# Admin Guide

## Speech and Text Analytics 8.5.2

2/23/2015

# Table of Contents

# SpeechMiner Administration Guide

The SpeechMiner 8.5.2 Administration Guide provides the instructions required to install and configure the SpeechMiner components. These pages are valid for all 8.5.2 releases of SpeechMiner. See the summary of the highlighted topics below:

## About SpeechMiner

Find out about SpeechMiner:



## Installation and Configuration

Find out about how to deploy the components:

# Introduction

SpeechMiner , Genesys Telecommunications Laboratories's 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.

SpeechMiner supports three modes of operation:

- **Analytics and Recording UI**: SpeechMiner plays back and analyzes interactions recorded with Genesys Interaction Recording.
- **Recording UI Only**: SpeechMiner plays back the call audio for each interaction in the search results. The contents of the interactions are not processed by the speech-analytics system.
- **Analytics Only**: SpeechMiner imports interactions and their recorded call audio from any recording system. Once the interactions and their audio is imported SpeechMiner processes the contents of each interaction.

> **Important**
>
> If you have purchased both Recording and Analytics licenses, it is recommended that you review the specific SpeechMiner setup instructions in the Genesys Interaction Recording documentation prior to commencing with the installation procedure. There may be some changes required to the generic analytics procedures in this SpeechMiner Administration Guide.

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

- **SpeechMiner browser-based interface**, Offers a variety of ways to access the audio of calls and the results of the interaction analysis performed by the system (when Analytics mode is in use). Users of the speech-analytics system can employ this interface to:
    - find interactions that have specific characteristics or that deal with particular topics

    - identify and listen to the parts of calls that interest them
    - audit and fine-tune SpeechMiner's call processing
    - keep track of a range of system-metrics.
- **SpeechMiner Administration Tool (SMART)**, 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.

# New in this Release

This section describes the new features that were released in the 8.5.x version of SpeechMiner.

## 8.5.2 Release

- New Responsive Style User Interface: In this release, the Main page, Menus, Media Player, Search pages and grids have been updated with the new design.
- New Media Player with Video Playback Capability: The updated media player, now supports screen recordings. When working with GIR, audio and screen recordings can now be synchronized.
- Multiple QM Forms per Interaction: Multiple QM form evaluations can now be attached to a single interaction.
- Categorization Based on Spatial Relationships: Text interactions can now be categorized based on rules such as: "found abc within X words of xyz.".
- Wildcard Support for Text Interaction Topic Definitions: Like Voice interaction topic definitions, Text interaction topic definitions can now utilize wildcards.
- Recognition Improvements: Continuous recognition improvements were made in this release based on new customer and vertical training material.

## 8.5.001 Release

- Ability to add text interactions to saved lists: Similar to voice interactions, text interactions can now be added to saved lists.
- Ability to add comments to text interactions: Similar to voice interactions, comments can now be added to text interactions.
- Ability to search for numbers in text interactions: Numbers and special characters can now be used in search term definitions for text interactions.
- Events are displayed in text interactions: Similar to voice interactions, topic events are highlighted when they occur in text interactions.

- Topic filters in reports supports text interactions: The topic parameter in the Data Set Filters on the reports now works for text interactions.
- Support for wildcards in Spanish: Similar to English, wildcards are now supported for Spanish voice interactions.
- High Availability improvement for indexing: In the event of an index failure, the system will automatically switch to a backup index.

## 8.5.0 Release

- Interaction Recording Integration: SpeechMiner 8.5.x provides the UI for Genesys Interaction Recording - Voice Edition. This enables out of the box integration with Genesys' new recording product.
- Chrome Support: Support for Chrome on Windows for the Interaction Recording features.
- Chat Support: Support for chat interactions with multiple speakers.
- Genesys Branding: The web UI has been re-branded with the Genesys name, logos and colors.
- Configuration Server Integration: SpeechMiner now integrates with Genesys Configuration Server for centralized user management.
- Language Recognition Support: Support for Brazilian Portuguese and German language calls.

# Deploying SpeechMiner

This section describes the SpeechMiner system and how to configure each component for your enterprise.

## Components

## SpeechMiner Components

The SpeechMiner system makes use of the following components:

- **UPlatform service**—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).
- **Recognition engine**—Nuance speech-recognition engine that transcribes call audio into text.
- **Nuance License Server**— This server manages 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.
- **UConnector service**—Retrieves interaction data (audio or text) and metadata from the recording systems that is placed in the SpeechMiner input folder.
- **Interaction Receiver**—A web service which receives calls (audio and metadata) from the Genesys Interaction Recording system.
- **MS-SQL database**—The SpeechMiner database stores the interaction data and the results of interaction processing.
- **Web service**—Runs the SpeechMiner web-based interface that enables users to view and work with the interaction data after it has been processed.
- **ULogger**—The log viewer for the SpeechMiner logs.

### System Software

Users employ the following software to work with SpeechMiner:

- **SpeechMiner browser-based interface**—Offers a variety of ways to access the audio of calls and the results of the interaction analysis performed by the system (when Analytics mode is in use). Users of the speech-analytics system can employ this interface to:
    - find interactions that have specific characteristics or that deal with particular topics
    - identify and listen to the parts of calls that interest them

    - audit and fine-tune SpeechMiner's call processing
    - keep track of a range of system-metrics.
- **SpeechMiner administration tool (SMART)**—An application that enables users to configure the speech-analytics system to search calls for specific topics and other characteristics.
- **SMConfig**—An application that is used by system administrators to configure SpeechMiner.
- **SMUpgrade**—An application used to upgrade the SpeechMiner database from the previous version to current version. For additional information refer to the *SpeechMiner Upgrade Guide*.

## Install

## Installing SpeechMiner

This section explains how to install SpeechMiner at your enterprise. This section includes pre-installation steps; setting up the system components, database, and the software steps 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.

## Configure

## 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.

# Installing SpeechMiner

This section describes how to prepare your environment before you install SpeechMiner, and how to install the SpeechMiner software. The SpeechMiner components can be installed on one or more servers, as required by the particular configuration of your system.

Important

Since the SpeechMiner supported environment may be different for each SpeechMiner version, the current SpeechMiner Administration Guide may contain information that does not apply to your version of SpeechMiner. For detailed information about supported operating environments, see the Supported Operating Environment Reference Guide.

## Getting Started

Before you install SpeechMiner, make sure of the following:

- The system requirements are met.
- The required third-party 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.

## System Requirements

# Disk Space

Each server in the system should have at least the following amounts of available disk space before installing SpeechMiner:

- **All servers:** Approximately 1 GB of disk space for the recognition engine
- **Recognition server(s):** For the UPlatform service, 20 MB 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. In addition, on some types of recording-system integrations that have a very high volume, a larger (10 GB-200 GB) storage area is needed for temporary files.

Important

- 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 20 MB for the SpeechMiner virtual folder, plus additional space for 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

## 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.)
- Microsoft SQL Server 2012 with Reporting Services

## Operating Systems

All machines must have Windows operating systems.
For detailed information about the Windows operating systems that are compatible with each SpeechMiner component refer to Supported Operating Environment Reference Guide.

## Browser

The SpeechMiner web interface is compatible with Google Chrome and Internet Explorer (IE) versions 10 and 11.

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 - 128 GB (dependent on call volume)
- Web server: 4 GB
- SMART application: 2 GB
- Platform server: 8 GB (allow 1 GB per recognizer task, as a rule of thumb)

## What Is Installed?

The following software will be installed on the machines in your system:

| Machine | Components |
|---|---|
| On All Servers | • MS .NET Framework 4.5.1 with SP1 (aka 4.5.1) |
| On the Recognition Server(s) | • UPlatform service<br>• Nuance recognition engine |
| On the DB Server | • MS-SQL 2008 or 2012 Server, including MS Reporting Services (normally installed by the customer beforehand)<br>• SpeechMiner database<br>• UConnector service (when not working with GIR). |
| On the Web Server | • SpeechMiner virtual folder |
| On the Interaction Receiver Server | • Interaction Receiver virtual folder |
| On Every Machine Running SMART | • Recognition engine<br>• SMART executable and runtime files (dlls) |

## Ports Used by the System Components

The following ports are used by SpeechMiner:

> **Important**
>
> 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 | 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 | smtp 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.

## Required Third-Party Software

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

Tip

You should install the required software before you install SpeechMiner.

# .NET Framework

## Installing the .NET Framework

Microsoft .NET Framework 4.5 SP1 (4.5.1) and .NET 2.0 must be installed on all machines that will run SpeechMiner components or interact with SpeechMiner

If you are installing the .NET Framework on machines that are running Windows Server 2008 R2 or Windows Server 2012:

- Enable .NET framework using the Add Features option in the Server Manager (Start > Administrative Tools > Server Manager).
- Verify that Windows Update is enabled.

If Windows Update is not enabled or you are using an operating system other than Windows Server 2008 R2 or Windows Server 2012, manually download and install .NET 4.5.1 from the following location: http://www.microsoft.com/en-us/download/details.aspx?id=40779

# Microsoft Visual C++ 2013 Redistributable

## Installing Microsoft Visual C++ 2013 Redistributable

Microsoft Visual C++ 2013 Redistributable must be installed on all machines that will run SpeechMiner components or interact with SpeechMiner. You can download the installation package at http://www.microsoft.com/en-us/download/details.aspx?id=40784.

Important

When installing Microsoft Visual C++ 2013 Redistributable on a 64 operating system you must install both 86 and 64 versions. When installing on a 32 operating system you must install the 86 version.

# SQL Server

## 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 information about installing and configuring the SQL Server for SpeechMiner, see Setting Up the SQL Server for SpeechMiner.

# Internet Information Server

## 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:

- Windows Server 2008
- Windows Server 2012

**Notes:**

- The SpeechMiner and Interaction Receiver Application Pool must use .NET framework version 4.0. After you install the SpeechMiner web server, you should check that this is the version in use.
- 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.

# Report Viewer

### Installing Report Viewer

SpeechMiner can be configured to use Microsoft's Report Viewer to run saved reports at night and cache their results. Using Microsoft's Report Viewer can significantly reduce the time required to load the SpeechMiner **Views** page, 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.

For additional information about Report Caching see: Defining Caching Reports

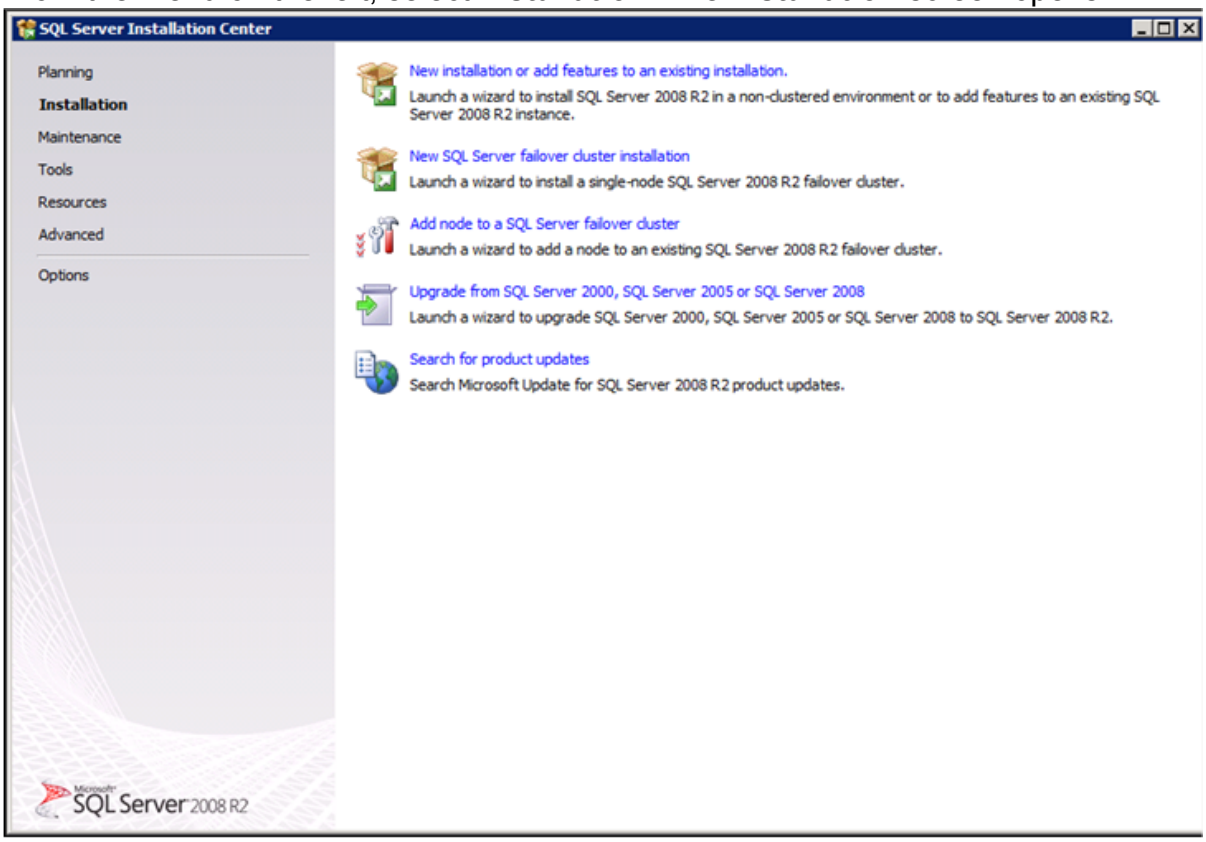
## Setting Up the SQL Server for SpeechMiner

# Installing SQL Server 2008 R2

In order to install SQL Server 2008 R2 for use with SpeechMiner, run the normal setup wizard and follow the instructions. To install SQL Server 2008 R2:

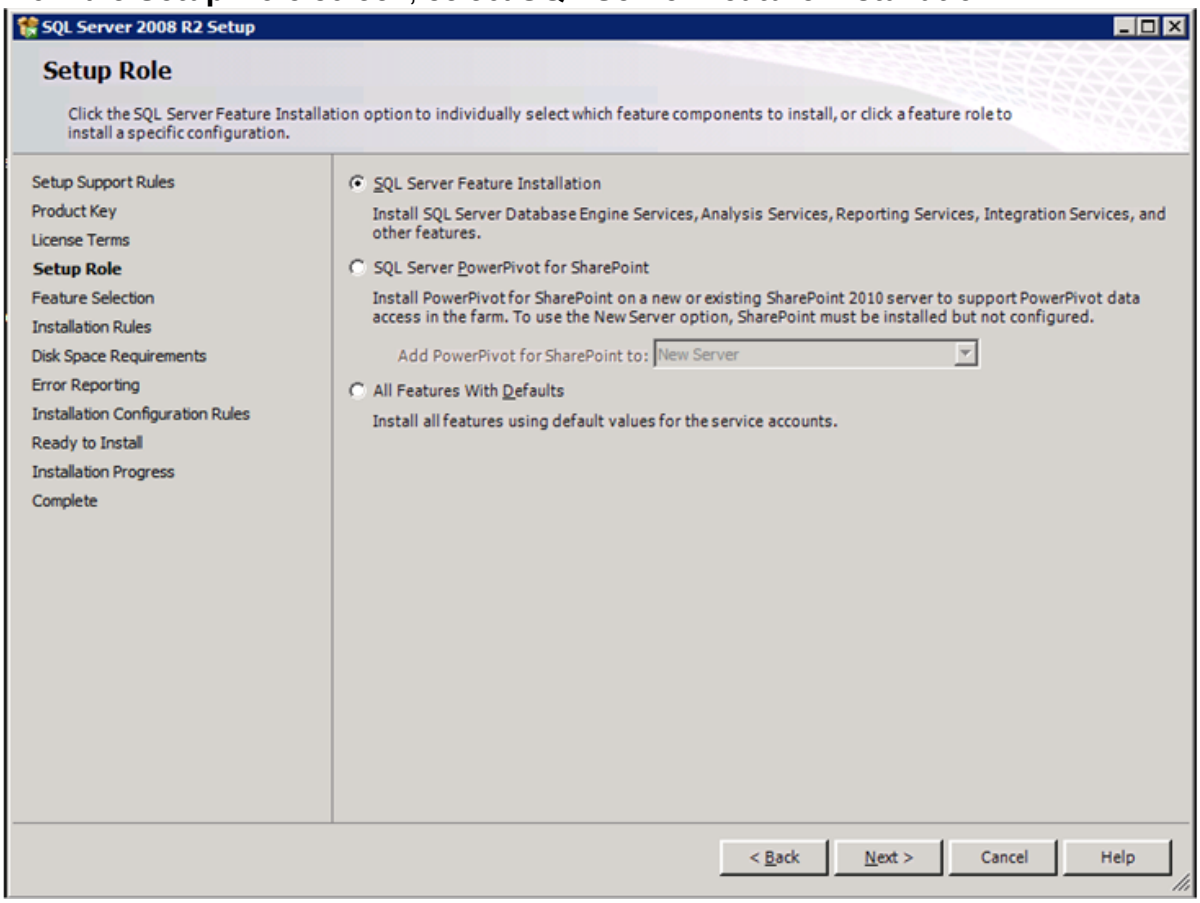
1. Run the installation program. The **SQL Server Installation Center** window opens, with the **Planning** screen open.

