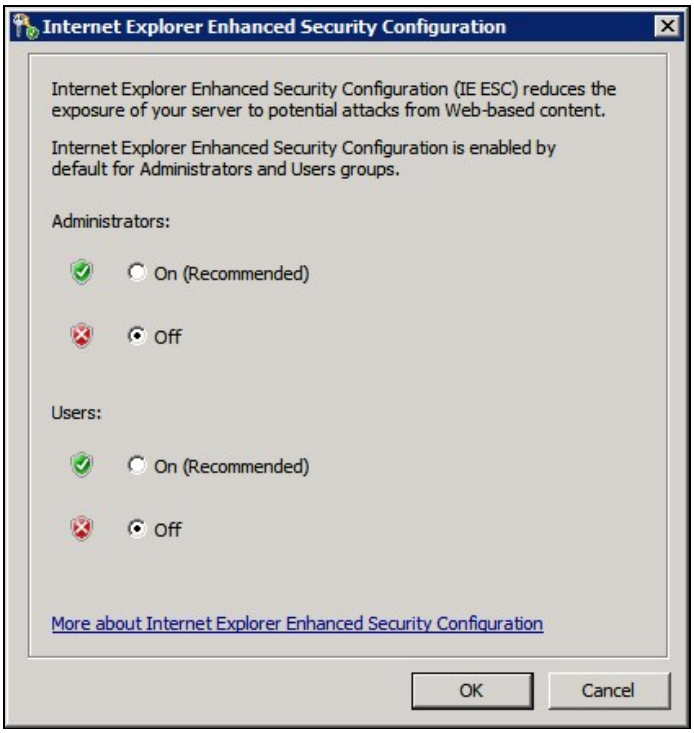
### To turn off the Enhanced Security Configuration feature on Windows Server 2008:

1. In the **Server Manager**, in the home page (the top level), expand the **Security Information** section. The current settings for the Enhanced Security Configuration feature appear under IE Enhanced Security Configuration (ESC).




Security Information section expanded

2. If the current settings are not **Off for Administrators** and **Off for Users**, click **Configure IE ESC**. The **Internet Explorer Advanced Security Configuration** dialog box opens.




**Internet Explorer Advanced Security Configuration dialog box**

3. For both **Administrators** and **Users**, select **Off**.
4. Click **OK**.

## See also

System Requirements
What Is Installed
Ports Used by System Components
Before You Begin
Installing the Components
Installing the SpeechMiner Database
Installing the SpeechMiner Web
Installing the Interaction Receiver
Installing the UPlatform Server
Installing SMART
Configuring Permissions

# Configuring SpeechMiner

This section explains how to configure SpeechMiner after it is installed. Most of the configuration is performed in the SMConfig application. This is a Windows application that can be installed on any machine on your network. Once it is installed, it can be used, from any machine on which it is installed, to configure the entire SpeechMiner system. (For information about installing SMConfig, see Installing the Components.)

### See also

Required Permissions
Encrypting the Connection to the Database
Opening SMConfig
Saving Changes
Sites & Machines
Reports
Licenses
Services
Audio
Index
Setting the Date and Time
Configuring a VMWare Server
Additional Configuration for Recording Modes

Welcome
Introduction
Installing SpeechMiner



# Required Permissions

The user account from which SMConfig is opened must have *read*, *write*, and *modify* permissions on the local installation folder and files.

For most of the configuration changes you can perform using SMConfig, you will need *Administrator* privileges on the current machine or on other machines. For each configuration task described below, the required permissions are listed. If you are running SMConfig as a non-administrator user, and errors are generated during the configuration process, make sure that you have the right permissions for the task.

In Windows Vista and later versions of Windows, if **User Access Control** is enabled, SMConfig will automatically require you to run it with administrator privileges. If **User Access Control** is disabled, it is recommended to manually run SMConfig with administrator privileges. To do this, right-click the **SMConfig** icon, and then select **Run as administrator**.

### See also

Encrypting the Connection to the Database
Opening SMConfig
Saving Changes
Sites & Machines
Reports
Licenses
Services
Audio
Index
Setting the Date and Time

Configuring a VMWare Server
Additional Configuration for Recording Modes



# Encrypting the Connection to the Database

The connection between SMConfig and the database can be encrypted to ensure that confidential data cannot be intercepted and viewed by unauthorized people. This option is configured by the system administrator on the SQL database server. Three encryption settings can be defined there:

- Always use encryption
- Never use encryption
- Use encryption when the user requests it

If the latter setting is implemented in your system, you can choose to use an encrypted connection when you log into SMConfig. If the database server is configured to always encrypt or not to encrypt at all, you cannot change this option when you log into SMConfig, and selecting one of the options has no affect.

## See also

Required Permissions
Opening SMConfig
Saving Changes
Sites & Machines
Reports
Licenses
Services
Audio
Index
Setting the Date and Time
Configuring a VMWare Server
Additional Configuration for Recording Modes



# Opening SMConfig

SMConfig can be run on any machine in your system in which it is installed. During installation, an **SMConfig** icon is placed on the desktop of the machine.

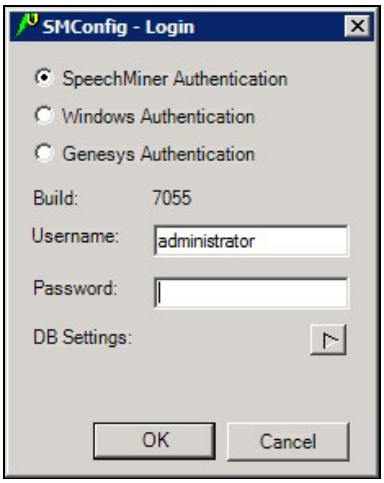
You can log into SMConfig in one of the following ways:

- Using a SpeechMiner user account
- Using the Windows account you used to log onto the PC
- Using a Genesys user account and connecting to a Genesys configuration server for confirmation

### To open SMConfig:

1. On the desktop of the computer, double-click the **SMConfig** icon. The **SMConfig - Login** dialog box appears.


**SMConfig icon**



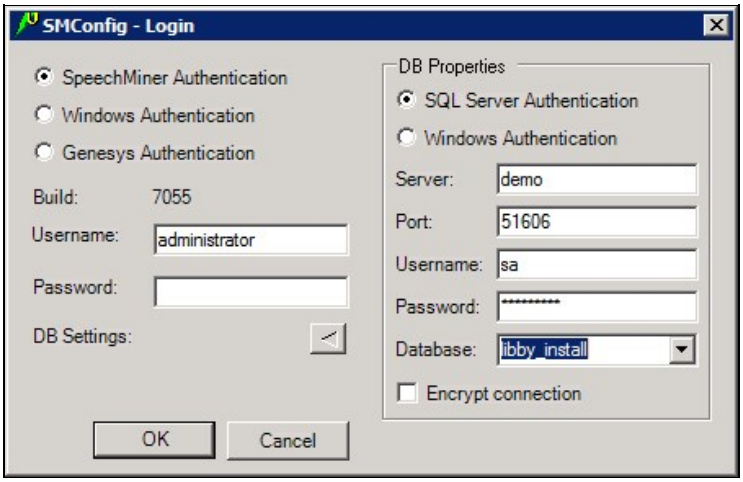

**SMConfig - Login dialog box**

2. Select the type of user account you want to use to log into SpeechMiner:
   - **SpeechMiner Authentication:** Use a username and password that are managed by SpeechMiner.
   - **Windows Authentication:** Use the username and password you used to log into Windows.
   - **Genesys Authentication:** Use a Genesys username and password.

   **Note:** If you are not sure which option to choose, consult your system administrator.
3. In the **Username** and **Password** fields, type your username and password.

   **Note:** If you are logging in using Windows Authentication, your username and password are inserted autoamtically, and the username is in the form **`domain\username`**.
4. If this is the first time you are opening SMConfig on this computer, or if you want to change the existing database settings, click the **DB Settings** arrow. The **Login** dialog box expands and displays the database settings.

   **Note:** If you do not need to set or modify the database settings, skip this and the next step.




**Expanded Login dialog box showing database settings**

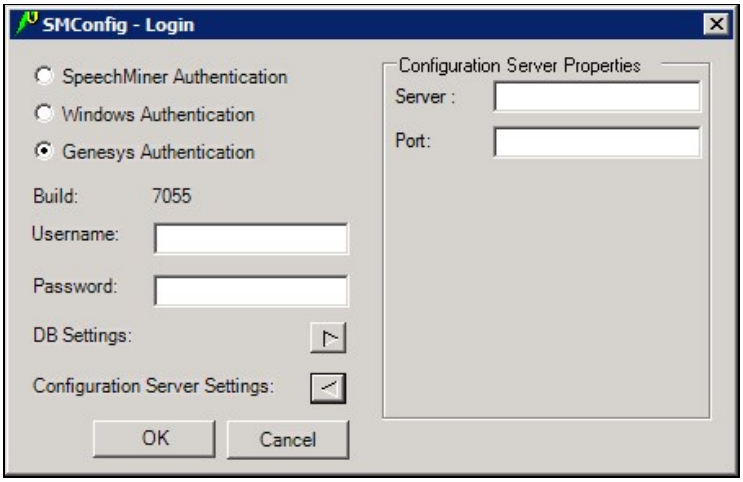
5. Fill in the fields as follows.

| Field | Description |
|---|---|
| SQL Server Authentication / | Select **SQL Server Authentication** if the username and password for accessing the database are managed on the SQL server. Select**Windows Authentication** if you log into the database using the same username and password you used to log into Windows. |

| | |
|---|---|
| Windows Authentication | **Note:** If you are not sure which option to choose, consult your system administrator. |
| Server | The name of the database server<br>**Note:** If the database is a named instance on the server, enter both the server name and the instance name, in the format `server_name\instance_name`. |
| Port | The port to use to connect to the database server<br>**Note:** This should normally be left as <default>, even if the database is a named instance. |
| Username | The username to use to connect to the database<br>**Note:** This field is not available when **Windows Authentication** is selected. In this case, the username is automatically taken from the username used to log into Windows. |
| Password | The password to use to connect to the database<br>**Note:** This field is not available when **Windows Authentication** is selected. In this case, the password is automatically taken from the username used to log into Windows. |
| Database | The name of the database |
| Encrypt connection | If encrypting the connection to the database is optional in your system, select this option to activate encryption.<br>**Note:** If encryption is always turned on in your system, selecting or clearing this option will have no effect. If encryption is always turned off in your system, selecting this option will prevent SMConfig from connecting to the database server and you will not be able to log in. In this case, an error message saying, "Could not connect to database. Please check database settings," will appear when you click **OK**. |

6. If you have chosen to log in using Genesys authentication, an additional option, **Configuration Server Settings**, appears below **DB Settings**. If this is either the first time you are opening SMConfig on this computer, or you want to change the existing Genesys configuration server settings, click the **Configuration Server Settings** arrow. The **Login** dialog box expands and displays the configuration-server settings.