2. From the menu on the left, select **Installation**. The **Installation** screen opens.

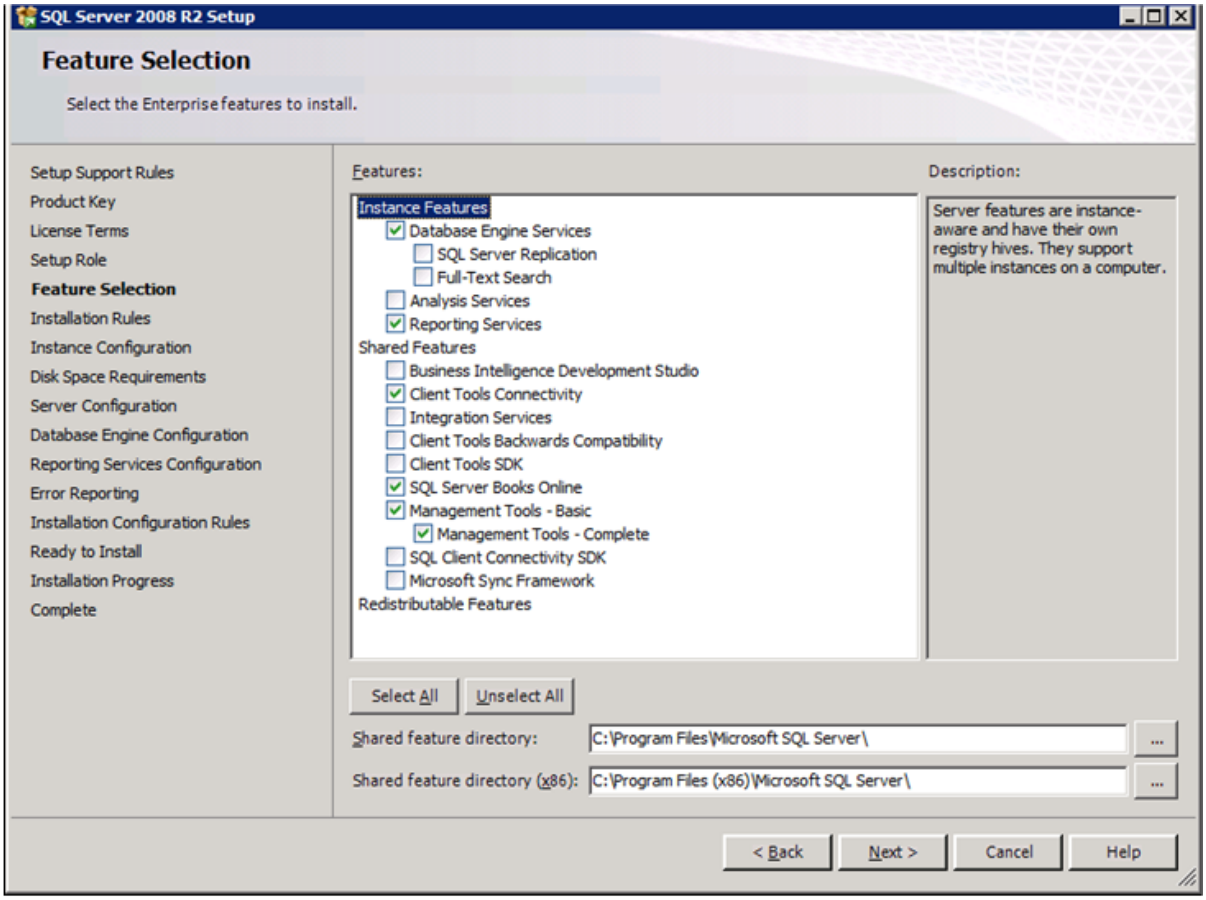



3. Select **New installation or add features to an existing installation**. The installation wizard opens.
4. Follow the on-screen instructions. When the screens mentioned below open, follow the instructions below to select the required settings and options for SpeechMiner.

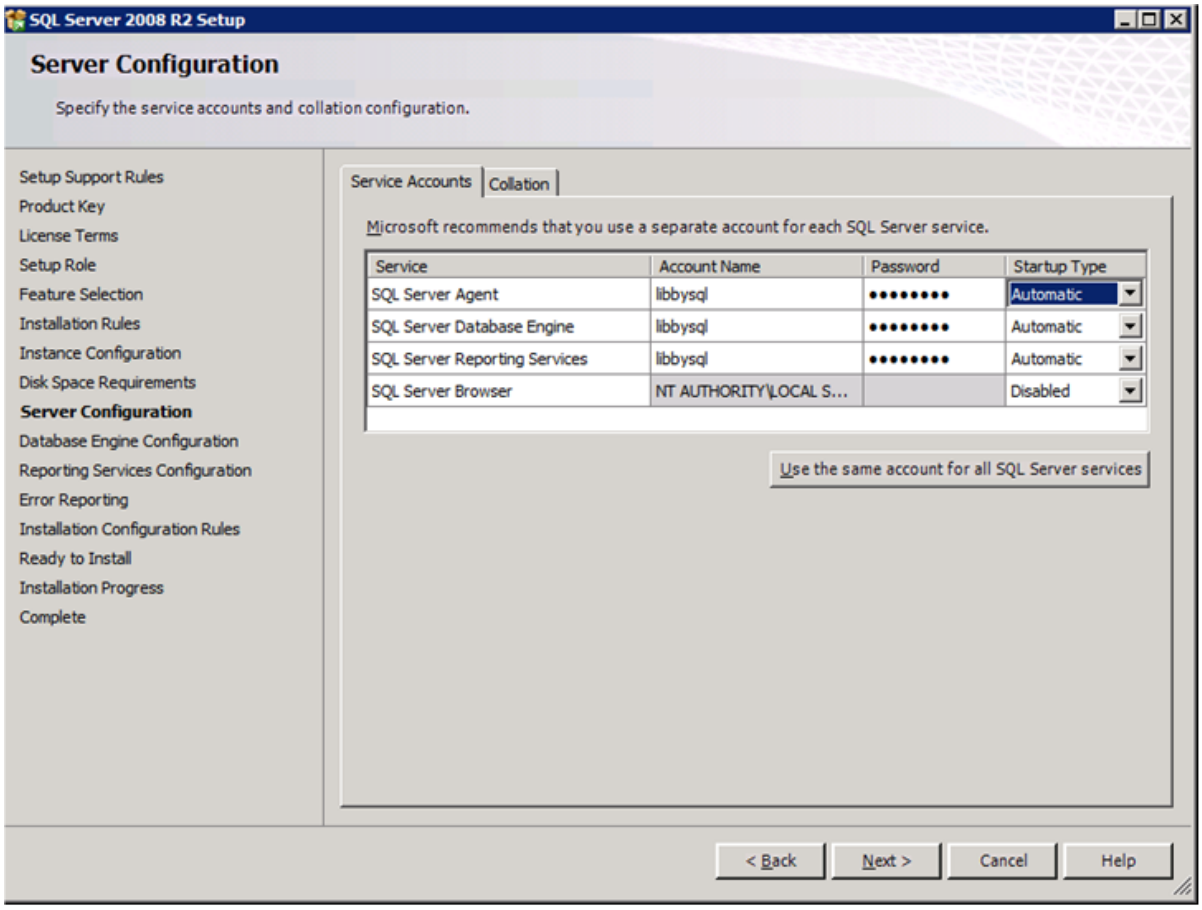
5. From the **Setup Role** screen, select **SQL Server Feature Installation**.



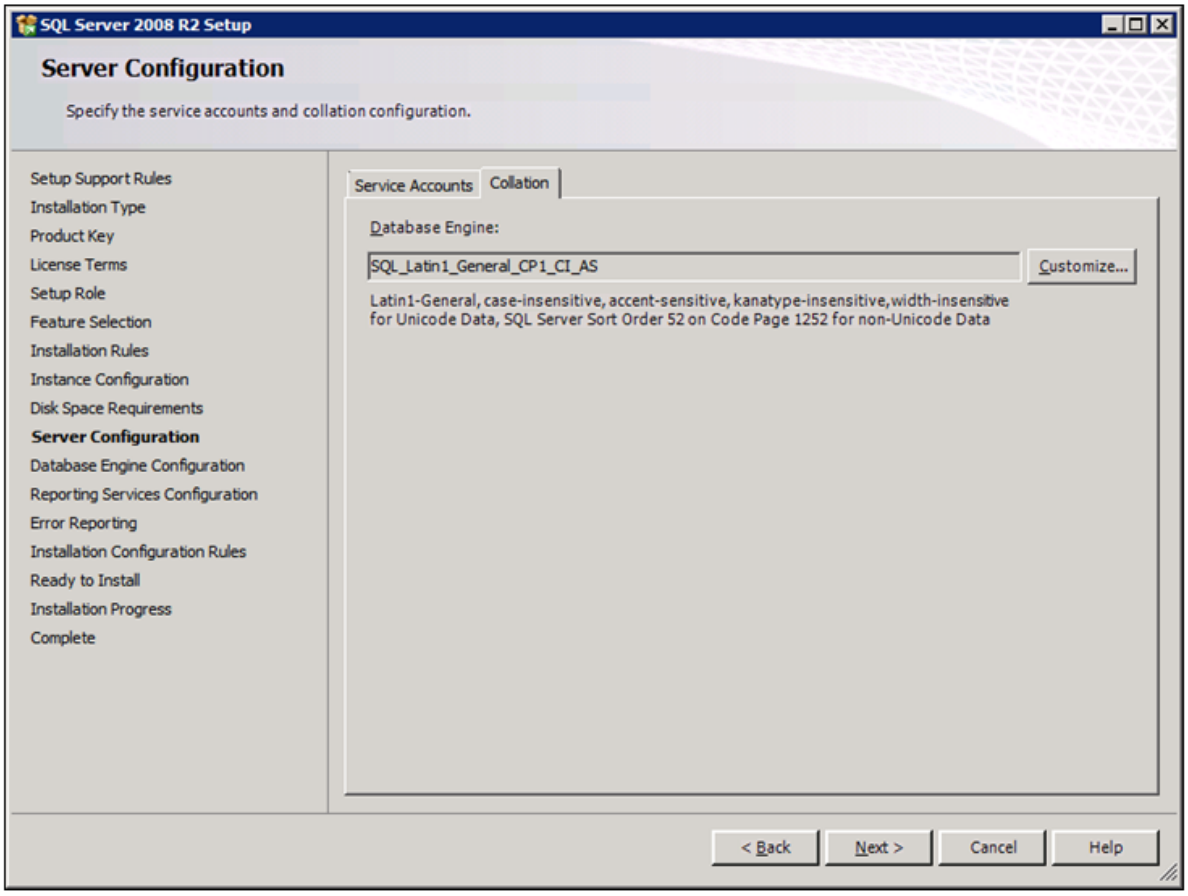

6. From the **Feature Selection** screen, select the following options:
   - Database Engine Services
   - Reporting Services
   - Client Tools Connectivity
   - SQL Server Books Online
   - Management Tools Basic
   - Management Tools Complete




7. From 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**.

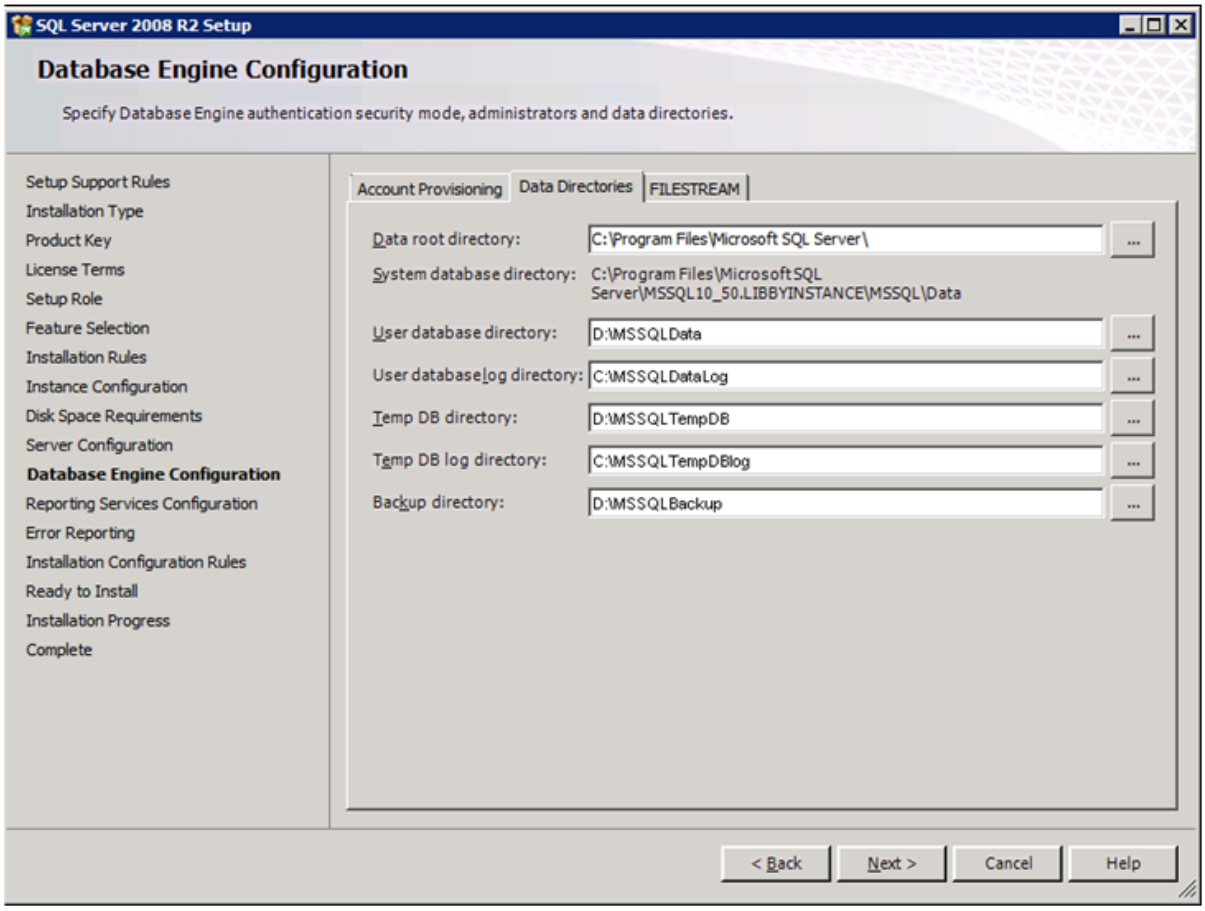

SQL Server 2008 R2 Setup
Server Configuration
Specify the service accounts and collation configuration.
Setup Support Rules
Product Key
License Terms
Setup Role
Feature Selection
Installation Rules
Instance Configuration
Disk Space Requirements
Server Configuration
Database Engine Configuration
Reporting Services Configuration
Error Reporting
Installation Configuration Rules
Ready to Install
Installation Progress
Complete
Service Accounts
Collation
Microsoft recommends that you use a separate account for each SQL Server service.
Service
Account Name
Password
Startup Type
SQL Server Agent
libbysql
Automatic
SQL Server Database Engine
libbysql
Automatic
SQL Server Reporting Services
libbysql
Automatic
SQL Server Browser
NT AUTHORITY\LOCAL S...
Disabled
Use the same account for all SQL Server services
< Back
Next >
Cancel
Help