   **Note:** If you do not need to set or modify the Genesys authentication settings, skip this and the next step.

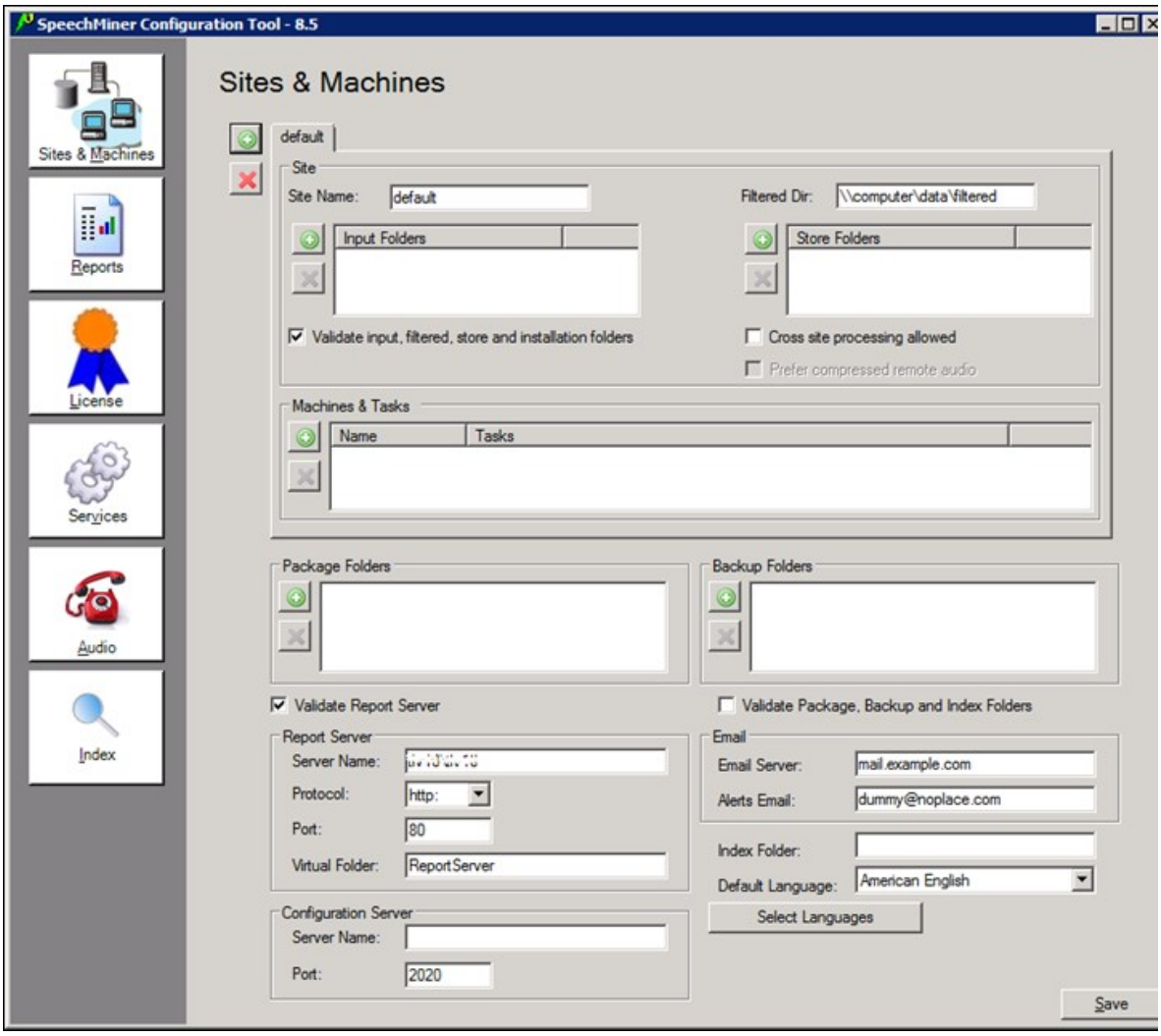



**Expanded Login dialog box showing configuration-server settings**

7. Enter the name of the server and the port to use to verify the user information, as follows.

| Field | Description |
|---|---|
| Server | Enter the name of the configuration server. |
| Port | The port to use to connect to the configuration server in order to verify the user information |

8. Click **OK**. You are logged into the system, and the **SpeechMiner Configuration Tool** (SMConfig) window opens with the first screen, **Sites and Machines**, displayed.




**Sites and Machines screen of the SMConfig window**

The SMConfig interface contains panels (**Sites and Machines**, **Reports**, etc.) in which various categories of configuration settings can be accessed.

### To open a panel:

- On the left side of the window, select the icon of the panel. The panel opens on the right side of the window.

## See also

Required Permissions
Encrypting the Connection to the Database
Saving Changes
Sites & Machines
Reports
Licenses
Services
Audio
Index
Setting the Date and Time
Configuring a VMWare Server
Additional Configuration for Recording Modes

# Saving Changes

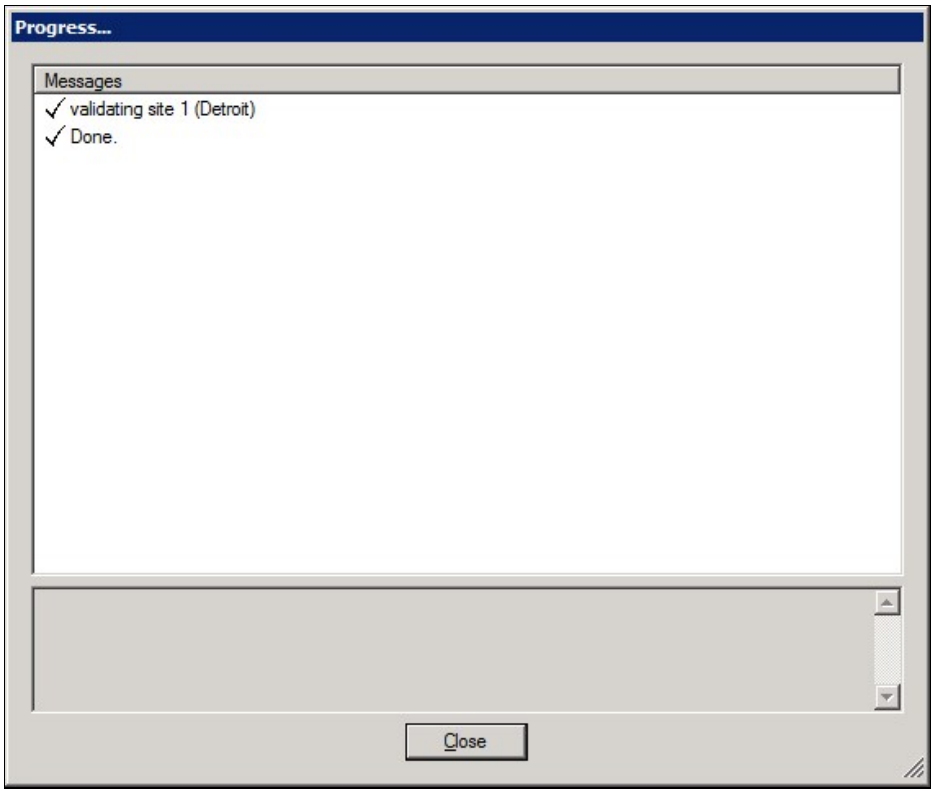
Changes you make in one panel of SMConfig are saved temporarily if you open a different panel. Nonetheless, you must click **Save** in each panel to save the settings in that panel.

After you click **Save**, before the settings are actually saved, some settings go through a validation process. Validation ensures that the locations specified for folders and files exist and can be accessed, and checks that certain important parameters are configured properly. Certain key settings are always validated when **Save** is selected; you can choose to have the system validate certain others if you wish.

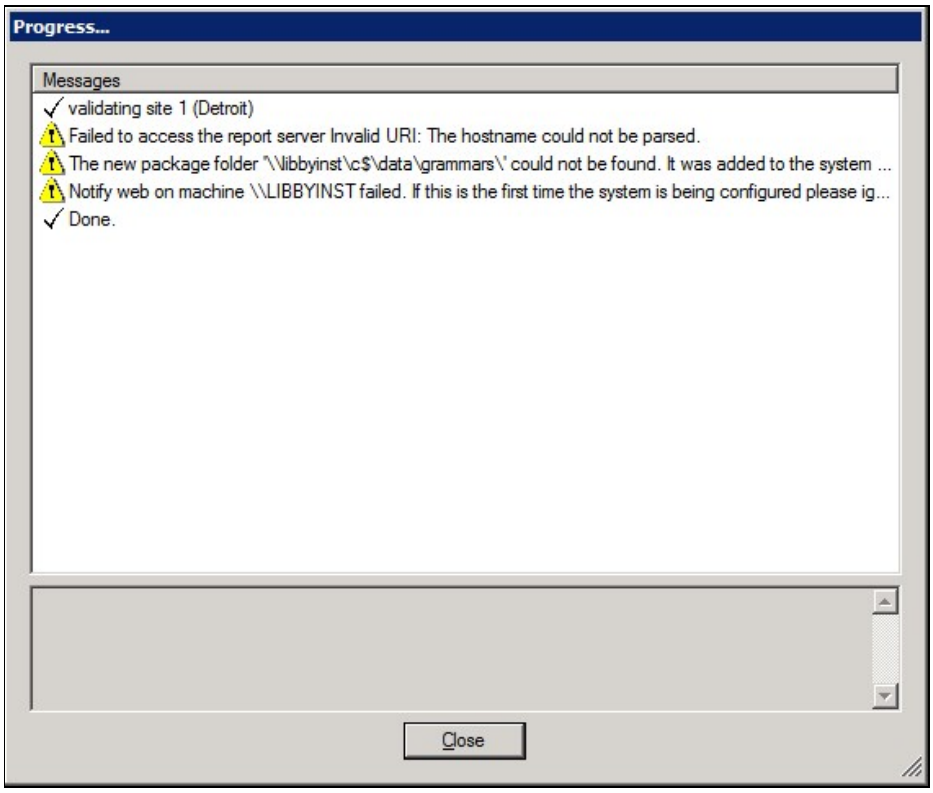
During the validation process, a **Progress** window is displayed. The window lists the stages of the validation process as they are completed, with an icon indicating the status of each stage.

| Icon | Description |
|---|---|
| ✓ | **Success:** Validation of the stage was successful. |
| ⚠ | **Warning:** Validation of the stage was successful, but some problematic issues were detected. |
| ✗ | **Failure:** Validation of the stage failed, because of the problems indicated. No changes to the configuration were saved. |

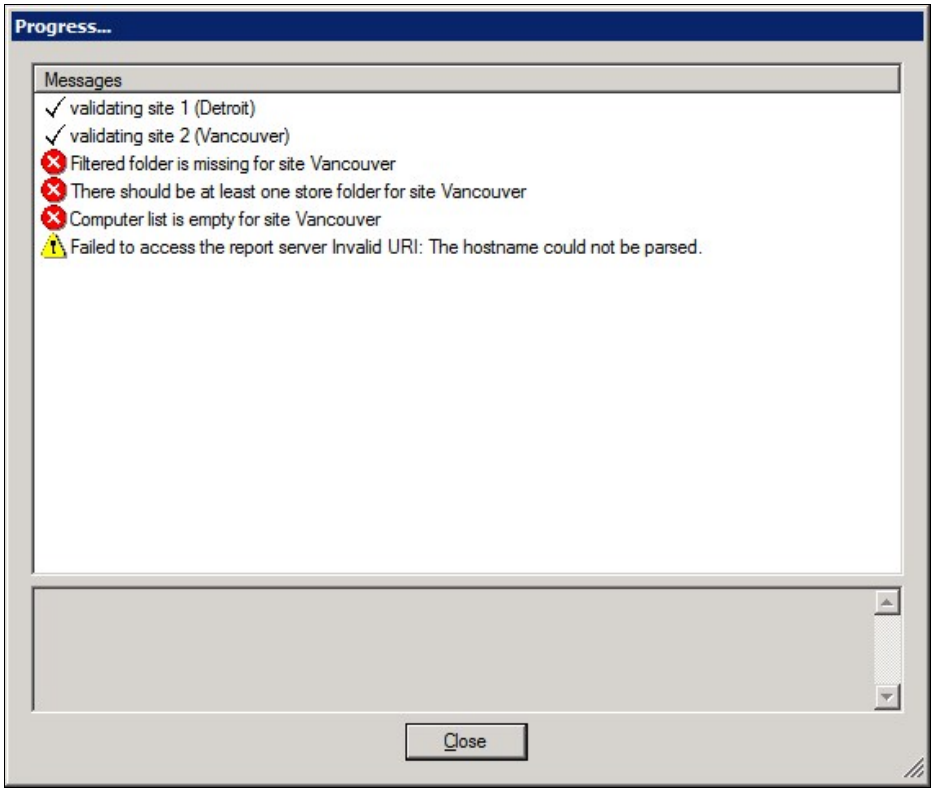
When the process is complete, the **Close** button at the bottom of the window becomes active. If validation was successful, the last line of the log says ✓**Done**. If the Progress window contains any stages that failed (indicated by ✗), the entire save process is cancelled.




**Validation process completed successfully**



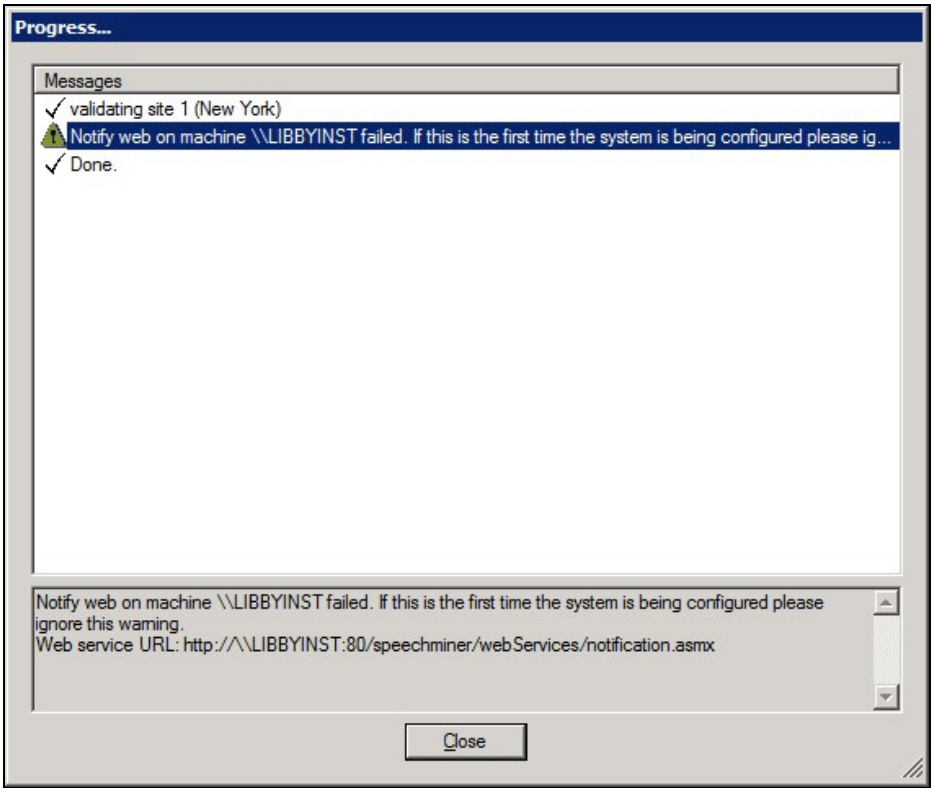

**Validation process completed successfully, with warnings**




**Validation process failed**

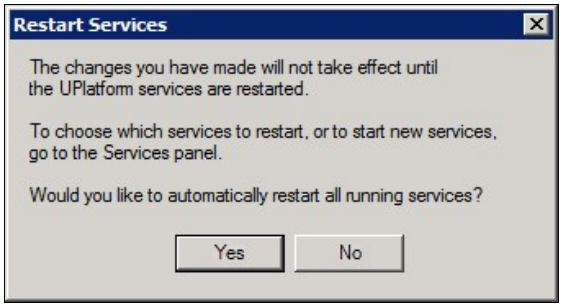
**To see details about a warning or failure:**

- In the **Progress** window, select the item. Details are displayed at the bottom of the window.




**Details displayed for the selected item**

After the configuration changes are successfully saved, a **Restart Services** message appears.




**Restart Services message**

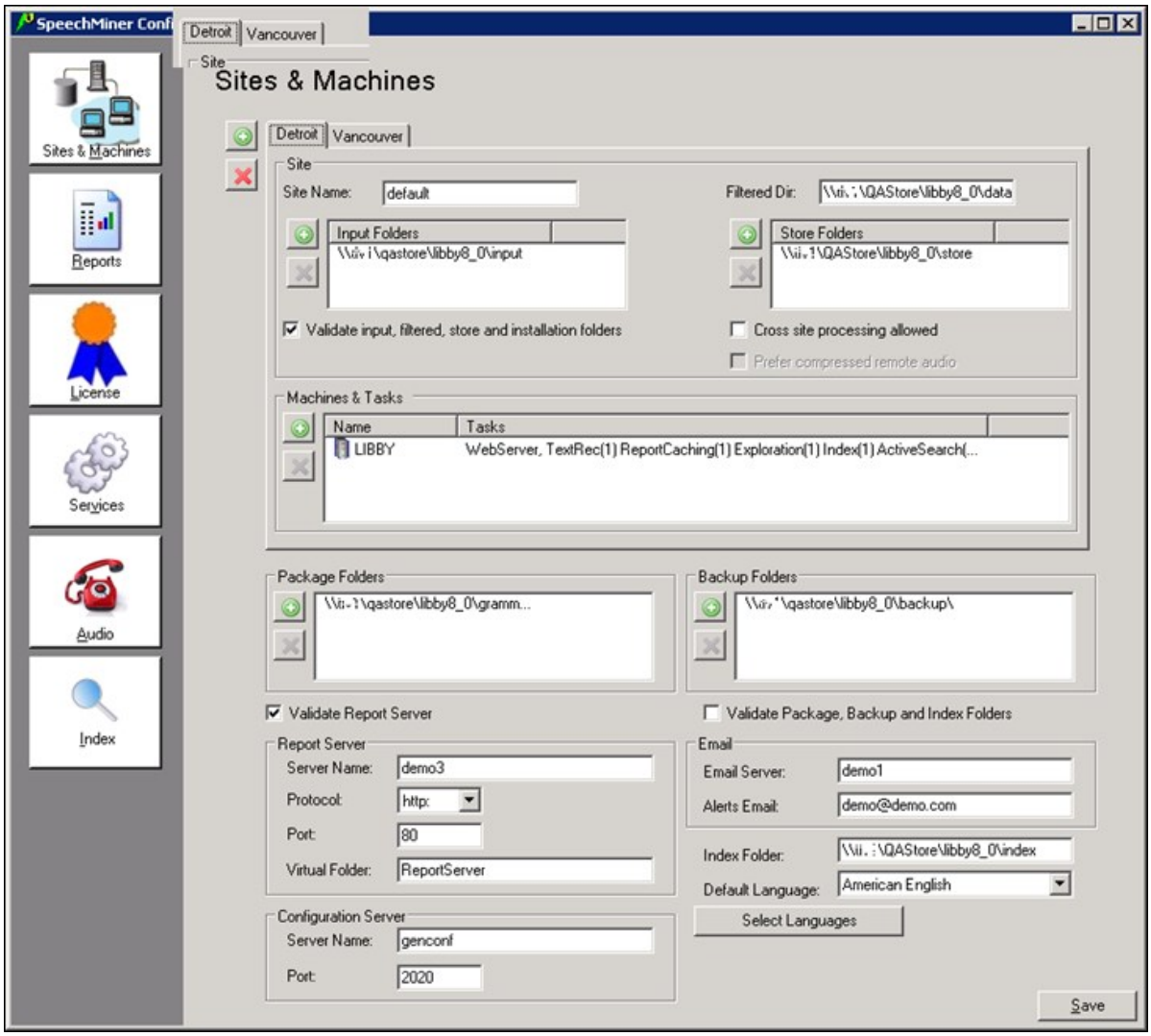
Select **Yes** to restart all of the services, or **No** if you prefer to restart them later (either after you make additional configuration changes, or manually from the **Services** panel.)

## See also

Required Permissions
Encrypting the Connection to the Database
Opening SMConfig
Sites & Machines
Reports
Licenses

# Sites & Machines

The first panel of the SMConfig application, **Sites and Machines**, is used to configure the layout of the system as well as some other system-wide parameters.




**Sites and Machines screen**

## See also

Configuring Sites
Configuring Machines and Tasks
Remote Index Search

# Configuring Sites

A site is a single geographical location in which SpeechMiner servers are located. One SpeechMiner system, which has one database, can have a number of sites. All the sites configured in the **Site** section of the **Sites and Machines** panel are locations that connect to the SpeechMiner database you entered when you logged into SMConfig. If your SpeechMiner is set up in more than one location, configuring each location as a site helps to minimize the bandwidth needed for call processing.

Every SpeechMiner system has at least one site. The first site is created automatically, and is initially called "default." Immediately after SpeechMiner is installed, the "default" site is automatically configured to include all the servers in the local network on which SpeechMiner components were installed. You can change the name of the default site, and add sites, as required. If you create new sites, you can move servers that are listed under the default site to other sites.

## Required Permissions

Validation of the `input`, `filtered`, `store`, and `installation` folders can only be performed if the user account used to log into SMConfig has administrator permissions on the machine that is being configured. This is because SMConfig must use the $ share to check that the installation folder exists.

## Configuring the Default Site

Some of the settings in the **Sites and Machines** panel are configured per site, and others are configured for the entire system. This section explains how to configure the default site by configuring the site and system settings defined in the **Sites and Machines** panel.

After you configure the settings, and click **Save** to save them, SMConfig automatically validates the key folders you specified by checking that they exist and are configured with the required permissions. Validation is always performed on the items listed under **Machines and Tasks**. Validation of other settings is optional, as indicated below. For additional information, see Saving Changes.

### To configure the default site:

1. In the **Sites and Machines** panel, fill in the fields as follows:

| Field | Description |
|---|---|
| Site Name | The name of the site. Initially, the site is called "default." Modify this field to change the name. |
| Filtered Dir | Enter the location of the folder called filtered that you created (see Creating the Required Folders). For example, the required path format is `\\computer\data\input`. |
| Input Folders | Click  to add a line to the list. Then, modify the line to give the location of the `input` folder you created (see Creating the Required Folders).<br>If you will be using multiple `input` folders for this site, repeat this procedure to add additional lines to the list, as necessary. For example, the required path format is `\\computer\data\input`. |
| Store Folders | Click  to add a line to the list. Then, modify the line to give the location of the `store` folder you created (see Creating the Required Folders). |

| | |
|---|---|
| | If you will be using multiple `store` folders for this site, repeat this procedure to add additional lines to the list, as necessary. |
| Validate input, filtered, store, and installation folders | Select this option if you want SMConfig to validate the `input`, `filtered`, `store`, and `installation` folders after you click **Save** (see Saving Changes). |
| Cross site processing allowed | If your system will have more than one site, select this option to enable processing of interactions from other sites at this site. When this option is selected, the Recognizers at this site will give priority to processing local files, but no local files need to be processed, they will process calls from remote locations. Selecting this option can improve the overall performance of the system, but it does mean that audio files will be transmitted over the network. |
| Prefer compressed remote audio | If cross-site processing is activated, select this option to give priority to compressed audio files if they are available. If this option is selected, when call data is transmitted from a remote site to this site for processing, the system will send the compressed versions of calls if they are available. In this case, the compressed audio will be decompressed before being processed by the Recognizer. Even so, the quality of the audio input may be diminished slightly, and this may impact the recognition quality.<br>**Note:** This option is only available when **Cross site processing allowed** is selected. |
| Machines and Tasks | List all the SpeechMiner machines at the site, and configure the tasks that will run on each machine, as explained under Configuring Machines and Tasks. |
| Package Folders | Click  to add a line to the list. Then, modify the line to give the location of the `grammars` folder you created (see Creating the Required Folders).<br>If you will be using multiple `grammars` folders in your system, repeat this procedure to add additional lines to the list, as necessary. For example, the required path format is `\\computer\data\input`. |
| Backup Folders | Click  to add a line to the list. Then, modify the line to give the location of the `backup` folder you created (see Creating the Required Folders).<br>If you will be using multiple `backup` folders in your system, repeat this procedure to add additional lines to the list, as necessary. For example, the required path format is `\\computer\data\input`. |
| Validate Report Server | Select this option if you are configuring SpeechMiner to use a report server (whose details are given below this option). SMConfig will check that the parameters are correct.<br>**Note:** If you select this option, SMConfig will try to validate that the user who is running SMConfig has access to the report web service and can call methods using this web service. Therefore the user account that was used to run SMConfig must have the *Content Manager* role on the report server (see For UPlatform (SMUSER) . |
| Validate Package, Backup, and Index Folders | Select this option if you want SMConfig to check whether the Package, Backup, and Index folders exist and are configured properly. |
| Report Server | Fill in the fields in this area as follows:<br>▪ **Server Name:** The name of the machine on which the report server is installed<br>▪ **Protocol:** The protocol SpeechMiner should use to connect to the report server<br>▪ **Port:** The port SpeechMiner should use to connect to the report server<br>▪ **Virtual Directory:** The folder of the reports on the report server - usually named `ReportServer`. If the database is a named instance, enter both the folder name and the instance name, in the format `ReportServer_<instance_name>`.<br>**Note:** If you plan to use the report server, select **Validate Report Server** (see above). |
| Email | Fill in the fields in this area as follows:<br>▪ **Email Server:** The name of the email server SpeechMiner should use to send alerts, notifications, and reports<br>▪ **Alerts Email:** The email address SpeechMiner should use as the sender address when it sends email notifications |

| | |
|---|---|
| Index Folder | Click  to add a line to the list. Then, modify the line to give the location of the `index` folder you created (see Creating the Required Folders).<br>If you will be using multiple `index` folders in your system, repeat this procedure to add additional lines to the list, as necessary. For example, the required path format is `\\computer\data\input`. |
| Default Language | Select the default language for new Programs that are opened in SMART. (If additional languages are installed in SpeechMiner, the languages of individual Programs can be changed in SMART when the Programs are created.)<br>**Note:** Only the languages selected under **Select Languages** appear in the dropdown list. |
| Select Languages | Select all of the languages for which you will want to perform speech recognition. These languages will appear as language options in SpeechMiner and in SMART.<br>**Note:** In order to create and apply Programs in these languages, their language packs must also be installed. The language packs are installed as part of the SpeechMiner installation process (see Running the Setup Program and Installing SMART).<br>**Note:**The langauge selections here do not affect the language of the web-based interface. The interface language is selected in the settings of the Web server, under Machines and Tasks. |
| Configuration Server | If users will use Genesys credentials to log into any of the SpeechMiner components from this site, fill in the fields in this area as follows:<br>▪ **Server Name:** The name of the machine on which the Genesys configuration server is installed<br>▪ **Port:** The port SpeechMiner should use to connect to the configuration server |

2. Click **Save**. The system validates the settings, and then, if the validation is successful, implements them. The **Progress** window opens and shows information about the implementation process.