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




9. From 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.



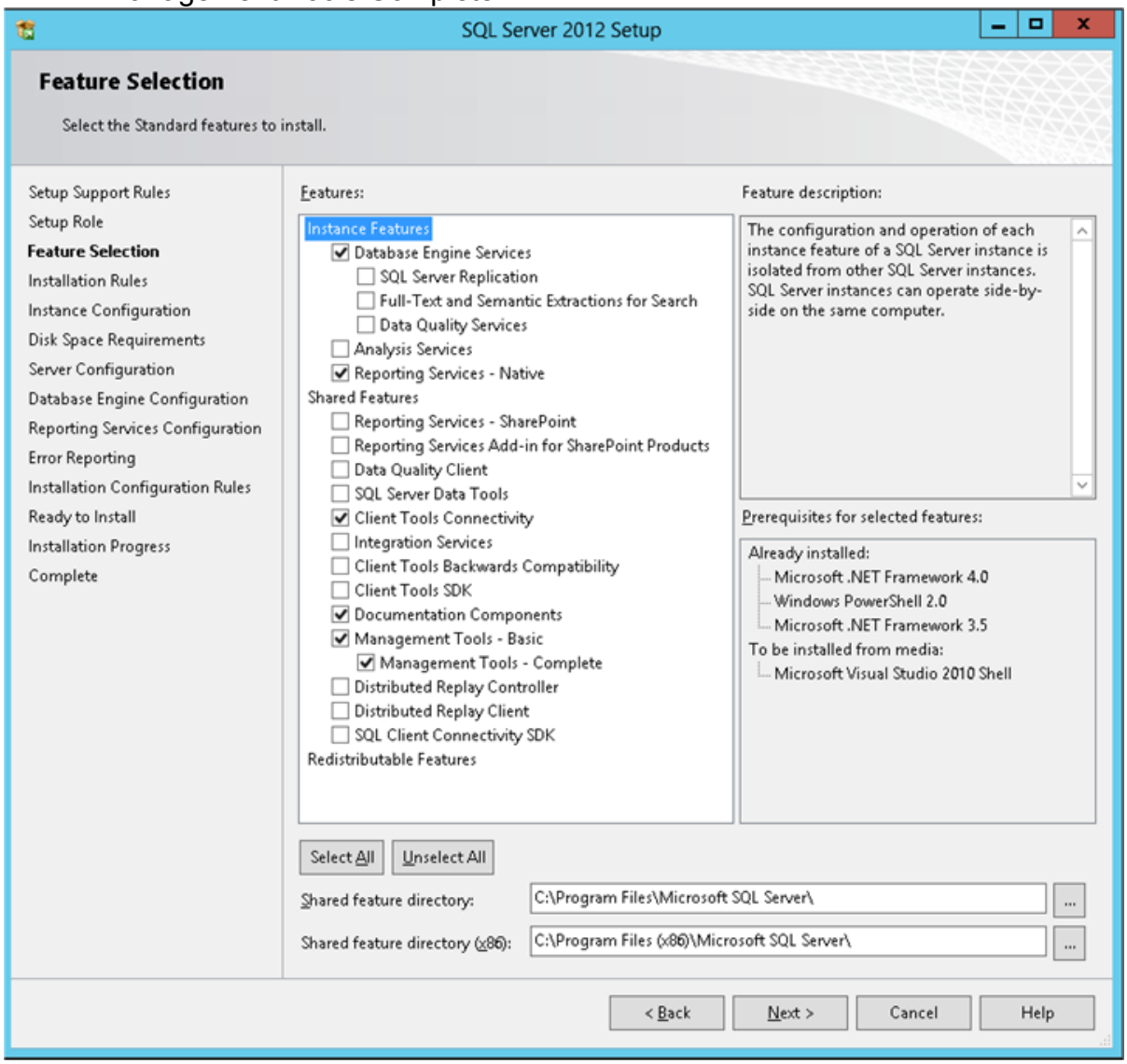

10. From the **Reporting Services Configuration** screen, select **Install the native mode default configuration**.
11. When you finish installing the SQL Server, restart the machine on which you installed it.

# Installing SQL Server 2012

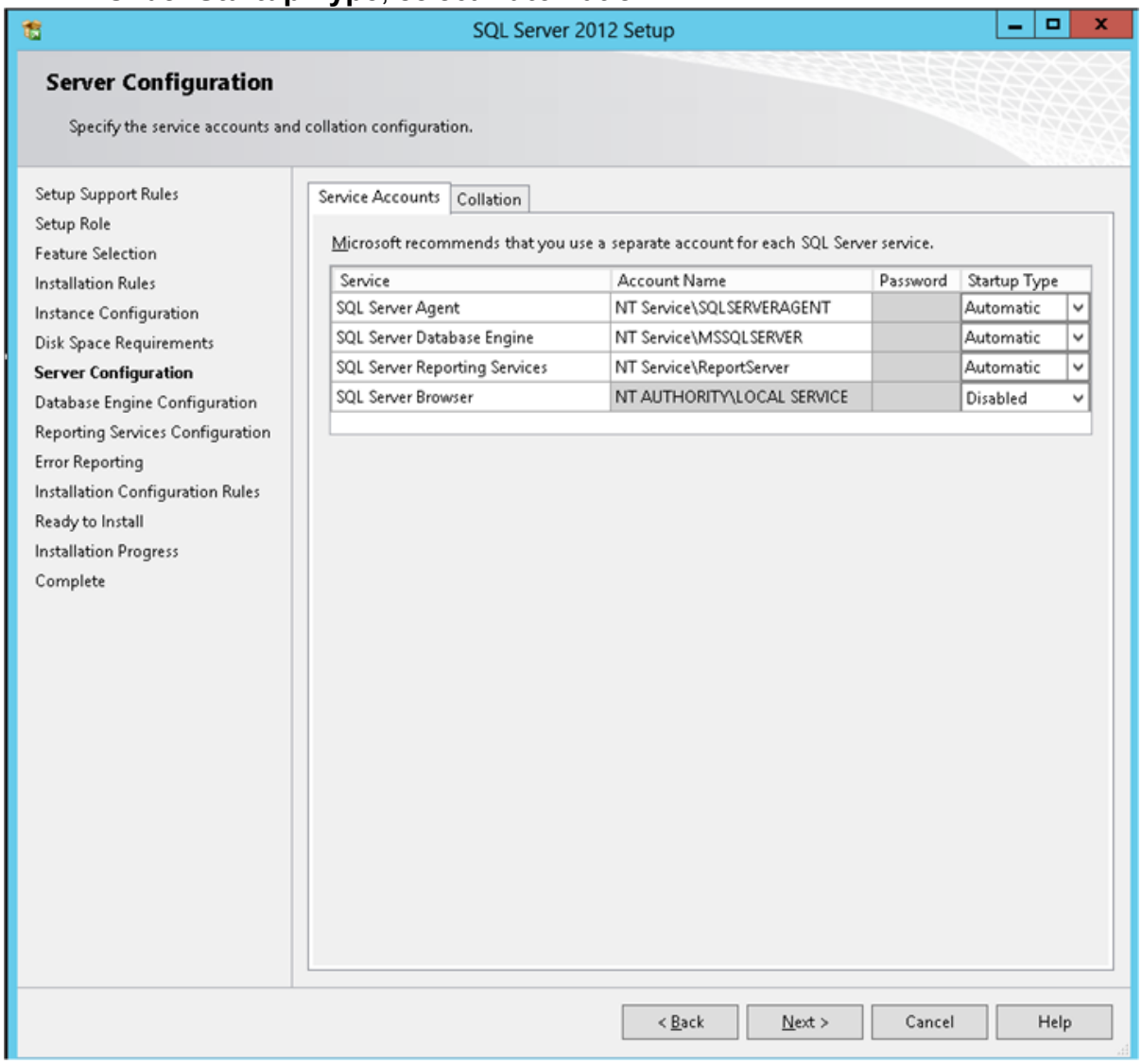
In order to install SQL Server 2012 for use with SpeechMiner, run the normal setup wizard and follow the instructions. To install SQL Server 2012:

1. Run the installation program. The **SQL Server Installation Center** window opens, with the **Planning** screen open.
2. From 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.

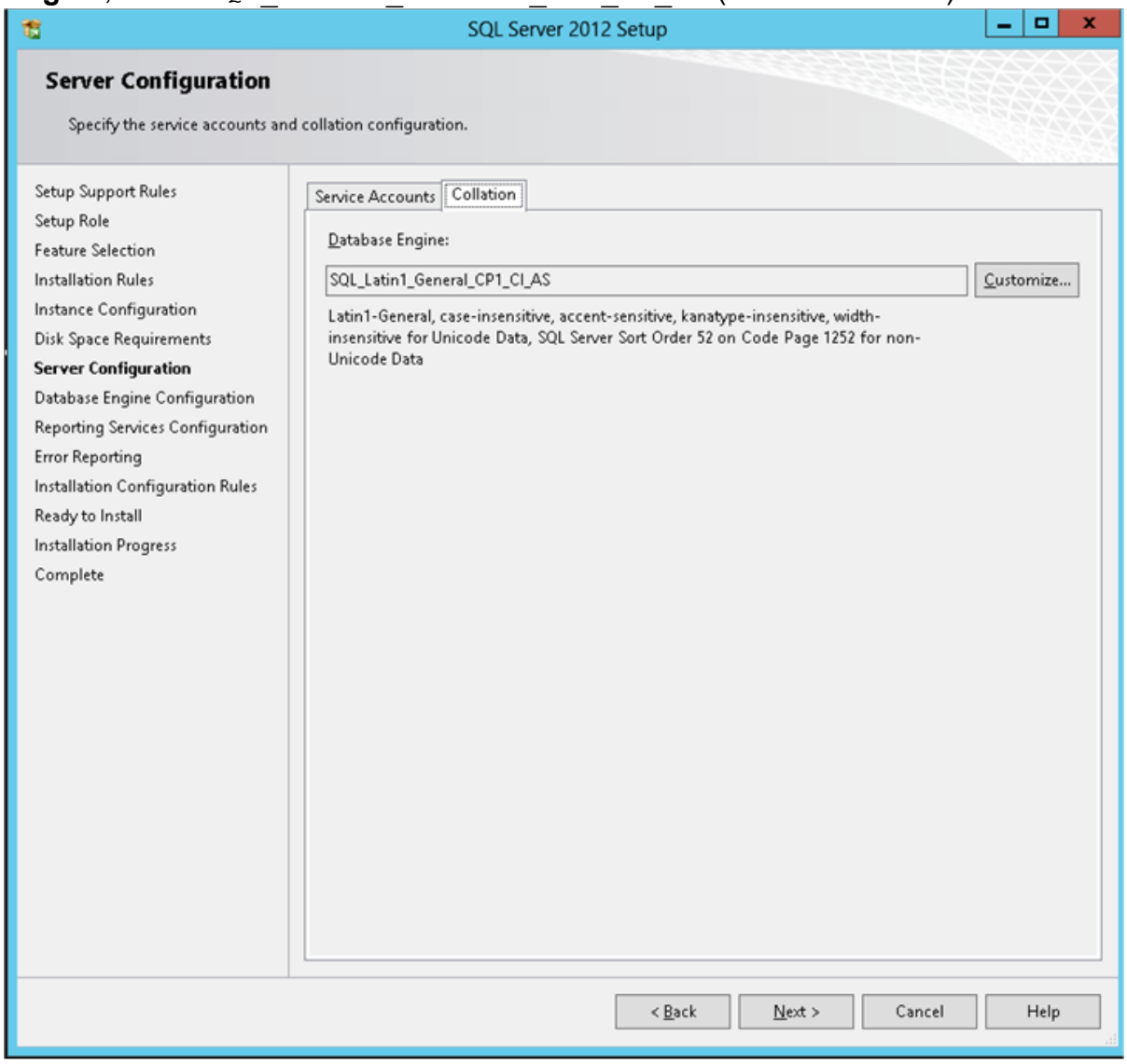
3. Follow the on-screen instructions. When the screens mentioned below open, follow the instructions below to select the required settings and options for SpeechMiner.
4. From the **Setup Role** screen, select **SQL Server Feature Installation**.
5. From the **Feature Selection** screen, select the following options:
    - Database Engine Services
    - Reporting Services
    - Client Tools Connectivity
    - SQL Server Books Online
    - Management Tools Basic
    - Management Tools Complete



6. From 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**.

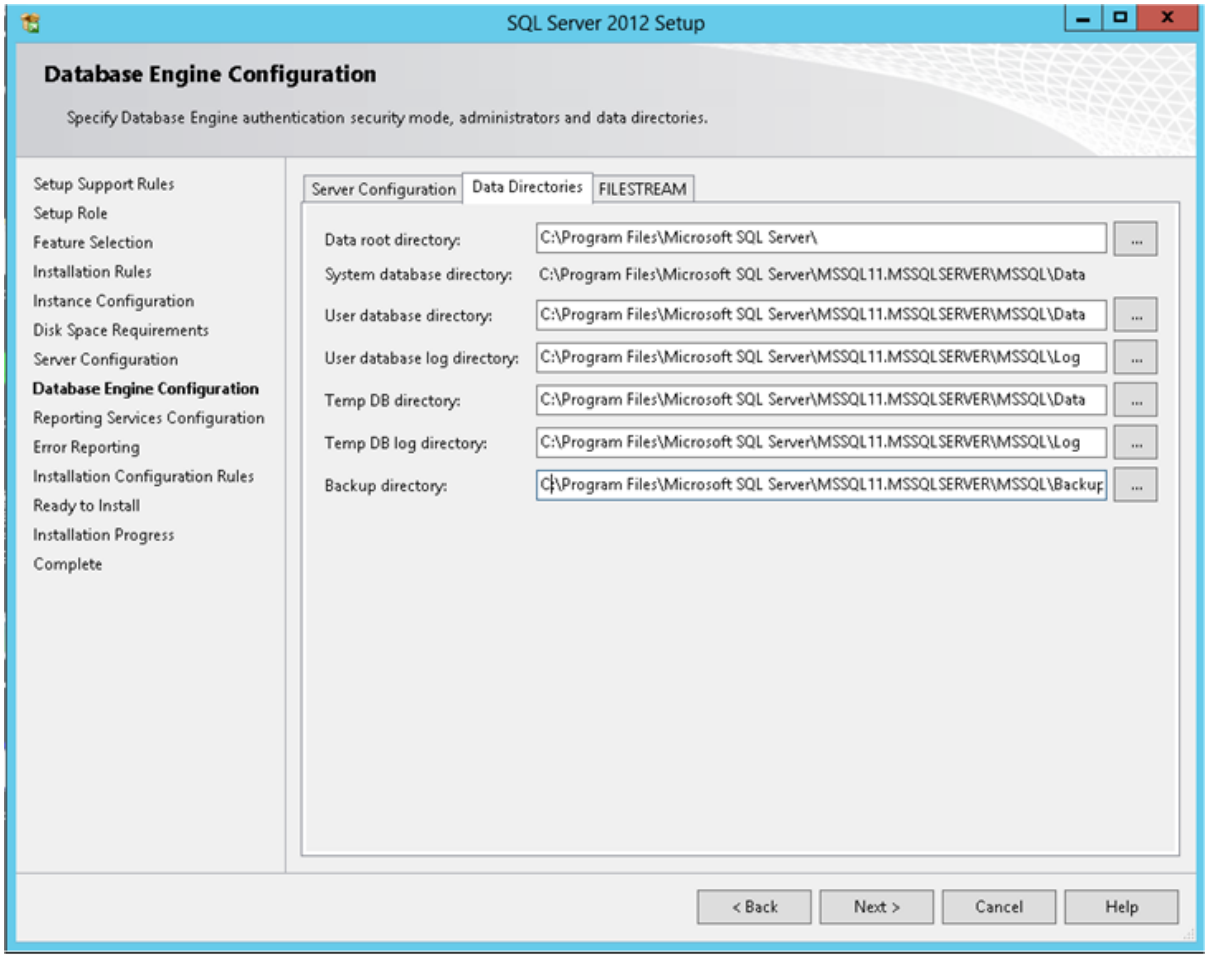


7. From the **Server Configuration** screen, in the **Collation** tab, under **Database Engine**, select `SQL_Latin1_General_CP1_CI_AS` (the default value).