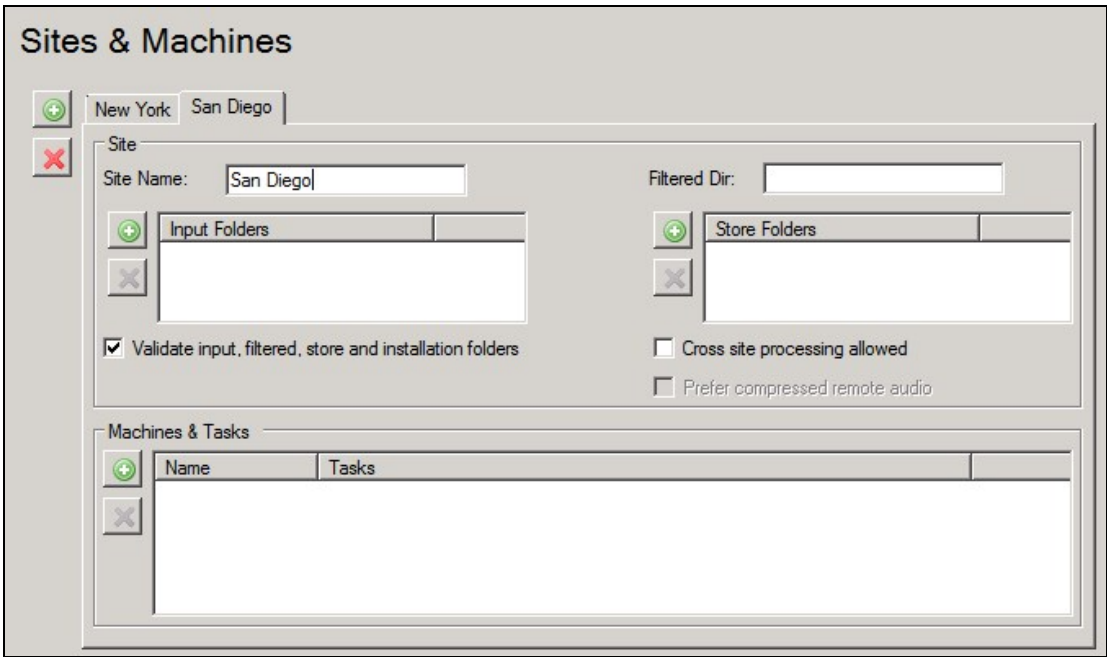
## Adding a Site

If your system will have servers at more than one site, you can add additional sites to the configuration in SMConfig. A new tab is added to the **Sites and Machines** panel for each site you create. The settings in the upper half of the panel, under **Sites** and **Machines and Tasks** are configured per site. The settings in the lower half of the panel are configured per system, and thus are not changed when you add an additional site.

Before you begin adding the site, create `filtered`, `input`, and `store` folders on a machine at the new site (see Creating the Required Folders).

### To add a site:

1. In the upper-left of the **Sites and Machines** panel, select  . A **New** tab is added to the site-setting area in the upper part of the panel.
2. Under **Site Name**, modify the name as required. The name of the tab is automatically updated.




**New site added**

3. Under **Sites** and **Machines and Tasks**, fill in the fields for the new site, as explained above.

### See also

Configuring Machines and Tasks
Remote Index Search



# Configuring Machines and Tasks

The Sites and Machines panel should list all the machines used by SpeechMiner at each site, and the tasks they will run. Before you begin configuring the settings in this panel, map out the machines in your system, their specifications, the sites at which they are located, and the tasks that must be performed at each site. Using this information, you can decide which tasks to run on each machine.

## Choosing Which Tasks to Run on Each Machine

Before you can configure the machines and their tasks, you must decide which tasks to assign to each machine. Each machine can have a number of different roles at one site. The entire system must include machines that fill all of the following roles:

- **Web server:** Runs the SpeechMiner web-based interface
- **Interaction Receiver:** Used for the Recording UI and Recording+Analytics modes. It receives interaction data and metadata from the Genesys Interaction Recording system, inserts it into the SpeechMiner database, and places the data files in the `Store` folder to await processing
- **Fetcher:** Takes unprocessed interaction data and metadata from the `input` folder (where the UConnector placed it after retrieving it from the recording system), inserts it into the SpeechMiner database, prepares the data files for processing by SpeechMiner, and places it in the `store` folder to await processing
- **Call Recognizer:** Processes call audio according to the requirements of the Program to which the call belongs, by transcribing the text and identifying Topics and other events in it
- **Indexer:** Maintains an index of calls, metadata, and events, so it can be searched quickly
- **Report caching:** Runs reports that are included in active users' Views pages overnight so that they can be displayed quickly in their widgets when the users open their Views pages; the amount of time to store cached results is configured in the Reports

panel.

- **Active Search Manager:** Enables the Active Search feature to work in the web-based interface
- **Exploration:** Performs the data analysis required for the Exploration feature of the web-based interface
- **Recategorizer:** Assigns Categories to the processed interactions in accordance with the Category definitions defined in the system
- **Text Recognizer:** Processes written interaction input data and identifies Topics and other events in it

Normally, each site will have:

- One Web server
- One or more fetchers
- Several Recognizers, Recategorizers, Active Search Managers, and Monitors
- One or more Indexer tasks (The Indexer tasks should only be configured on machines that are located on the same local network as the index folder.)

**Note:** Monitors run on all computers in the system. Because of this, there is no option to assign the Monitor task to specific machines, and it does not appear in the list of roles above.

**Note:** It is recommended to run the Recategorizers and the Active Search Managers on the same machines as the Recognizers.

### Optimizing the Number of Fetchers

In order to optimize the rate at which interaction data is fetched, multiple fetchers can run simultaneously. You can configure SpeechMiner to employ multiple fetchers on one or more machines. However, if too many fetchers run on a single machine simultaneously, the CPU may not be able to run all of its tasks efficiently. The optimal number of fetchers to run on a single machine is a function of how powerful the CPU of the machine is. As a rule of thumb, you can assume that 0.5 fetcher tasks per core on each fetcher machine is ideal. Thus, normally, two fetchers will maximize the CPU usage on a quad-core machine.

### Optimizing the Number of Call Recognizers

In order to maximize the speed of interaction processing, multiple Call Recognizers can run simultaneously. You can configure SpeechMiner to employ multiple Call Recognizers on one or more machines. However, if too many Call Recognizers run on a single machine simultaneously, the CPU may not be able to run all of its tasks efficiently. The optimal number of Call Recognizers to run on a single machine is a function of how powerful the CPU of the machine is and how many Topics must be recognized concurrently. As a rule of thumb, you can assume that 1.5 Call Recognizers per core on each Recognition server is ideal. Thus, normally, six Call Recognizers will maximize the CPU usage on a quad-core machine.

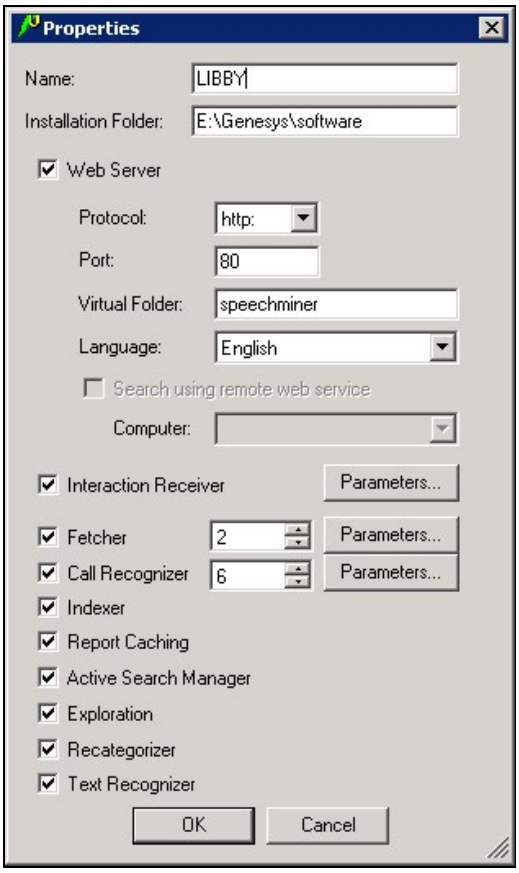
The Call Recognizers in your system are run by a special Recognition process (uRecognizer.exe) that is distinct from the Platform process (uPlatform.exe). Each Recognition process can manage multiple Call Recognizers. You can configure the maximum number of Call Recognizers that should be managed by each Recognition process. If the number is too low, performance may be impacted; if it is too high, the process may run out of memory. Running more than six Call Recognizers per process is not recommended. Unless you are running the processes on a virtual machine(VM), it is recommended to configure the system to run at most six Call Recognizers per process. Then, if you encounter memory problems, reduce this number as necesary to eliminate the problems. On a virtual machine, it is highly recommended to run only two Call Recognizers per process. If you run more than two Call Recognizers simultaneously on a VM, they slow one another down considerably. This recommendation is relevant for virtual machines running either on VMware or Hyper-V servers.

## Configuring the Properties of a Machine

You configure the properties of a machine by selecting the tasks it should perform.

#### To configure the properties of a machine:

1. Under **Machines & Tasks**, double-click the machine. A **Properties** window opens and displays the properties of the machine..




**Properties of selected machine**

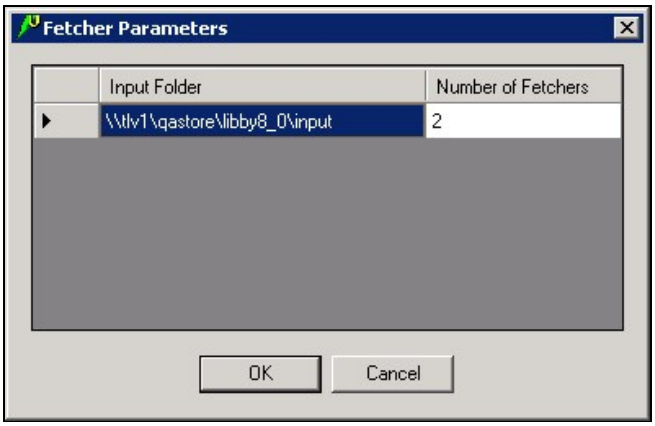
2. Select all of the tasks the machine should perform.
3. If you selected **Web Server**, select the protocol, specify the port and virtual folder, and select the langauge of the web-based interface.

   In addition, if the index folder used by the system is on a different network, select **Search using remote web service**, and then, under **Computer**, select the machine that the index folder is stored on. For additional information about this option, see Remote Index Search below.

4. If you selected **Interaction Receiver**, click the **Parameters** button to its right. In the dialog box, enter the location of the **Interaction Receiver** Input folder in which the audio files received from the Genesys Interaction Recording solution will be placed , and then click **OK**. Note that the Interaction Receiver Input folder is not the same folder as the Input folder used by the fetchers.
5. If you selected **Fetcher**, configure the **Fetcher** settings as explained below.
6. If you selected **Call Recognizer**, configure the **Call Recognizer** settings as explained below.
7. Click **OK**. The machine is added to the list of machines at the site.

### To configure the settings of the fetchers:

1. To the right of the **Fetcher** checkbox, select the number of fetchers that should run on the machine.
2. Click the **Parameters** button. The **Fetcher Parameters** window opens and displays a list of all the input folders that are configured for the site.

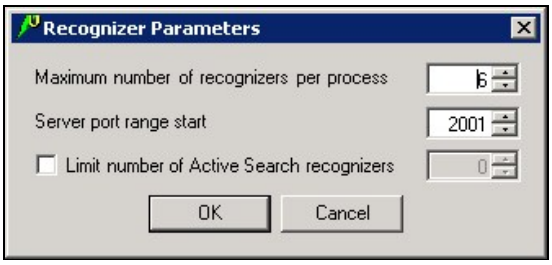



**Fetcher parameters**

3. Under **Number of Fetchers**, specify how many fetchers should retrieve interaction data from each input folder. Modify the values so that the sum of all the fetchers defined matches the number of fetchers that you specified should run on the machine.
4. Click **OK**.

### To configure the settings of the Call Recognizers:

1. To the right of the **Fetcher** checkbox, select the number of Call Recognizers that should run on the machine.
2. Click the **Parameters** button. The **Recognizer Parameters** window opens and displays a list of all the input folders that are configured for the site.




**Recognizer parameters**

3. Fill in the fields as follows:

| Field | Description |
|---|---|
| Maximum number of recognizers per process | How many Call Recognizers can be handled by each process |
| Server port range start | The ports that will be used by the Call Recognizers; the system will use multiple ports, as necessary, begining with the port entered in this field. By default, this is port 2001. You can change this number if it conflicts with other port settings in your system. |
| Limit number of Active Search recognizers | Active Search is a feature that users can access from the SpeechMiner web-based interface. It allows users to reprocess calls in order to search for new terms that were not sought in the original processing. Active Search uses the same Call Recognizers that are used for the original processing of calls. If Active Search is running at the same time as routine call processing, it may slow the routine processing down considerably by using its Call Recognizers.<br>If Active Search is frequently run during the time when routine call processing is performed, you may wish to limit the number of Call Recognizers that can be used by Active Search at any given time. To do so, enter the maximum number of Call Recognizers that Active Search can use at one time. |

4. Click **OK**.

### Adding Machines to a Site

You can add machines to sites as required.

**To add a machine to a site:**

1. Under **Machines & Tasks**, click  . A blank **Properties** window opens.
2. Fill in the name and properties of the machine, as explained above.
3. Click **OK**. The machine is added to the list of machines at the site.

### See also

Configuring Sites
Remote Index Search



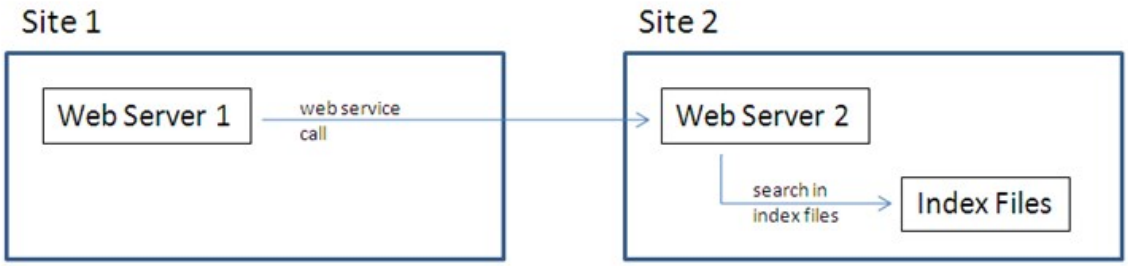
# Remote Index Search

The index is a collection of system files. When SpeechMiner searches for calls in the index, it reads the index files from the hard drive on which they are stored. These index files can be on the hard drive of the machine performing the search (the Web server), on a different machine on the same LAN, or on a different machine on a remote LAN.

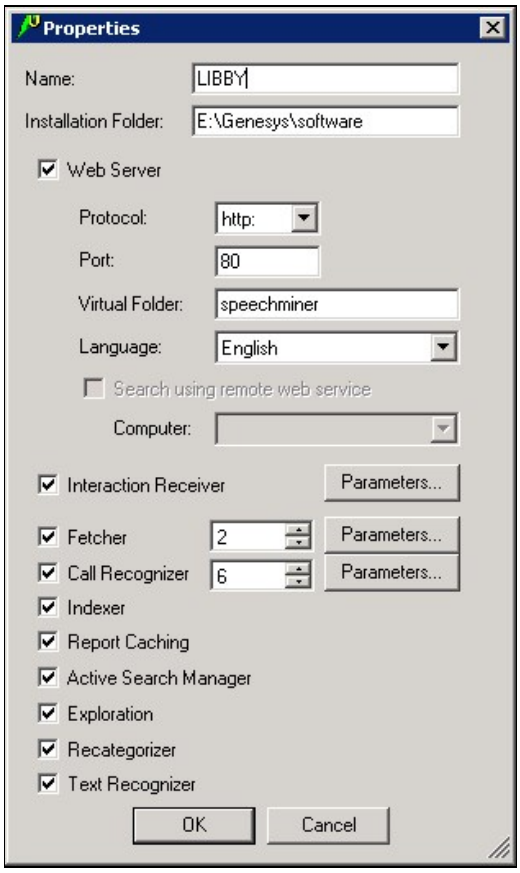
Whenever the index folder is on a different machine from the Web server performing the search, Windows sharing is used to enable the Web server to access the index files. If both machines are on the same LAN, this arrangement should not cause any performance issues. But when the Web machine and the index machine are on different sites that connect to one another over the internet, accessing the system files on the index machine directly, via Windows sharing, can be slow, especially if the index files are large.

To solve this issue, each Web machine can be configured to either search the index files directly or to use Web service calls.

Consider, for example, a SpeechMiner system that has two sites: Both sites have Web servers, and the second site also stores the index files. In this system, we configure the Web server at Site 2 to search the index files directly, because the index files are located on the same machine as the Web server. On the other hand, we configure the Web server at Site 1 to search the index using Web service calls to the Web server at Site 2. This arrangement is illustrated in the diagram below:




This configuration is set up in the **Properties** windows of each of the machines in the system.




**Properties window**

### To configure a Web server to search the system files directly:

- In the **Properties** window of the Web server, clear the **Search using remote web service** checkbox.

### To configure a Web server to search the system files by calling the Web service on another machine:

1. In the **Properties** window of the Web server, select the **Search using remote web service** checkbox. The **Computer** field becomes active.
2. In the **Computer** field, select the Web server to which search requests should be sent.

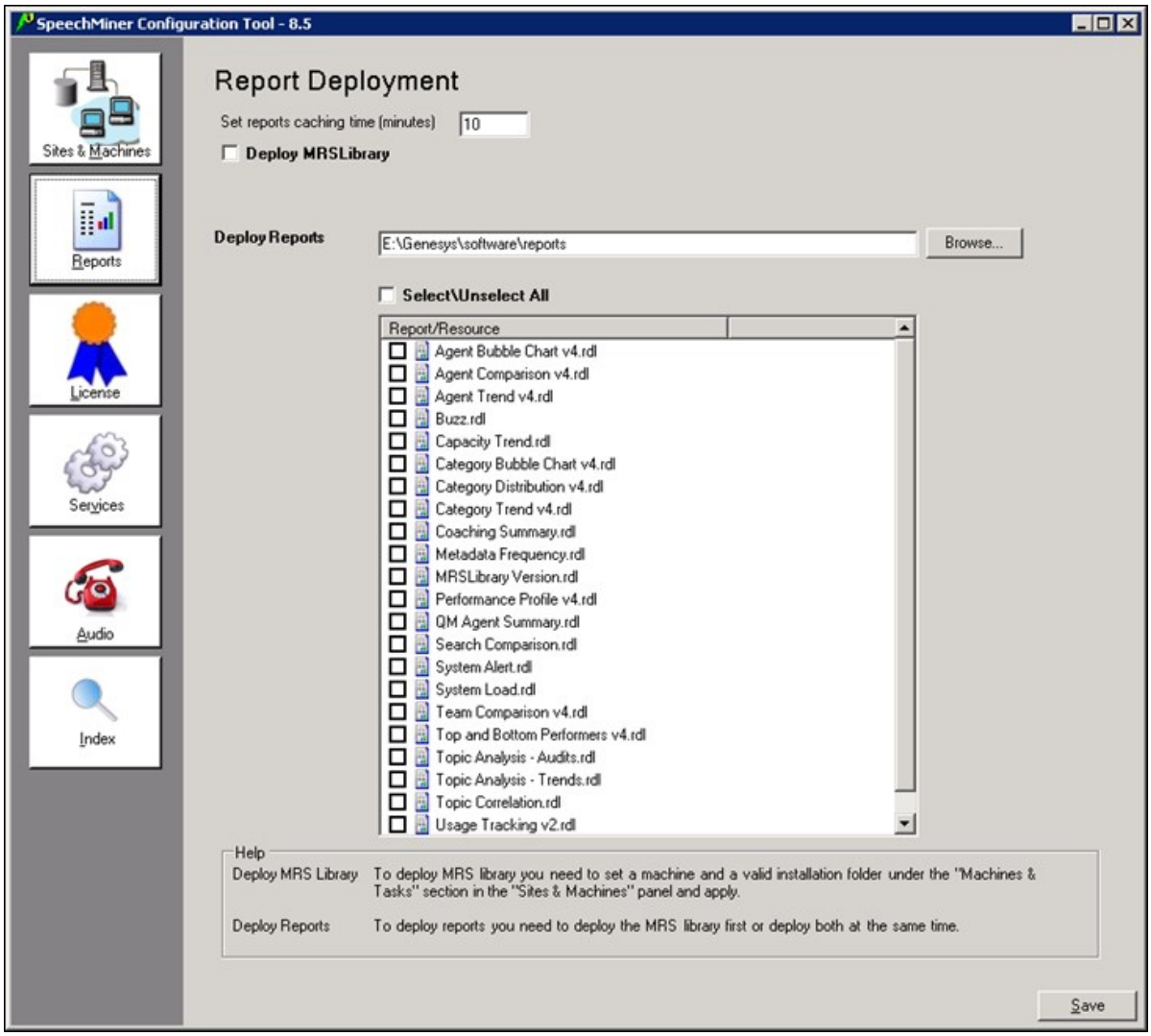
## See also

Configuring Sites
Configuring Machines and Tasks



# Reports

If you want to use any of the SpeechMiner reports, you must deploy both the MRS Library, which is a DLL that provides support for various report features, and all the required reports, on the report server. You can do this from the **Reports** panel of SMConfig. The DLL and the reports will be deployed on the machine that is identified in the Sites and Machines panel, in the list of Machines and Tasks, as the report server.




**Reports panel**

## Required Permissions

In order to check if the MRS Library is already deployed on the report server, and in order to deploy it, SMConfig has to find the location of the report server's `bin` folder and then access the folder using the $ share. To do this, it must read the report server's Registry. Therefore, to deploy the MRS Library and any or all of the reports, the user account used to log into SMConfig must have administrator permissions on the report server.

## Deploying the Reports

In order to deploy reports on the report server, you must deploy the MRS Library on the server, and then deploy the required report templates. You can perform both actions simultaneously by selecting both options in the **Reports** panel. Once the MRS Library is deployed on the server, you can deploy additional reports there without redeploying the library.

**Note:** When you select the **Reports** panel, SMConfig checks whether the MRS Library is already deployed on the machine.

### To deploy reports on the report server:

1. In the **Reports** panel, fill in the fields as follows:

| Field | Description |
|---|---|
| Set reports | If you chose to use report caching in the **Sites and Machines** panel, specify how long report results |

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| caching time | should be cached, in minutes. The results of reports that are included in active users' **Views** pages will be saved for the specified period of time. Users who open their **Views** pages during that time period will see the cached results. The recommended time period is 24 hours (i.e., 24*60=1440 minutes), because the report caching runs once every 24 hours. |
| Deploy MRSLibrary | If the MRS Library has not yet been deployed on the report server, select this option.<br>**Note:** If this option is not selected, but the checkboxes in the **Report/Resource** list below are active, this means that the MRS Library is already deployed on the machine. In this case, it is not necessary to select this option. |
| Deploy reports | Enter the location of the **reports** folder. This folder is called reports, and is located in the SpeechMiner installation folder. For example, if SpeechMiner was installed in `c:\Program Files (x86)\Genesys\Software`, the path to enter would be `c:\Program Files (x86)\Genesys\Software\reports`. |
| Select\Unselect All | Select the checkbox to select all of the reports in the **Report/Resource** list below for installation. Clear it to clear all of the selections in the list.<br>**Note:** If this option is not available, this means that the MRS Library has not yet been deployed on the machine. In this case, select Deploy MRSLibrary, and this option will become available. |
| Report/Resource | Select the reports you want to deploy on the report server<br>**Note:** If this option is not available, this means that the MRS Library has not yet been deployed on the machine. In this case, select Deploy MRSLibrary, and this option will become available. |

2. Click **Save**. The system begins to deploy the reports on the report server, and the **Progress** window opens and shows information about the deployment process.