8. From 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.




9. From 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.

# Configuring the SQL Server Setting

After the SQL server is installed, do the following:

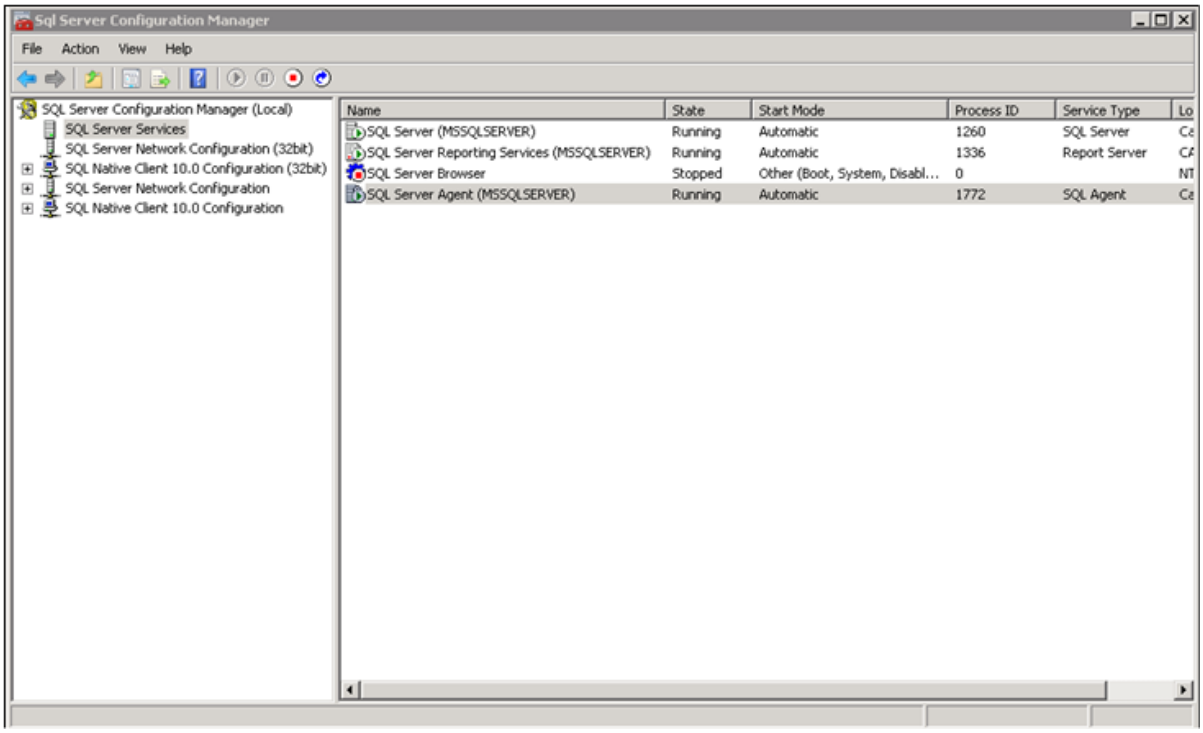
- Ensure that the SQL server is running
- Configure the SQL server to start automatically
- Enable both the TCP/IP and the Named Pipes protocols

**Important**

After you install SpeechMiner, you also have to deploy the CLR assembly and set its permissions. See Installing the SpeechMiner Components > Installing the SpeechMiner Database > SQL CLR.

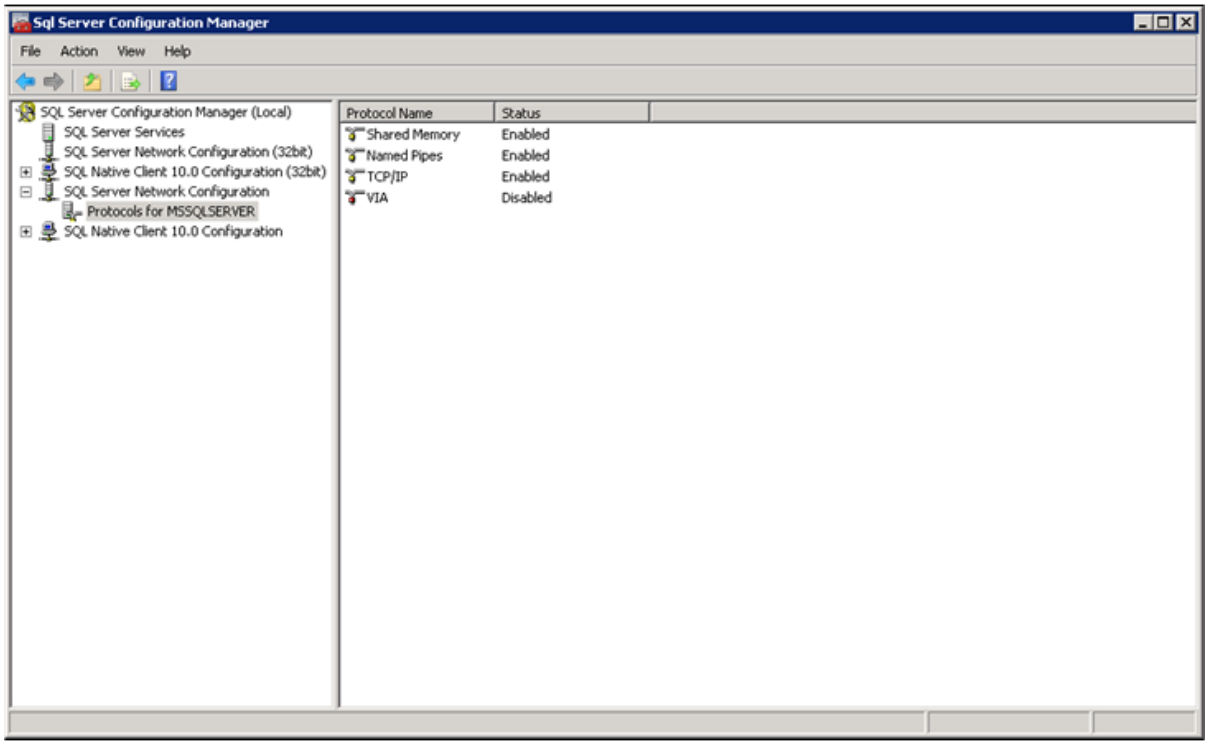
To configure the SQL server and enable the required protocols:

1. From the **Start** menu, navigate 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**.

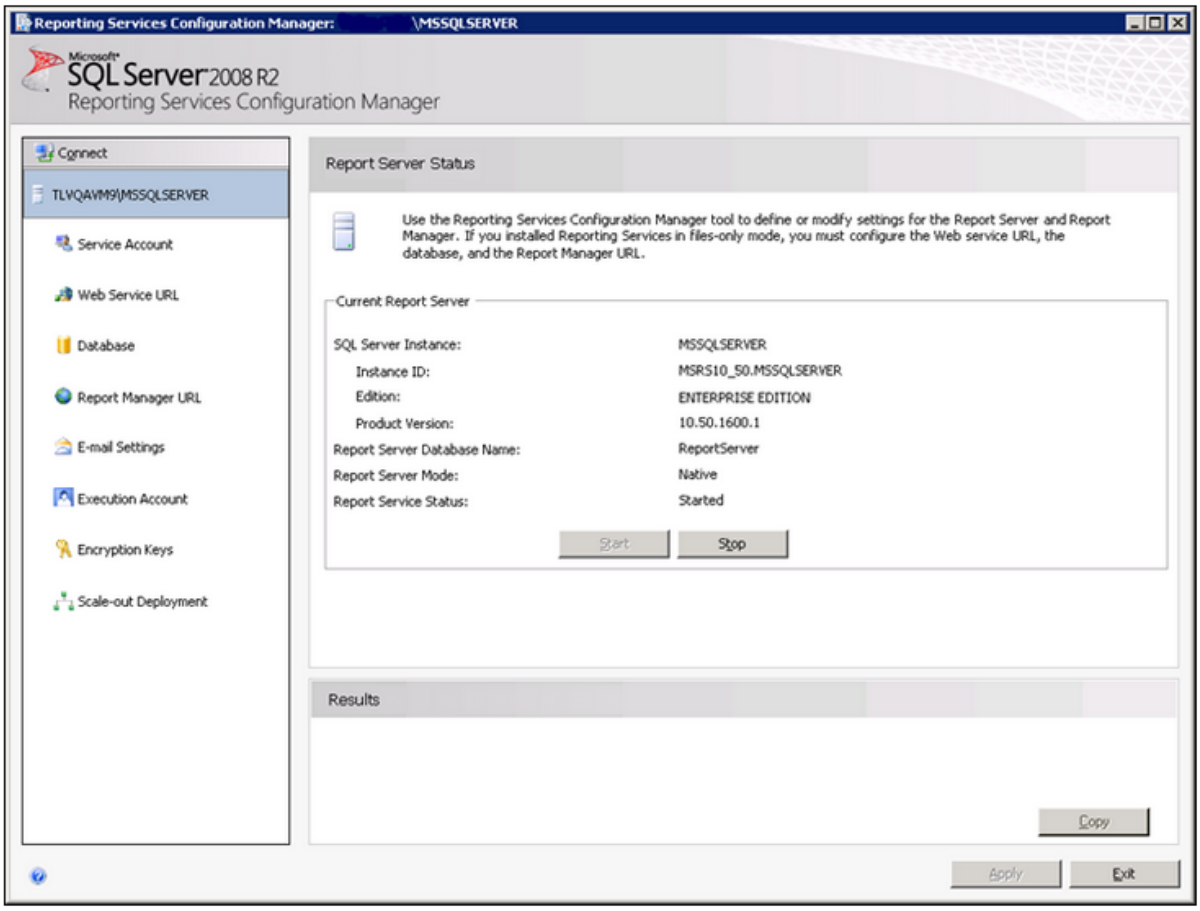



6. On the right side of the window, for **TCP/IP** and for **Named Pipes**, check that the **Status** is **Enabled**.
7. For each of these protocols, if it is not enabled, do the following:
    - Double-click the row. The **Properties** window opens.
    - In the **Protocol** tab, under **Enabled**,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

## Configuring the Reporting Services

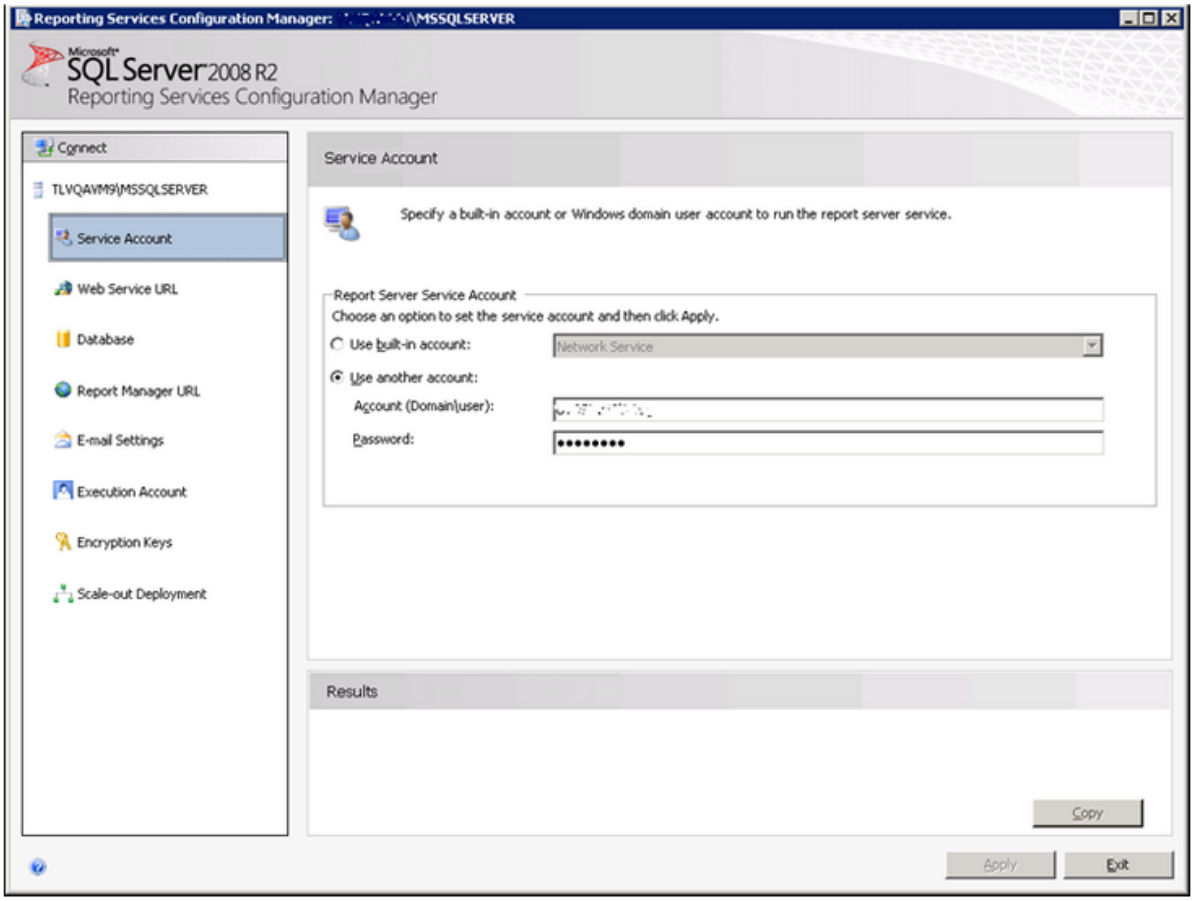
The SQL reporting services should be configured as explained below. To configure the SQL reporting services:

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




3. Check whether the report server is running. If it is not, click **Start**.

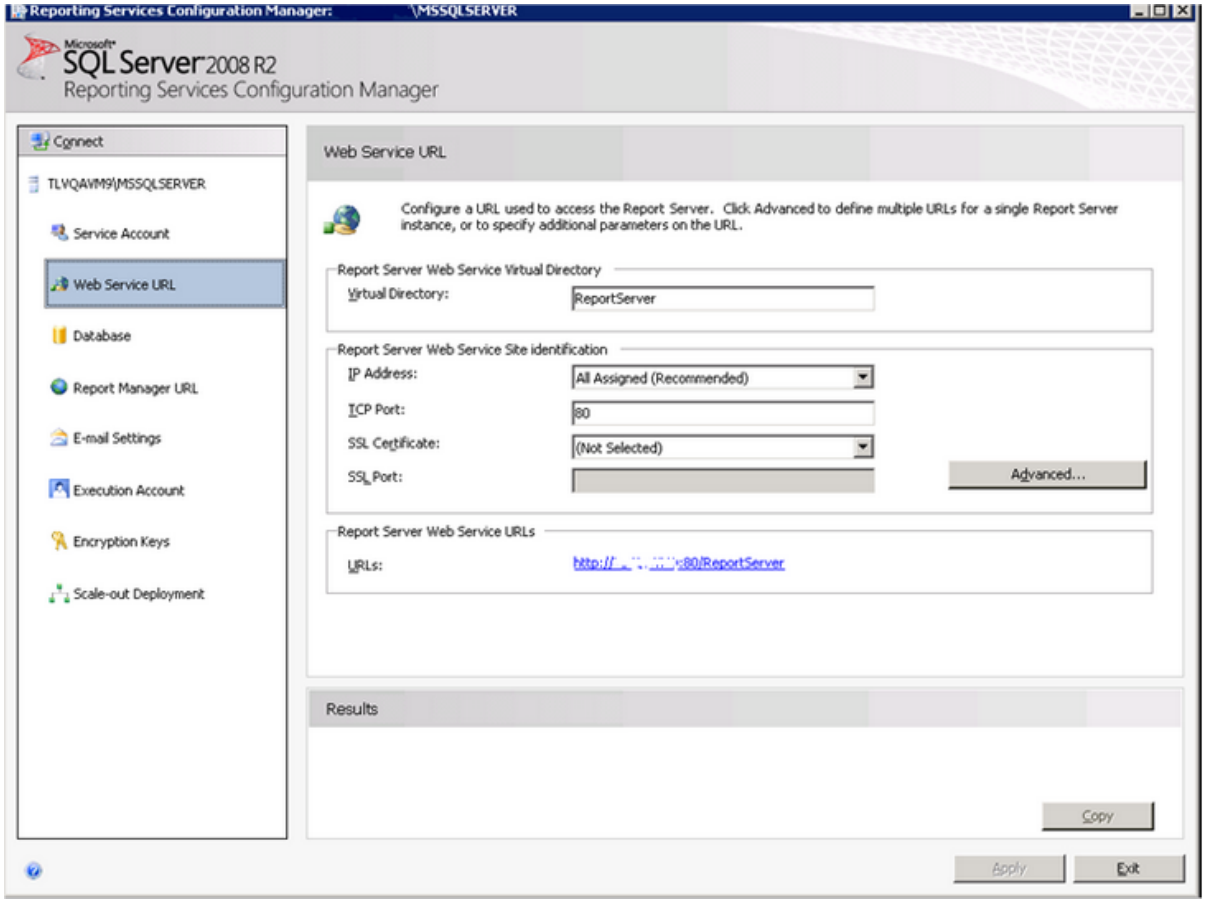
4. On the left side of the window, select **Service Account**.



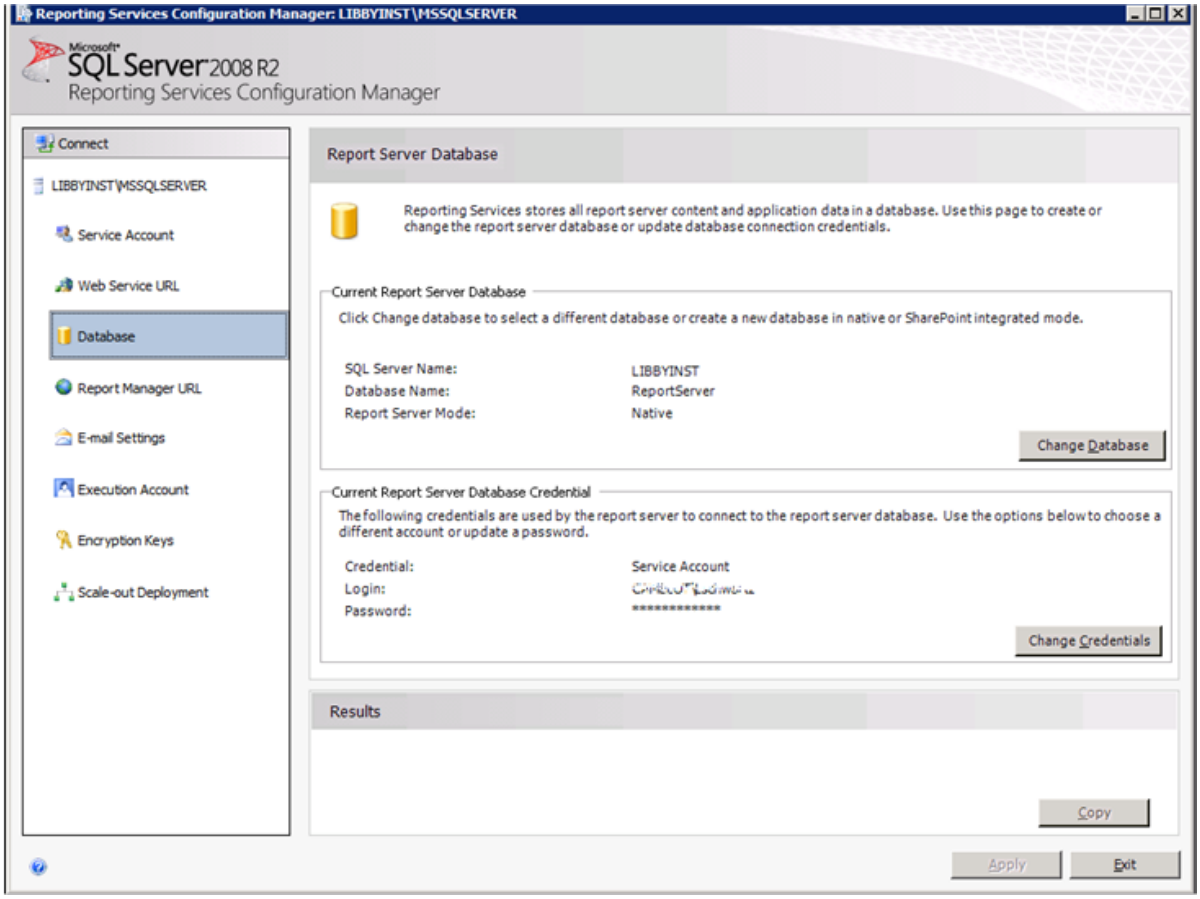

5. Configure the account name and password of the service account that will be used to run the report-server service, as required. Use either a local administrator account or an account that can log in as a service and run services on the local machine.

   The user must be a **Domain user**.

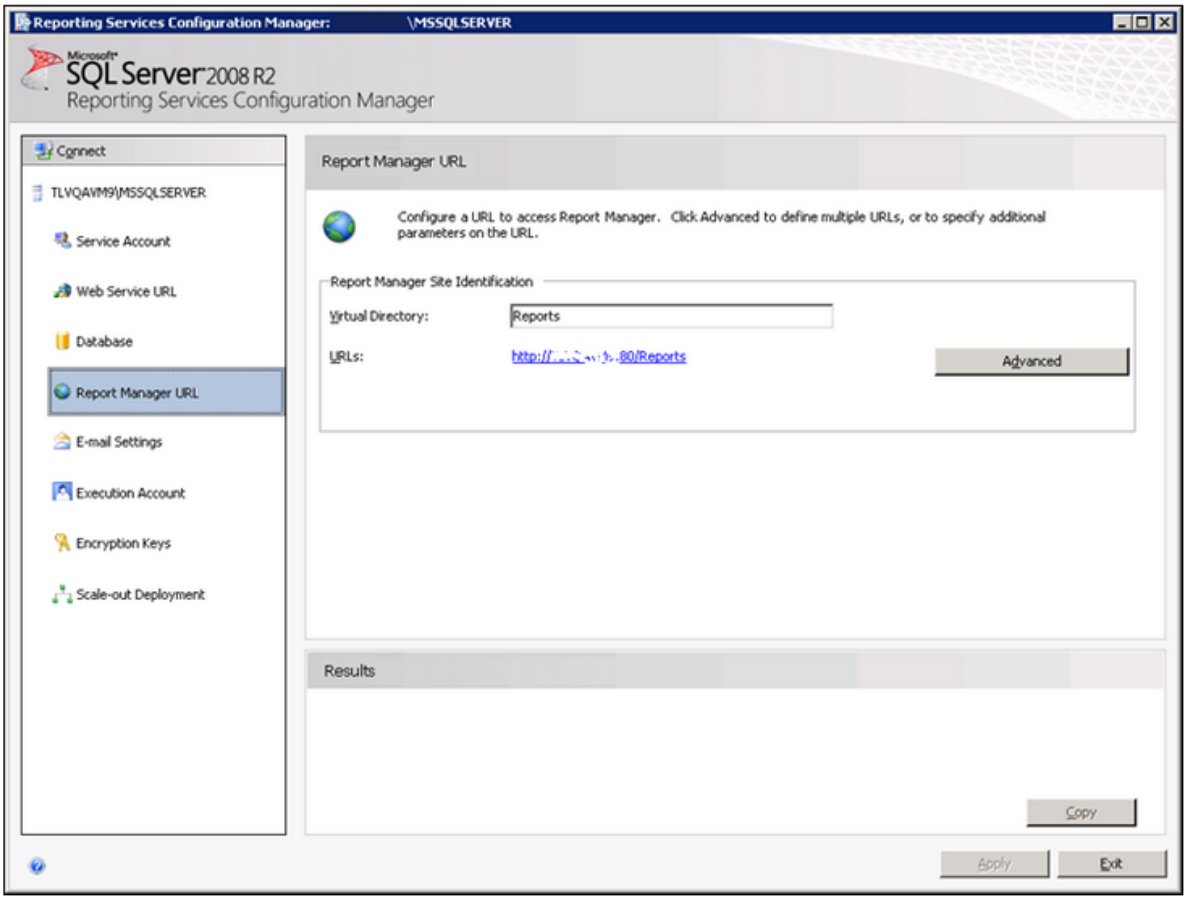
6. On the left side of the window, select **Web Service URL**; make sure the settings in the screen match the settings as follows:



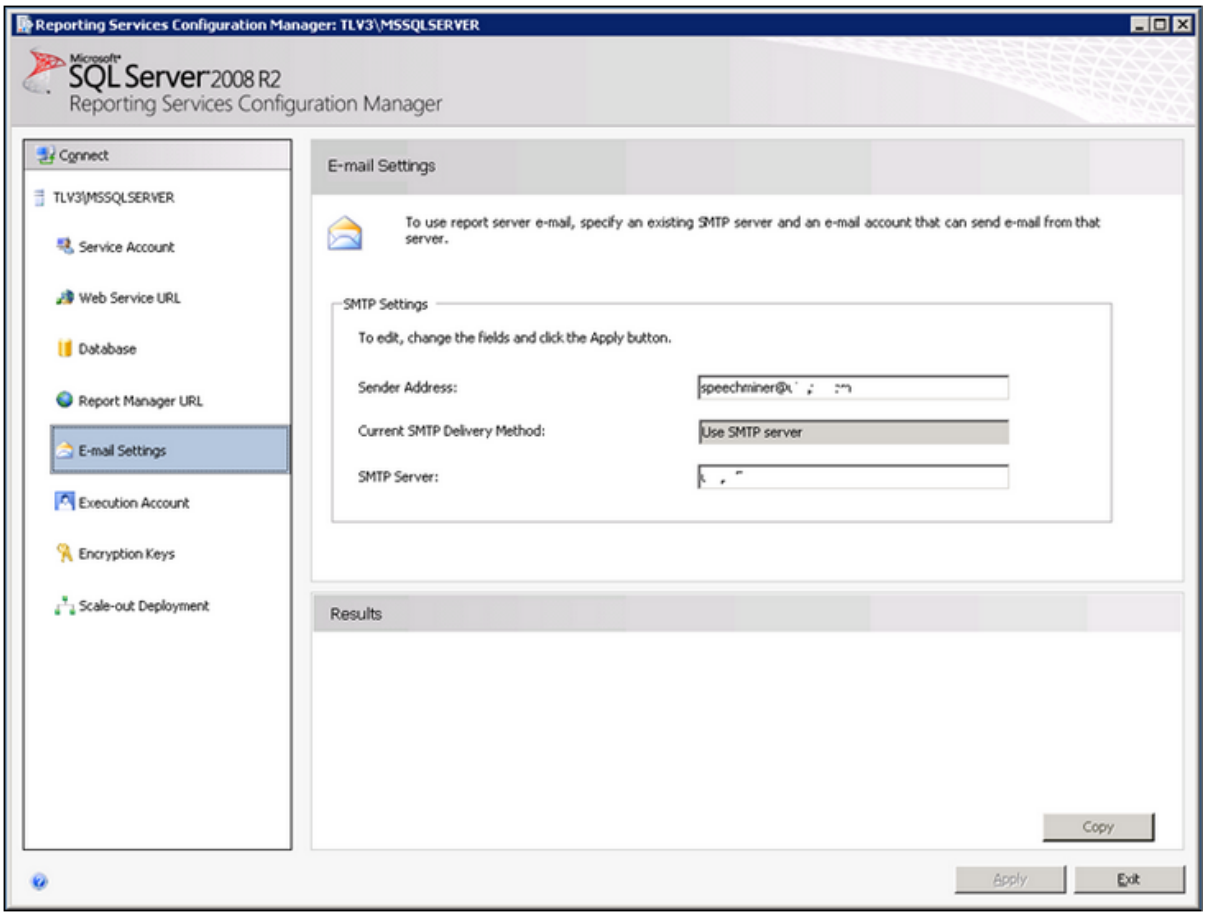

7. On the left side of the window, select **Database**. If you created a report-server database when you installed SQL Server, it appears under **Current Report Server Database**. If you did not, create it now.




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




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.



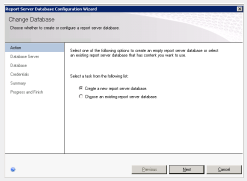

11. Click **Exit** to close the **Reporting Services Configuration Manager**.
12. In the **Report Server config** file (rsreportserver.config) change the **MaxActiveReqForOneUser** parameter value from 20 to 250.
    For more details see: http://msdn.microsoft.com/en-us/library/ms157273.aspx

## Creating the Report-Server Database

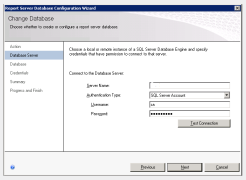
If the report-server database was not created automatically when you installed SQL Server, you can create it in the **Report Server Database Configuration Wizard**. To create the report-server database:

1. Open the **Reporting Services Configuration Manager**.
2. From 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 examples shown (except, of course, for the server name and the credentials, which you must specify as

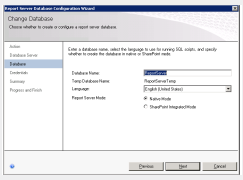
appropriate for your system). Click **Next** to progress from screen to screen until you have finished creating the database.



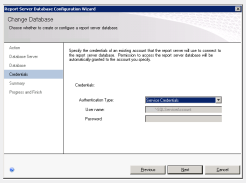
Action



Database Server



Database



Credentials

Click on the image to enlarge.

## 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.

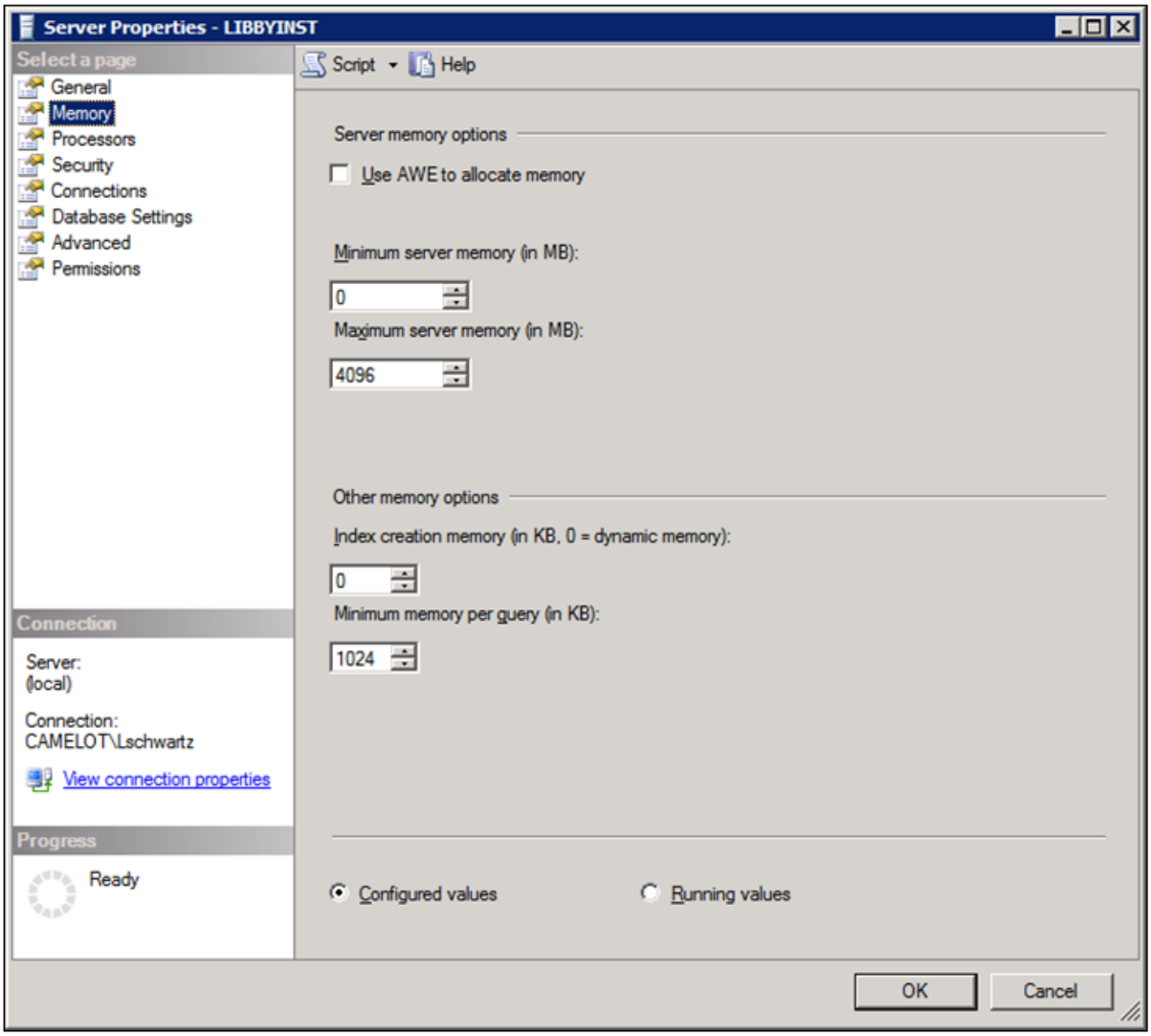
Important

In addition to the "server memory" that is limited by this value, the SQL server uses 2-4 GB of other memory. For this reason, it is recommended to set the max server memory to a value that is 2-4 GB 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. From 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.




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.

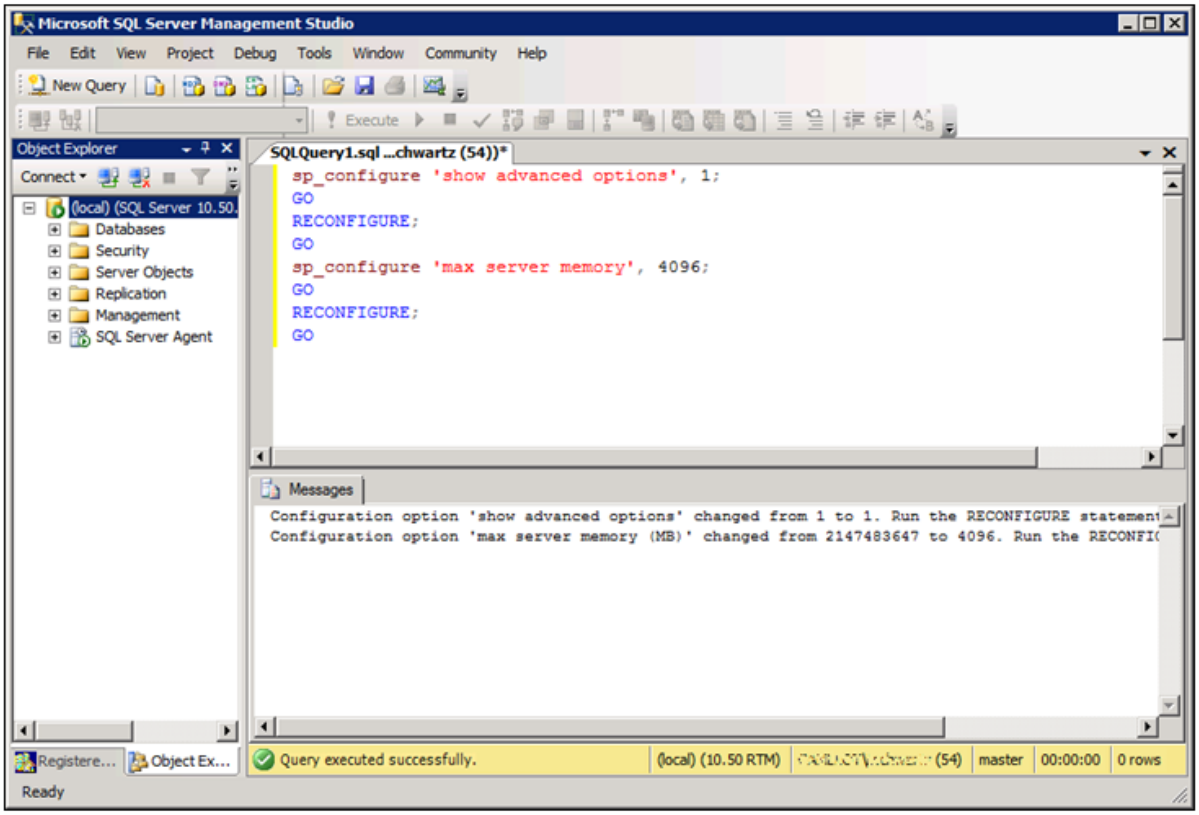
If you prefer, you can also set the max server memory property by executing a query:

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 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.



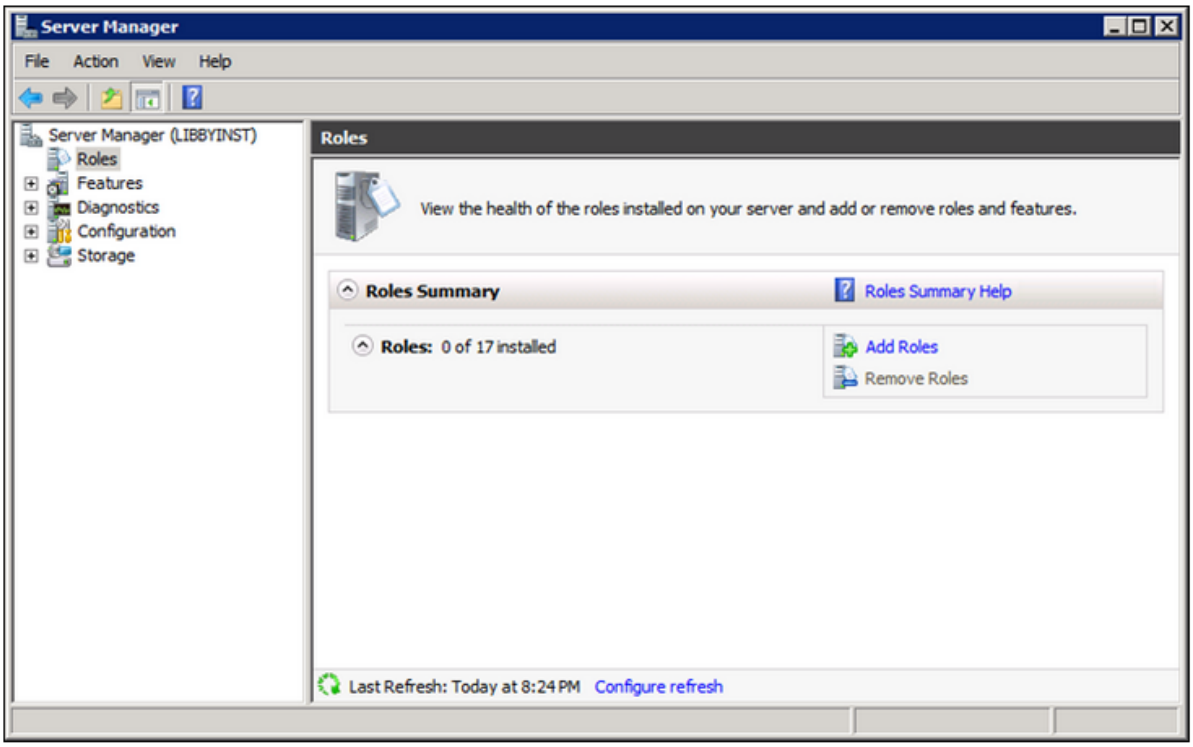
# Installing IIS on the Web Server or Interaction Receiver Server

## Windows Server 2008

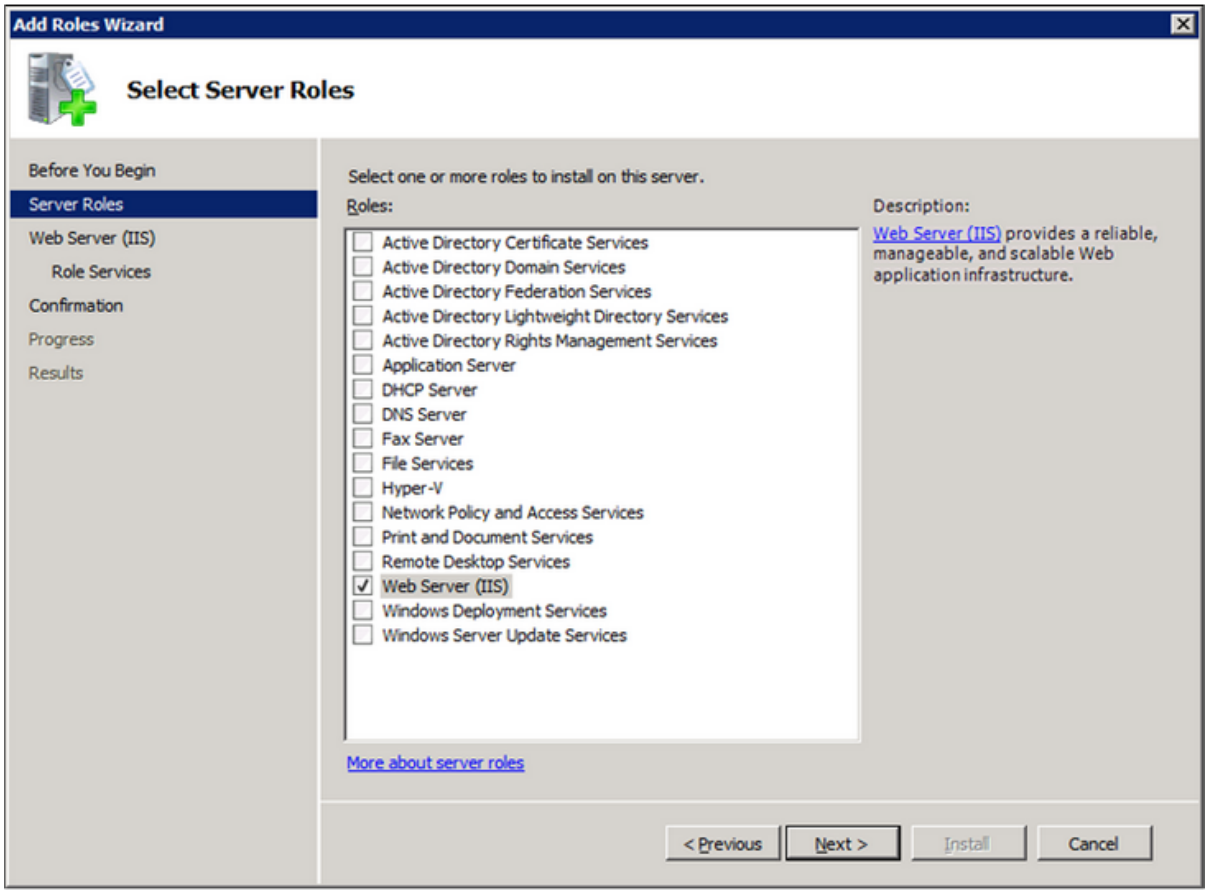
On Windows Server 2008, you can install and configure the Internet Information Services (IIS) in the Server Manager.