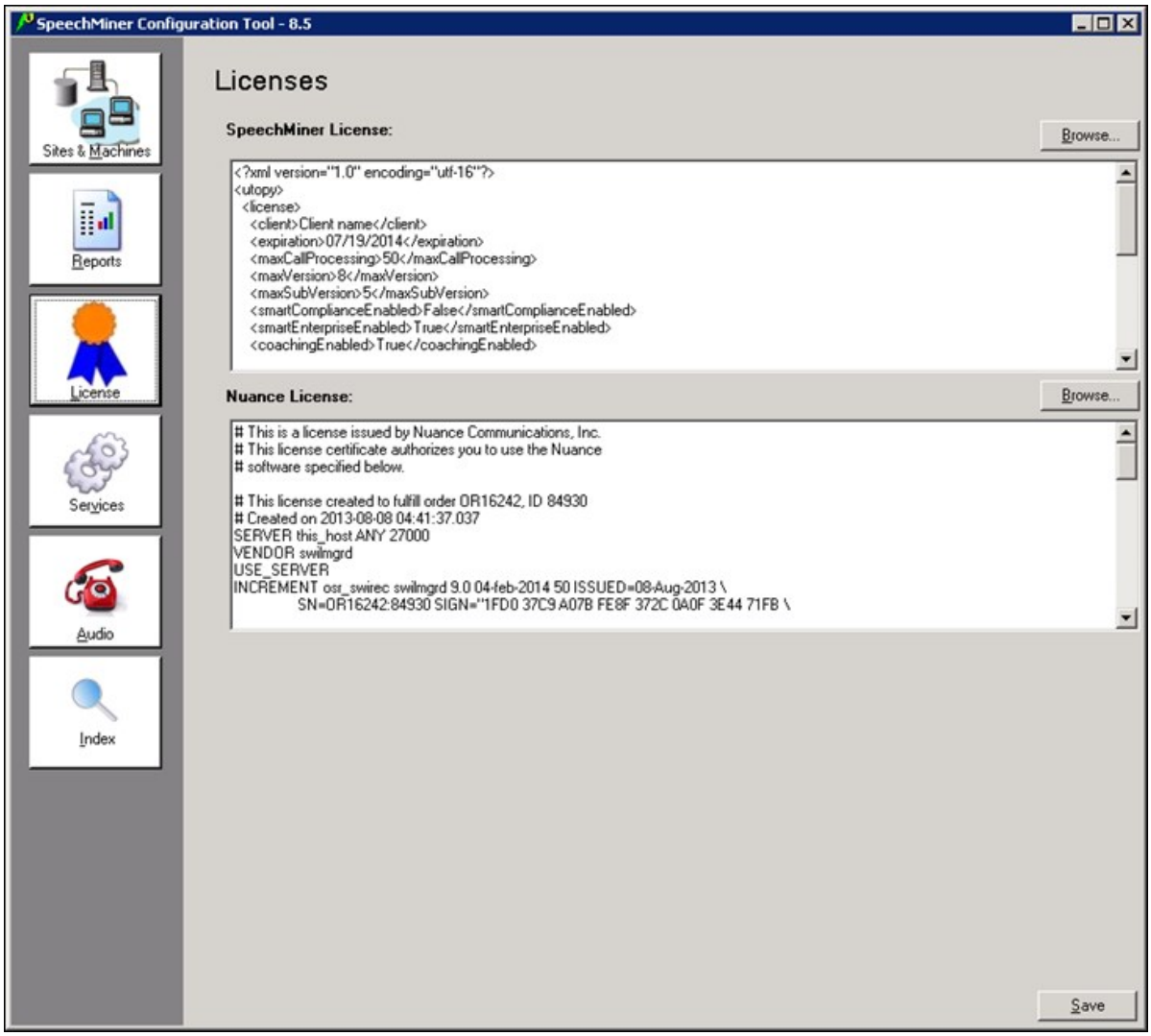
### See also

Required Permissions
Encrypting the Connection to the Database
Opening SMConfig
Saving Changes
Sites & Machines
Licenses
Services
Audio
Index
Setting the Date and Time
Configuring a VMWare Server
Additional Configuration for Recording Modes



# Licenses

In order for the system to process calls, the licenses you received from Genesys must be entered in the **Licenses** panel. The licenses are not included in the SpeechMiner installation folder.




**SMConfig Licenses panel**

### To update the licenses:

1. Copy the SpeechMiner license that was supplied.
2. In **SMConfig**, in the **Licenses** panel, paste the license into the **SpeechMiner License** field.
3. Copy the Nuance license that was supplied.
4. In **SMConfig**, in the **Licenses** panel, paste the license into the **Nuance License** field.
5. Click **Save**.

**Note:** If the license texts are stored in separate files, as an alternative to the procedure described above, you can browse to locate the files. When you open the relevant file, its contents are automatically copied into the appropriate field.

## See also

Required Permissions
Encrypting the Connection to the Database
Opening SMConfig
Saving Changes
Sites & Machines
Reports
Services

Audio
Index
Setting the Date and Time
Configuring a VMWare Server
Additional Configuration for Recording Modes

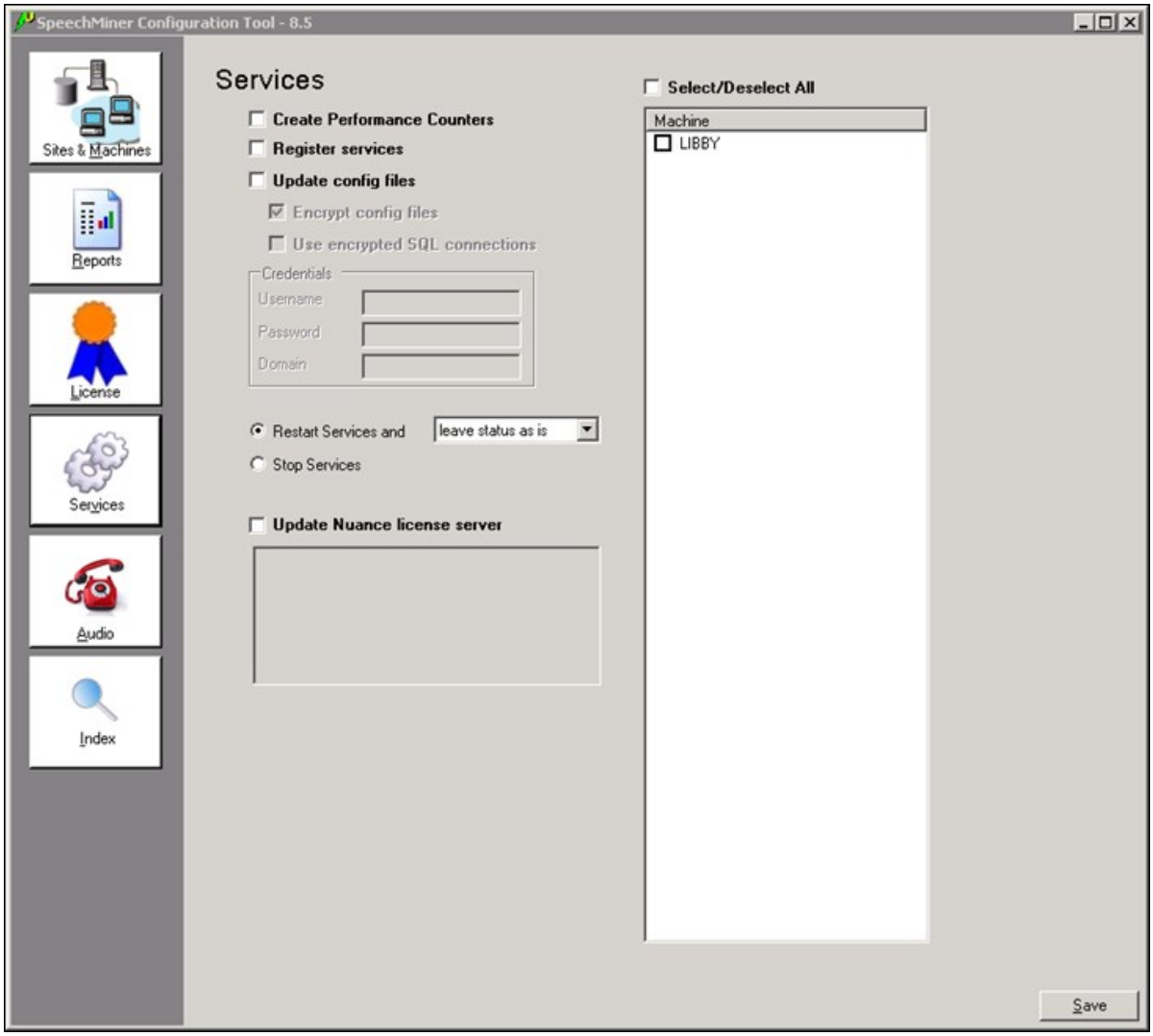


# Services

The **Services** panel is used to manage the SpeechMiner services. You can use it to:

- Register all the SpeechMiner services on each machine in the system
- Update the SpeechMiner configuration files on each machine
- Start, restart, and stop services

You must perform these actions at the end of the installation process, and also whenever you add, change, or remove services or machines to or from the system. You can also use the **Services** panel to restart or stop services whenever necessary.




**Services panel**

## See also

# Initial Configuration

After you install SpeechMiner and configure its components in SMConfig, you must register all of the SpeechMiner services, update the SpeechMiner configuration files on each machine, and start all Uplatform servers. In addition, whenever you make changes to the system, you should follow the same procedures, as explained below.

### To configure the services in your system:

1. In the **Services** panel, fill in the fields as follows:

| Field | Description |
|---|---|
| Create performance counters | Select this option to configure the performance counters on each of the selected machines.<br>**Note:** Performance counters should normally be configured only once for each machine. Select this option for all machines when you first install SpeechMiner. Then, if you add new machines to the system, select this option for the new machines. |
| Register services | Select this option to register the relevant services on each of the selected machines.<br>When you select this option, the **Credentials** area becomes active. Enter the credentials of the Windows user that will run the services (typically, SMUSER).<br>**Note:** Service registration should be performed once for each machine when SpeechMiner is first installed. It should be performed again if the credentials of the Windows user account running the services are changed. Select this option for all machines when you first install SpeechMiner. Then, if you add new machines to the system, select this option for the new machines.<br>**Note:** If the credentials given are for a local user on each machine rather than a domain user, under **Domain**, enter a "." (dot). The Uplatform service will be registered but the user will not have the "Run as Service" role. You will have to manually go to the Windows services management tool on each machine, enter the password, and click **Apply**. |
| Update config files | Select this option to update the SpeechMiner configuration files on each of the selected machines.<br>When you select this option, the **Credentials** area becomes active. Enter the Windows user that will run the services(typically, SMUSER). In addition, the encryption options become active. Select the required options.<br>**Note:** Updating of configuration files should be performed once for each machine when SpeechMiner is first installed. It should be performed again if the credentials of the Windows user account running the services are changed. Select this option for all machines when you first install SpeechMiner. Then, if you add new machines to the system, select this option for the new machines. |
| Restart Services / Stop Services | All the Uplatform services must be restarted after the installation and configuration processes are completed. To do this, under **Restart Services and**, select **change status to run**. Then, under **Machine**, make sure all servers on which Uplatform is installed are selected.<br>**Note:** The restart and stop options in this panel should also be used whenever you need to restart or stop any of the SpeechMiner servers (see Starting and Stopping the System). |

| | |
|---|---|
| Update Nuance license server | If your Nuance license servers are installed on central machines, enter the list of servers and ports in this box. This will update the selected machines' environment variables so that they point to these license servers. Separate entries with semi-colons (;).<br>If you want SMART to access a central license server, add this environment variable to the list: SWILicenseServerList=port@server<br>**Note:** Select this option for all machines when you first install SpeechMiner. Then, if you relocate the license server to a different machine, add additional servers, or remove existing ones, run this option and select all the machines in your system.<br>**Note:** If you are updating the Nuance license servers on remote machines, the Remote Registry service must be running on those machines. If it is not running on one of the machines, the error "Failed to update Nuance license on [MACHINE NAME]. The network path was not found." will appear in the **Progress** window. |
| Select/Deselect all | Select the checkbox to select all of the machines in the list below for updating. Clear it to clear all of the selections in the list. |
| Machine | Select the machines for which you want to implement the options you selected on the left side of the panel. |

2. Click **Save**. The system begins to implement the settings you selected, and the **Progress** window opens and shows information about the implementation process.

**Note:** For information about required permissions, see below.

### See also

Required Permissions
Starting and Stopping the System



# Required Permissions

The user account used to log into SMConfig must have the required permissions in order for SMConfig to perform the actions selected in the **Services** panel. Some of the requirements are for permissions on the local machine (the machine on which SMConfig is currently running); others are for permissions on the selected remote machines. The various options in the panel have different permission requirements, as explained below:

| Option | Required Permissions | Additional Details |
|---|---|---|
| Create Performance Counters | ▪ For remote machines: Administrator privileges on the selected machines<br>▪ For the local machine: Under Windows Server 2008, Power User privileges. | |
| Register Services | Administrator privileges on the selected machines | Administrator privileges on the selected machines are required in order to register the Uplatform service. These privileges are required for running remote commands on the selected machines and for registering the services using the Windows Services API |
| Update Config Files | Administrator privileges on the local machine and on all selected machines | Administrator privileges on the selected machines are required in order to update the configuration files on the local machine and on the remote machines. These privileges are required for accessing the files using the $ share and for encryption and decryption (if **Encrypt config files** is selected). |

| | | |
|---|---|---|
| Restart/Stop Services | ▪ For remote machines: Administrator privileges on the selected machines<br>▪ For the local machine: Power User privileges | ▪ To change the Uplatform service status on remote machines, Administrator permissions are required in order to get the service information and change it's status remotely using the Windows Services API.<br>▪ To change the Uplatform service status on the local machine Power User privileges on the local machine are sufficient. |
| Update Nuance license server | ▪ For remote machines: Administrator privileges on the selected machines<br>▪ For the local machine: Under Windows Server 2008, Power User privileges. | Administrator permissions are required in order to update the registry key that controls the Nuance environment variables. |

### See also

Initial Configuration
Starting and Stopping the System



# Starting and Stopping the System (Bootstrap)

You can start, restart, or stop SpeechMiner services in SMConfig in the **Services** panel. One case in which you must use this feature to start the Uplatform services is after the initial installation and configurion of the system (see Initial Configuration). You can also use these features to change the status of a service from run to idle, or vice versa, or to completely stop a service.