To install and configure the IIS component:

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

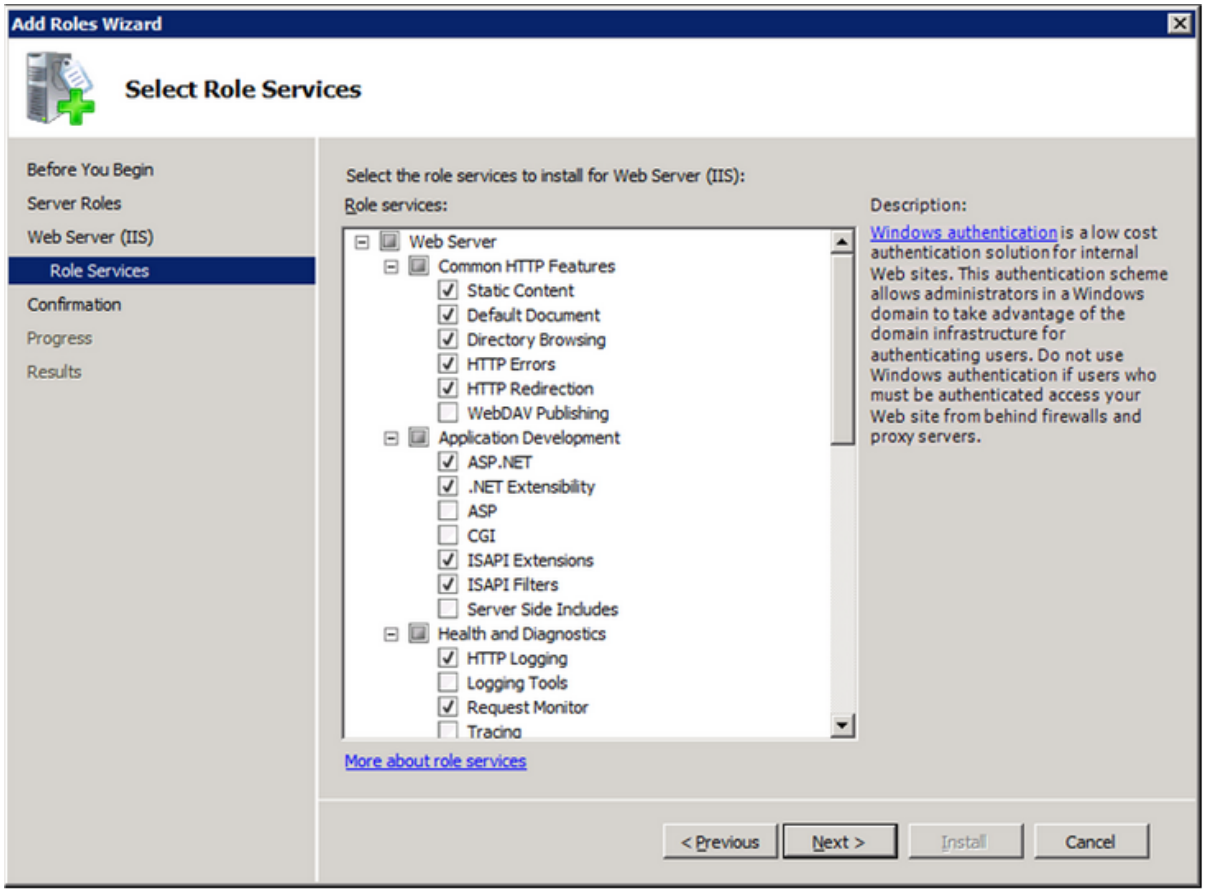


3. On the right side of the screen, select **Add Roles**. The **Add Roles Wizard** opens.




4. From 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.




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**

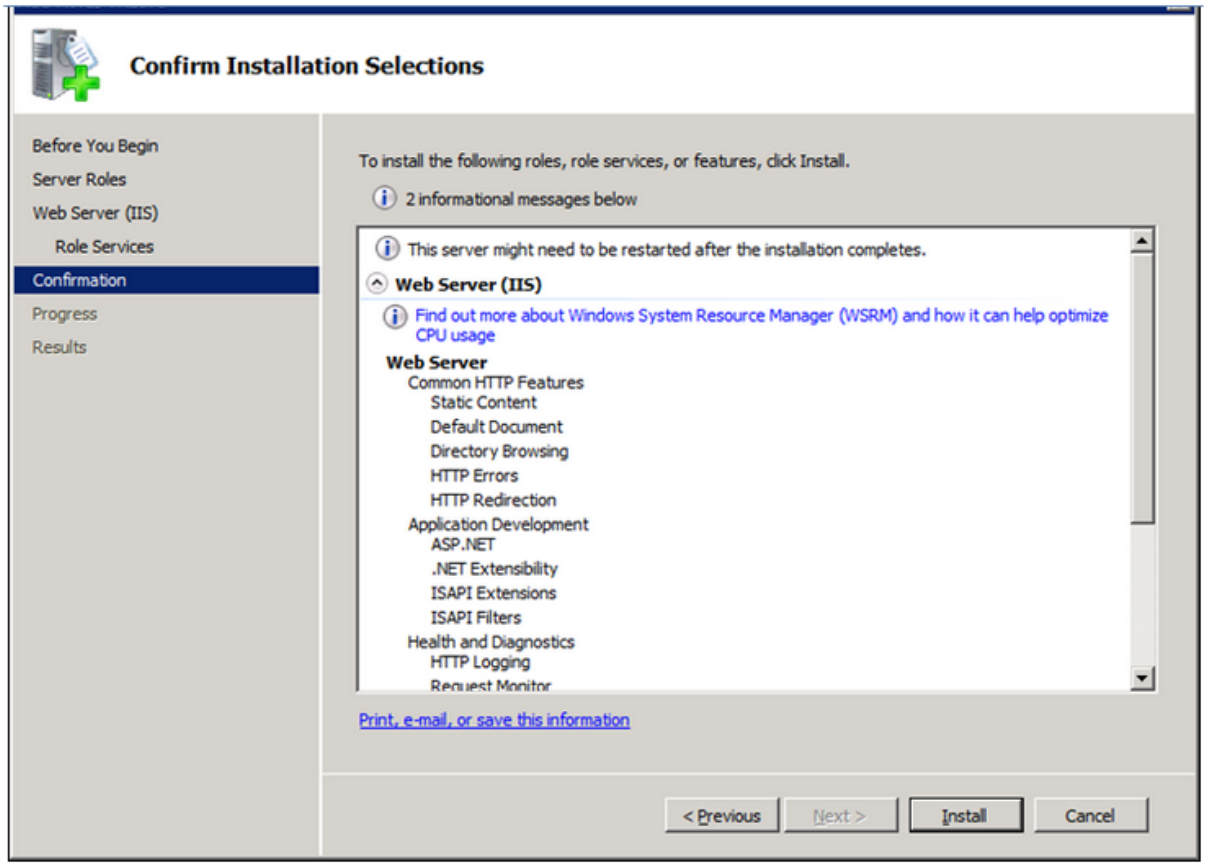
> Important

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**.

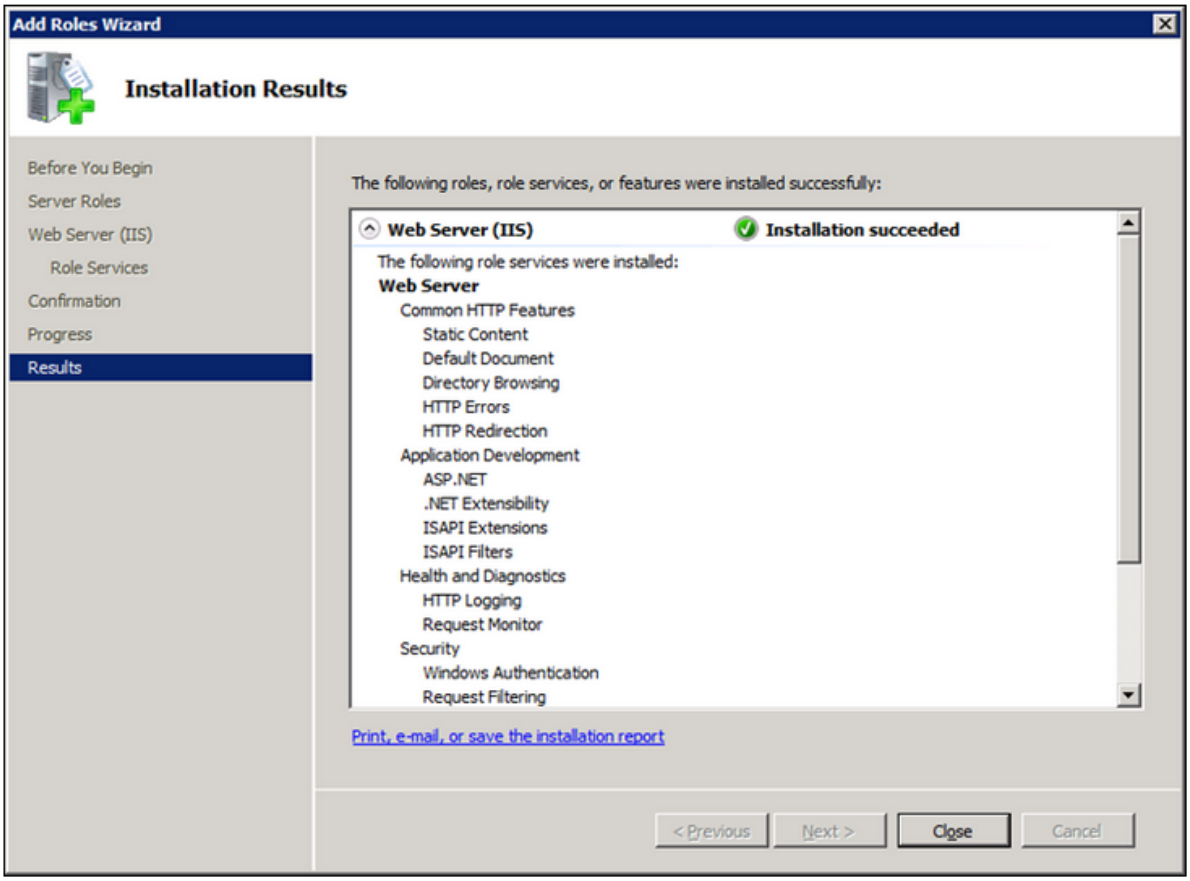
c. Under Security:
   - **Windows Authentication**

d. Under IIS 6 Management Compatibility:
   - **IIS 6 WMI Compatibility**
   - **IIS 6 Metabase Compatibility**

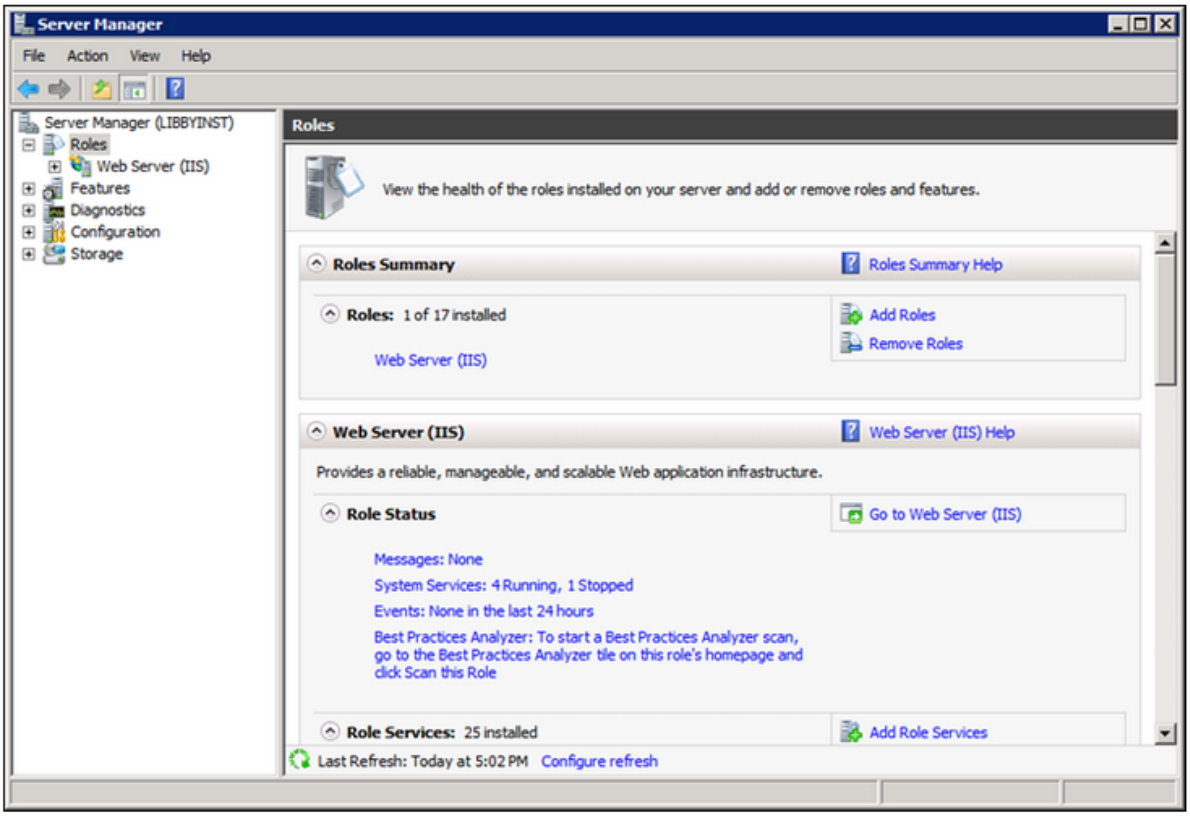
7. Click Next. A **Confirm Installation Selections** screen opens.



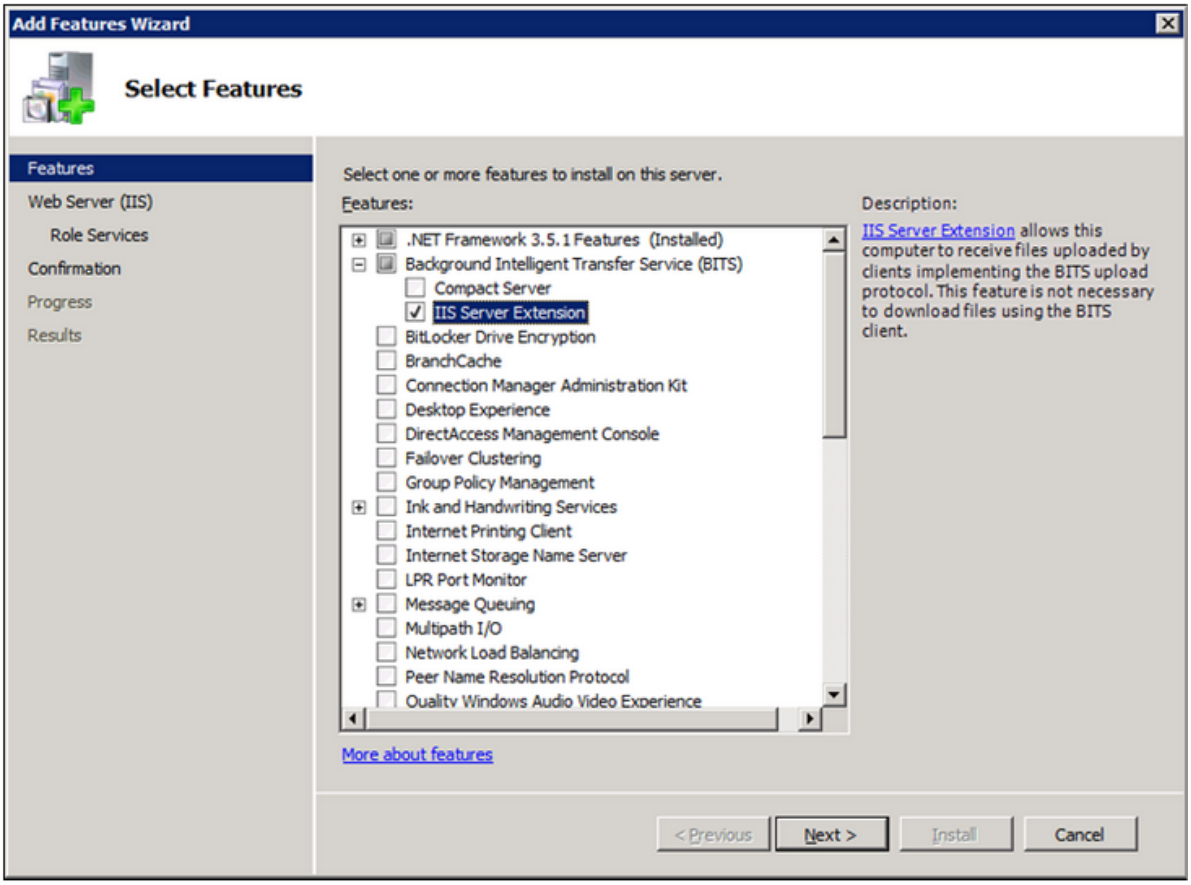

8. Select **Install**. The installation process begins, and the **Installation Progress** screen is displayed. When the installation is completed, an **Installation Results** screen is displayed.