**Note:** You can also toggle between "idle" status and "run" in the SpeechMiner web interface, in the **System Monitor** page.

#### To start, restart, or stop SpeechMiner services:

1. In the **Services** panel, clear the **Create Performance Counters**, **Register Services**, and **Update Config Files** checkboxes.
2. Select one of the following options:
    1. **Restart Services and leave status as is:** Restarts the selected services, and leaves them in the mode they were in previously
    2. **Restart Services and change status to run:** Restarts the selected services, and puts them into "run" mode
    3. **Restart Services and change status to idle: Restarts the selected services, and puts them into "idle" mode**

        Restarts the selected services, and puts them into "idle" mode
    4. **Stop Services: Stops the selected services**

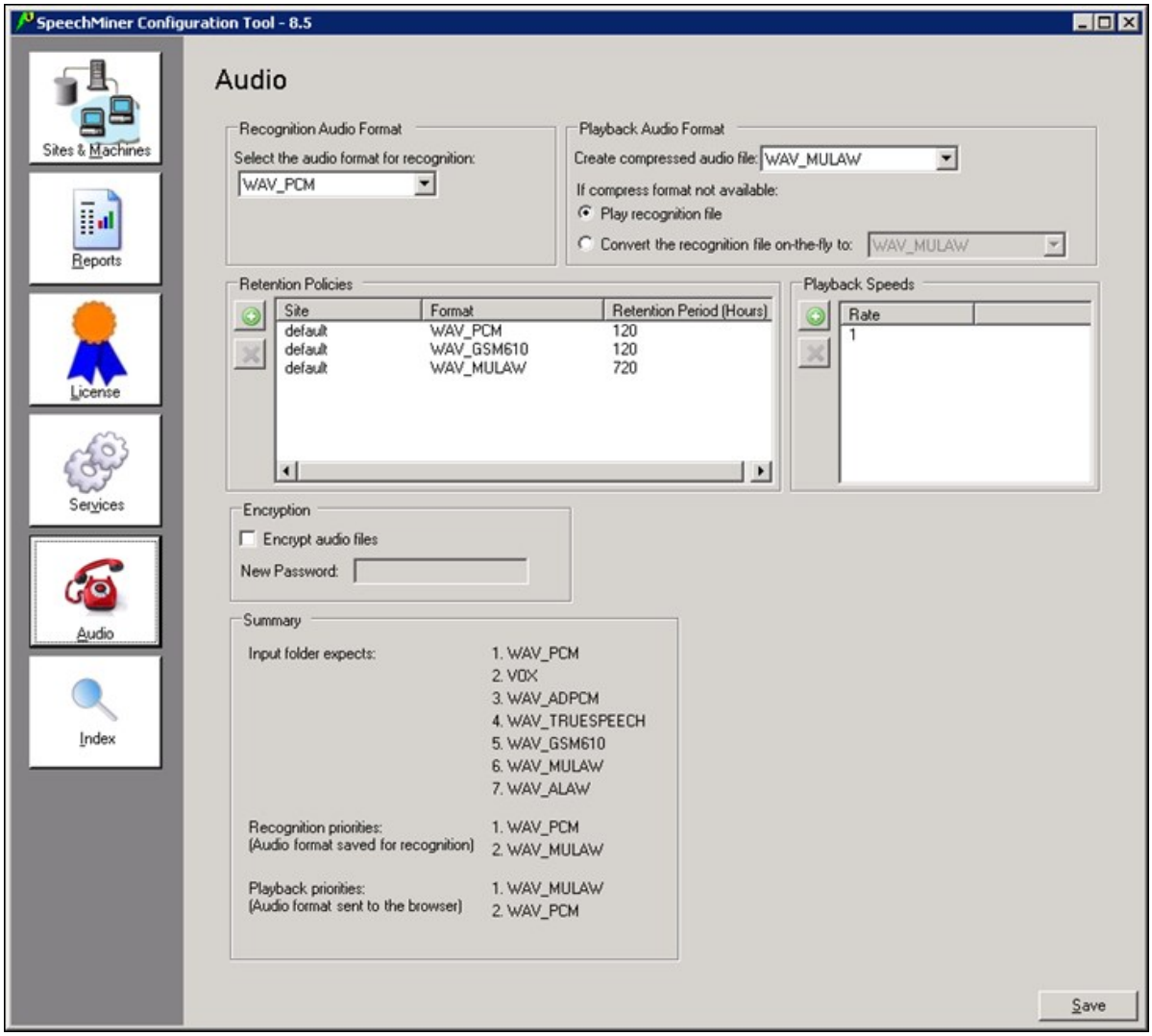
        Stops the selected services
3. In the list of machines, select the servers you want to restart or stop.
4. Click **Save**. The system begins to implement the options you selected, and the **Progress** window opens and shows information about the implementation process.

### See also

Initial Configuration
Required Permissions

# Audio

The **Audio** panel of SMConfig is used to configure the call-audio recognition and playback formats, retention periods for each format and site, and playback rates. Below the settings is a summary of the audio formats that are supported for each audio function.




**Audio panel**

## Configuring the Audio Settings

The **Audio** panel contains the basic audio setting options for the system.

**Note:** This panel includes the most common audio configurations. If you require a more complex configuration, you must manually define it in the database. Bear in mind that, if you do so, the configuration you defined in the database will not appear in the **Audio** panel. In this case, be careful not to click **Save** in this panel. If you do, the settings in the panel will overwrite the more complex configuration you defined in the database.

### To configure call-audio settings:

1. In the **Audio** panel, fill in the fields as follows:

| Field | Description |
|---|---|
| Select the audio format for recognition | Select the format of the call audio that should be used by SpeechMiner during the recognition process. If the audio received from the recording system is not in the format selected here, the fetchers will automatically convert it to this format (after they retrieve it from the `input` folders) before they save it in the `store` folders to await processing by SpeechMiner. If the system is used in the Recording UI mode or Recording and Analytics mode, the format should be set to WAV_PCM. |
| Create compressed audio file | Select the format of the call audio should that should be used by SpeechMiner for playback in the web-based interface. After the audio of a call is processed, an additional compressed copy is made in this format and saved in a file in the `store` folders.<br>If the system is used in the Recording UI mode, or Recording and Analytics mode, this should be set to `Do Not Generate`.<br>**Note:** TrueSpeech format is not supported on Windows 2008 Server, Windows Vista, or Windows 7. On these platforms, it is recommended to select **GSM**. |
| If compress format not available | Select what SpeechMiner should do if a user initiates playback of a call for which no compressed audio file is available. (If compressed audio is available, it is automatically used for playback.) Select one of the following options:<br>▪ **Play recognition file:** The player should play the recognition audio file directly without any format conversion.<br>▪ **Convert the recognition file on-the-fly to:** The player should first convert the recognition audio file to the format selected here, and then play it for the user.<br>If the system is used in the Recording UI mode, or Recording and Analytics mode, this should be set to `Play recognition file`. |
| Retention Policies | Specify the retention policy, per site, for each of the audio formats selected above. Call data is deleted from the `store` folder automatically when it has been in the folder as long as the specified retention period. The values chosen should be based mainly on the disk space available for storing the call audio. Bear in mind that 1MB of disk space can contain roughly one minute of uncompressed audio data or 15 minutes of compressed audio data.<br>Default values are automatically entered for each site in the system, with separate retention periods for each of the formats selected under **Recognition Audio Format** and **Playback Audio Format**, in hours. You can manually adjust the retention period for each item, as required. To do so, double-click the item, or select it and then select  . The **Retention Period** dialog box opens. Modify the value in the text field, and then click **OK**.<br>If the system is used in the Recording UI mode or Recording and Analytics mode, set the retention policy of WAV_PCM to 0.<br>**Note:** Selecting these options prevents the creation of unnecessary audio files and the storage of files for longer than is necessary.<br>**Note:** The recognition audio files of calls that have not been processed yet, and of calls that are included in Static Call Lists, are not deleted even when the retention period is over.<br>**Note:** If you do not want audio data to be deleted from the `store` folder automatically, enter the value -1. This value should only be used in static systems where the number of calls is limited and does not grow continuously. |
| Playback Speeds | Enter the playback speed options that should be available to users when they playback calls in the media player. For example, "1" means playback at the original speed, "2" means double-speed, etc.<br>By default, only "1" is available. To add an additional speed, click  . A new line is added to the list. Modify the value in the line as required, and then press **Enter**. |
| Encrypt audio files | Select this option if you want the audio files to be encrypted before they are saved in the `store` folder.<br>When you select this option, the **New Password** field becomes active. Enter the encryption password in the field. |

2. Click **Save**. The system implements the settings, and the **Progress** window opens and shows information about the process.

### Summary

The bottom of the **Audio** panel, under **Summary**, lists the audio formats that SpeechMiner supports, and the preferred formats, for each audio function:

| Item | Function | Description |
|---|---|---|
| Input folder expects | Fetcher | Audio formats supported by fetchers; call audio that is retrieved from the external recording system by UConnector must be saved in the input folder in one of these formats |
| Recognition priorities | Recognition | Preferred audio formats for the recognition process, in order of preference; call audio that is processed by the Recognizers should ideally be in one of these formats |
| Playback priorities | Playback | Preferred audio formats for the SpeechMiner media player, in order of preference; call audio that is played back should ideally be in one of these formats |

### See also

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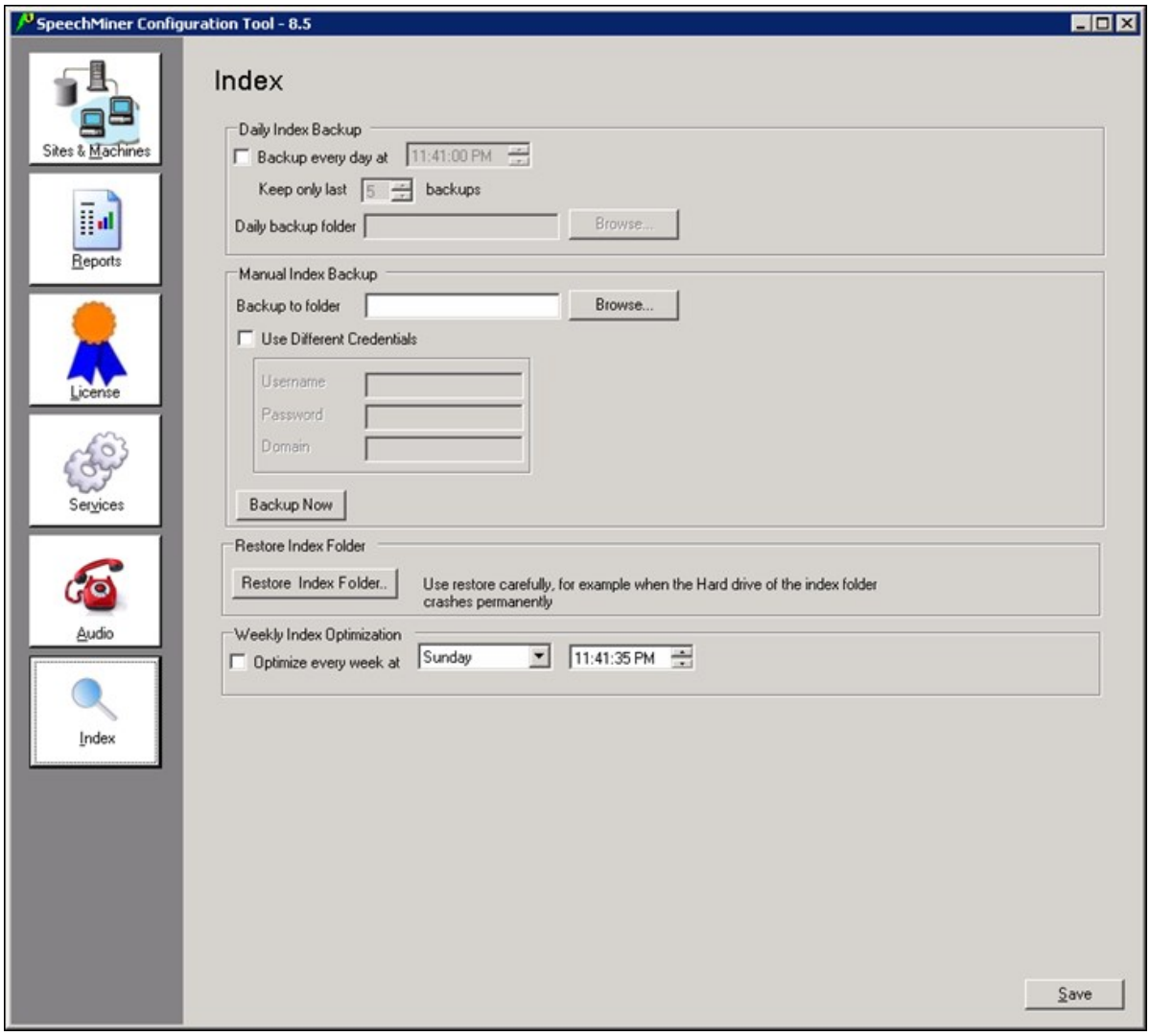
Additional Configuration for Recording Modes



# Index

The **Index** panel enables you to manage index-related tasks: backup, restore, and index optimization.




**Index panel**

## See also

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# Backing Up the Index

You can back up the index automatically on a daily basis or manually as required. Note that no incremental backup is available; every time the backup is started, all of the index files are copied to the backup folder.

## Daily Backup

You can set a time and specify a backup folder, and SpeechMiner will automatically back up the index every day at the specified time to the specified folder.


**Index panel, Daily Index Backup region**

### To set up a daily backup of the index:

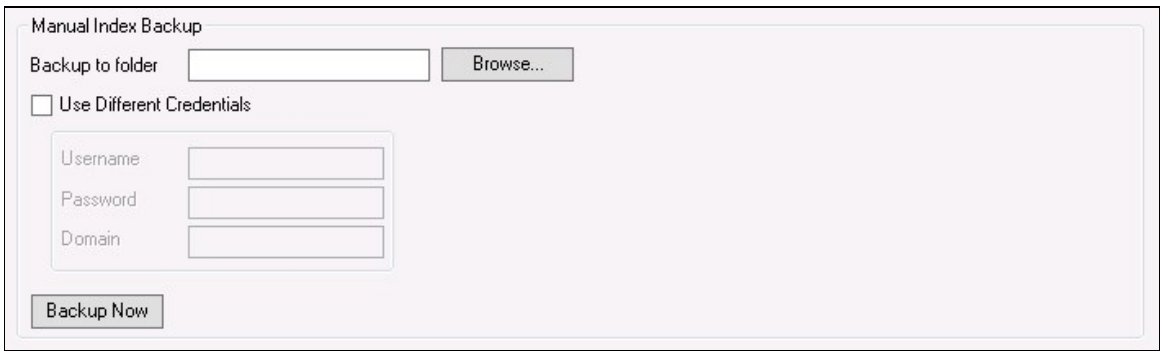
1. In the **Index** panel, in the Daily Index Backup region, fill in the fields as follows:

| Field | Description |
|---|---|
| Backup every day at | Select the checkbox to activate the automatic daily backup, and then, in the time field, select the time at which you want to the backup to begin. |
| Keep only last... | Select the number of backups to keep. Older backups will be deleted automatically. |
| Daily backup folder | Select the folder in which to store the backup data. |

2. Select **Save**. The changes are saved, and a **Progress** window shows information about the saving process.

## Manual Backup

You can select a folder and back up the index to that folder manually as necessary.




**Index panel, Manual Index Backup region**

### To run a backup of the index manually:

1. In the **Index** panel, in the Manual Index Backup region, fill in the fields as follows:

| Field | Description |
|---|---|
| Backup to | Select the folder in which to store the backup data. |

| | |
|---|---|
| folder | |
| Use different credentials | If different credentials are required to access the index folder, select the **Use Different Credentials** checkbox, and then enter the required user credentials. |

2. Select **Backup Now**. The backup is performed, and a **Progress** window shows information about the backup process.

### See also

Restoring the Index
Optimizing the Index



# Restoring the Index

Restoring the index can be done in two different ways:

- Restoring the index from a backup, using SMConfig
- Deleting the existing index and creating a new one from scratch

## Restoring the Index from a Backup

If you have a backup of the index, it is generally preferable to restore the index from it. Restoring the index from a backup is generally a much quicker process than creating it from scratch, especially if the database is large. The index task re-indexes the database at a pace of about 3,500 calls per minute. If you restore the index from a backup, only those calls that were indexed after the backup was created must be re-indexed. Calls that are included in the backup do not have to be re-indexed. As a result, you can start using the index almost immediately.

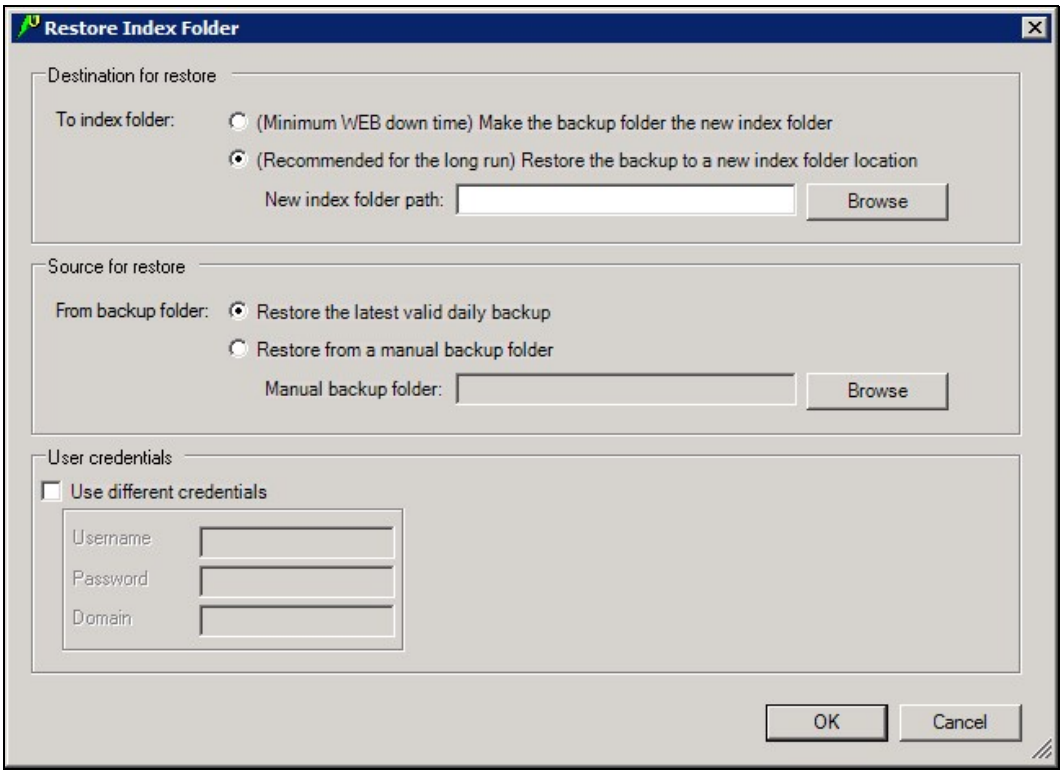
Two alternative methods for restoring the index from a backup are available:

1. Use the backup folder as the current index folder.
2. Restore the index from the backup folder to a new index folder.

In either case, you should not restore the index folder manually. Instead, use SMConfig to perform the restoration. Using SMConfig ensures that the process is performed properly, and, in addition, SMConfig also takes care of re-indexing all the calls that were indexed after the backup was created.

### To restore the index from a backup:

1. In SMConfig, in the **Index** panel, select **Restore Index Folder**. The **Restore Index Folder** dialog box opens.




**Restore Index Folder dialog box**

2. Fill in the fields as follows:

| Field | Description |
|---|---|
| To index folder | Select **(Minimum WEB down time) Make the latest valid backup folder the new index folder** to use the backup folder as the new index folder, or **(Recommended for the long run) Restore the backup to a new index folder location** to create a new folder to use as the index folder.<br>If you chose the second option, under **New index folder path**, select the folder to use as the new index folder. Note that this folder must be empty when you begin the restoration process. |
| From backup folder | Select **Restore the latest valid daily backup** to restore the index from the folder that contains the automatically generated backups of the index (specified in the **Index** panel under **Daily Backup Folder**), or **Restore from a manual backup folder** to use a manually generated backup.<br>If you chose the second option, under **Manual Backup Folder**, select the folder from which to take the backup. |
| Use Different Credentials | If different credentials are required to access the index folder, select the **Use Different Credentials** checkbox, and then enter the required user credentials |

3. Click **OK**. The index is restored to the new index folder, and a **Progress** window shows information about the restoration process. during the process, SMConfig will also do the following:
   - Check the validity of the new index folder, and, if it is not valid, abort the process.
   - Insert indexing requests into the index queue for all the calls that were processed or updated after the backup was created.
   - Notify the Web servers that the index folder was changed.
4. When the restoration process is finished, restart the platform servers.

## Creating a New Index from Scratch

If you do not have a backup of the index, you can restore it by deleting the existing index and creating a new one. In addition, if the database is quite small, you may prefer to restore the index in this way even if you do have a backup.

Restoring an index by creating it from scratch is generally a much slower process than restoring it from a backup, especially if the database is large. The index task re-indexes the database at a pace of about 3,500 calls per minute. If you re-create the index from scratch, all of the calls in the database must be indexed.

**To create a new index from scratch:**

1. Stop all the Uplatform services that run index tasks.
2. Run the following SQL command: **truncate table indexq**
3. Delete all of the files in the index folder.
4. Run the following stored procedures in the database:
   - To re-index the calls, run **exec dbo.sp_reindexCallsByParams 3,0,0,''**
   - To re-index the text interactions: **exec dbo.sp_reindexTextDataByParams 3,0,0,''**

   **Note:** Re-indexing the text interactions is only relevant in SpeechMiner versions from 7.3 and on, and only if your system handles text interactions as well as calls.
5. Restart the Uplatform services that you stopped before. After a minute or two, the index task will start to index the calls. Newer calls will be indexed first.

### See also

Backing Up the Index
Optimizing the Index



# Optimizing the Index

The Index Optimization task optimizes the index files of the system, thus reducing their size. It is recommended to configure it to run at a time when the system is not in use, such as Sunday at midnight..

**To configure the system to optimize the index:**

1. In SMConfig, in the **Index** panel, in the Weekly Index Optimization region, select the **Optimize every week at** checkbox.
2. Select the day of the week on which to perform the optomization, and specify the time to begin the process.
3. Clcik **Save**. The setting is saved, and the **Progress** window opens and shows information about the saving process.

### See also

Backing Up the Index
Restoring the Index



# Setting the Date and Time

The webServiceParams table has two fields for configuring the date and time display:

- **globalDateFormat** which configures the date format, for example: `MM/dd/yy`
- **globalDateTimeFormat** which configures the time format, for example: `hh:mm tt`

For additional information about the options available, see http://www.w3.org/TR/NOTE-datetime.

**Note:** When SpeechMiner's Spanish interface is used for the Web interface, the only formats supported for globalDateTimeFormat are the following 24-hour formats: `H:mm:ss` or `H:mm`.

### See also

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# Configuring a VMWare Server

If you are installing SpeechMiner on virtual machines and using VMWare Server VSphere4, it is recommended to use the Scheduling Affinity feature, which dedicates specific logical CPUs for the virtual CPUs of particular VMs. Doing this can improve Recognition performance.

**To use the VMWare Scheduling Affinity feature:**

1. For each active Virtual Machine, check the VM Settings to see how many CPUs are configured for the machine.
2. In **Setting\Resources tab\Advanced CPU\Scheduling Affinity**, enter the serial numbers of the VMWare server's logical CPUs.

### See also

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# Additional Configuration for Recording Modes

If using Recording modes, the following additional database configuration is required:

- In the `configServer` table, set the `RcsUri` value to the RCS URL, in the format: http://host:port/rcs, or https://host:port/rcs.
- In the `cmrsParams` table, set the `RP_Authorization` and `MCP_Authorization` values to the user and password that are configured for each of these components, respectively. Use the format `user:password`.
- In systems whose licenses are Call Recording Mode, or Call Recording and Analytics Mode, the Program ID is normally assigned to calls by the recording processor, which adds it to the call's metadata. If the call arrives in the Interaction Receiver input

folder without a Program ID, SpeechMiner assigns the default Program ID to it. The default Program ID is defined in the database, in the `cmrsParams` table, with the value of `DEF_PROGRAM_EX_ID`. By default, this value is `default`. If you want to change this default value to some other value, you can do so as follows:

- For Call Recording and Analytics Mode licenses, in SMART, create a Program with the name you want to use for the default Program, and apply it. Finally, in the `cmrsParams` table, set `DEF_PROGRAM_EX_ID` to the Program's external ID.
- For Call Recording Mode licenses, in the database, in the `cmrsParams` table, set `DEF_PROGRAM_EX_ID` to the Program ID you want to use. (In this case, the Program ID and the Program Name are identical).

## See also

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# Snippets

| Field | Description |
| --- | --- |
| | |
| | |
| | |

List with pics:

1. Step

   pic

   **caption**

## See also

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