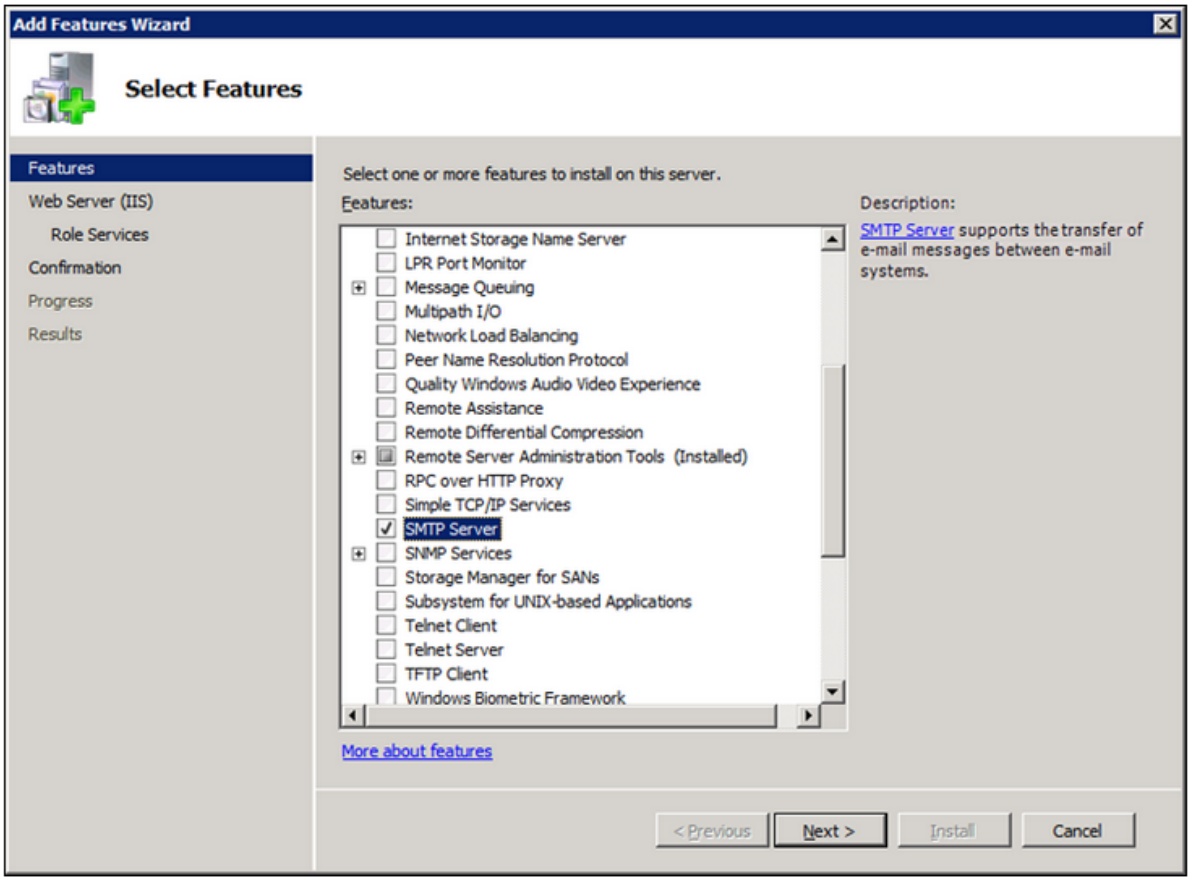

9. Click **Close**. The **Add Roles Wizard** closes, and the **Server Manager** lists the **Web Server (IIS)** role as installed.




10. From the **Server Manager**, in the left pane, select **Features**, and then, in the right pane, select **Add Features**. The **Add Features Wizard** opens.
11. From 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**.

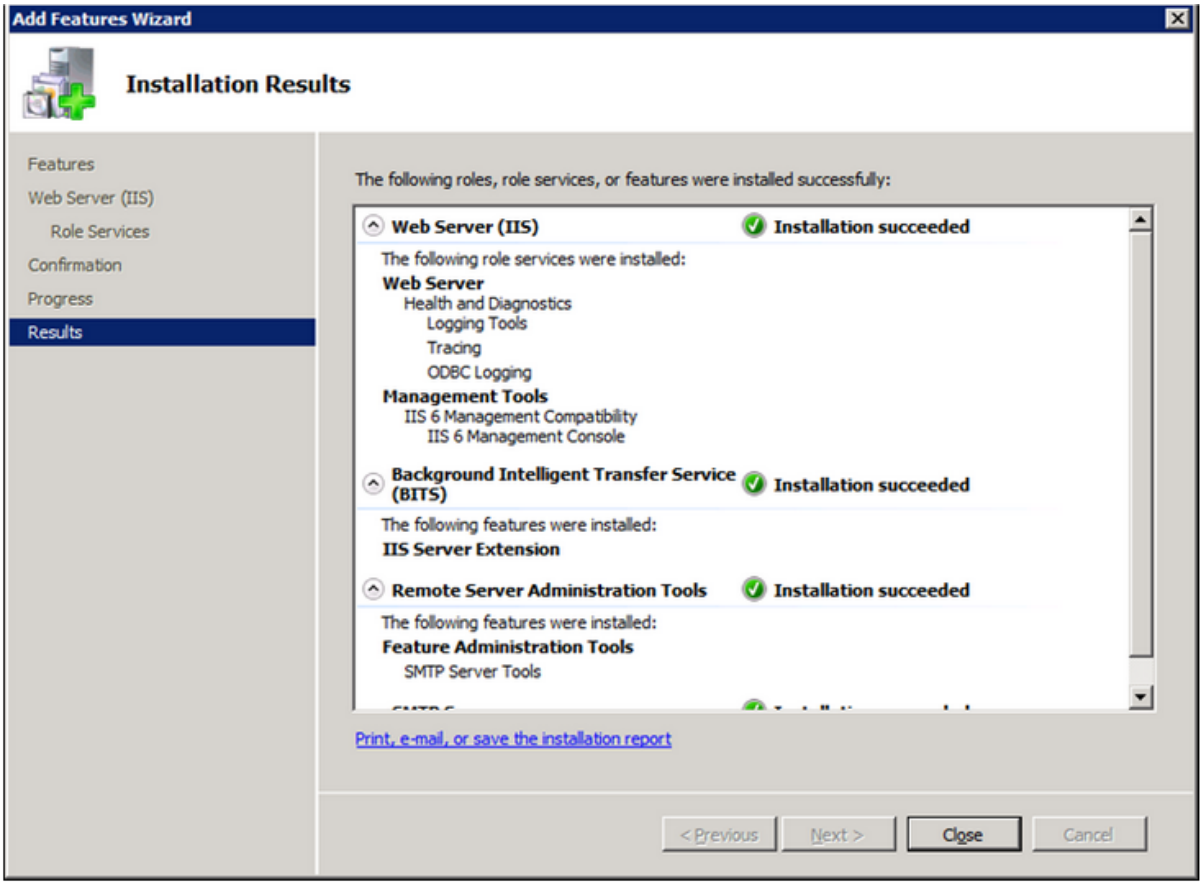



12. Select **Add required role services**. The window closes.
13. From the list of features, select **SMTP Server**. A window pops up, asking you to confirm that you want to **Add role services required for SMTP Server**.

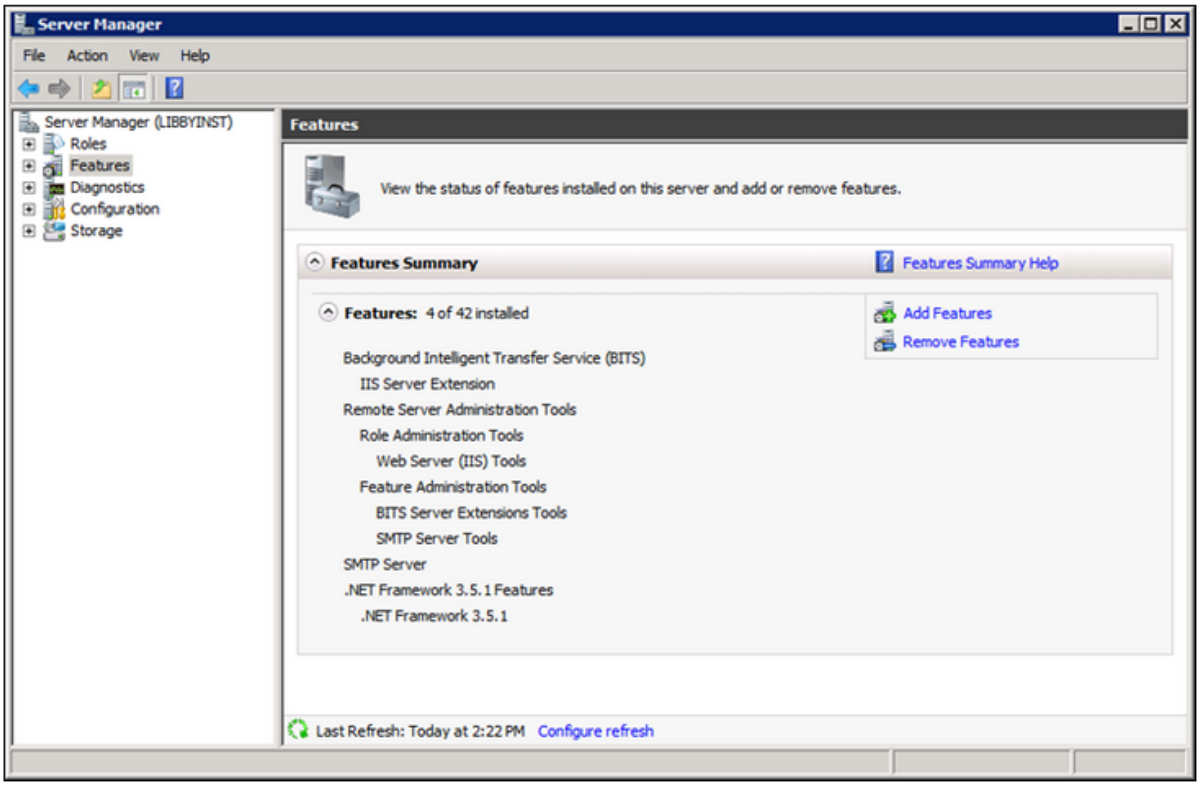



14. Select **Add required role services**. The window closes.

    Click **Next** three times, and then click **Install**. The installation process begins, and the **Installation Progress** screen is displayed. When the installation is completed, the **Installation Results** screen is displayed.


Add Features Wizard
Installation Results
Features
Web Server (IIS)
Role Services
Confirmation
Progress
Results
The following roles, role services, or features were installed successfully:
Web Server (IIS)
Installation succeeded
The following role services were installed:
Web Server
Health and Diagnostics
Logging Tools
Tracing
ODBC Logging
Management Tools
IIS 6 Management Compatibility
IIS 6 Management Console
Background Intelligent Transfer Service (BITS)
Installation succeeded
The following features were installed:
IIS Server Extension
Remote Server Administration Tools
Installation succeeded
The following features were installed:
Feature Administration Tools
SMTP Server Tools
Print, e-mail, or save the installation report
< Previous
Next >
Close
Cancel

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

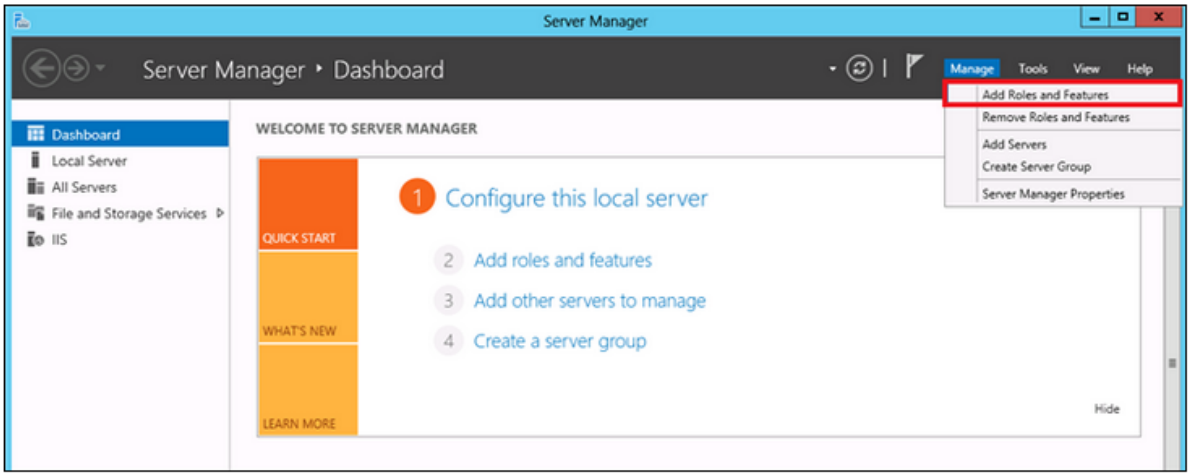



# Windows Server 2012

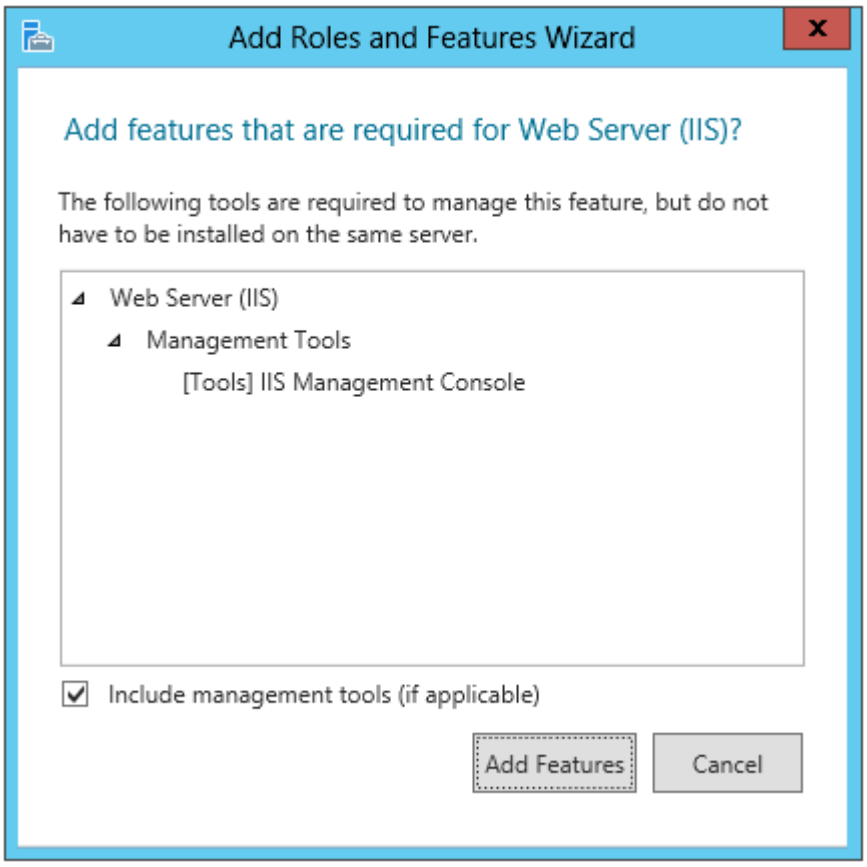
On Windows Server 2012, you can install and configure the Internet Information Services (IIS), version 8, in the **Server Manager**.

To install and configure the Internet Information Services (IIS) component:

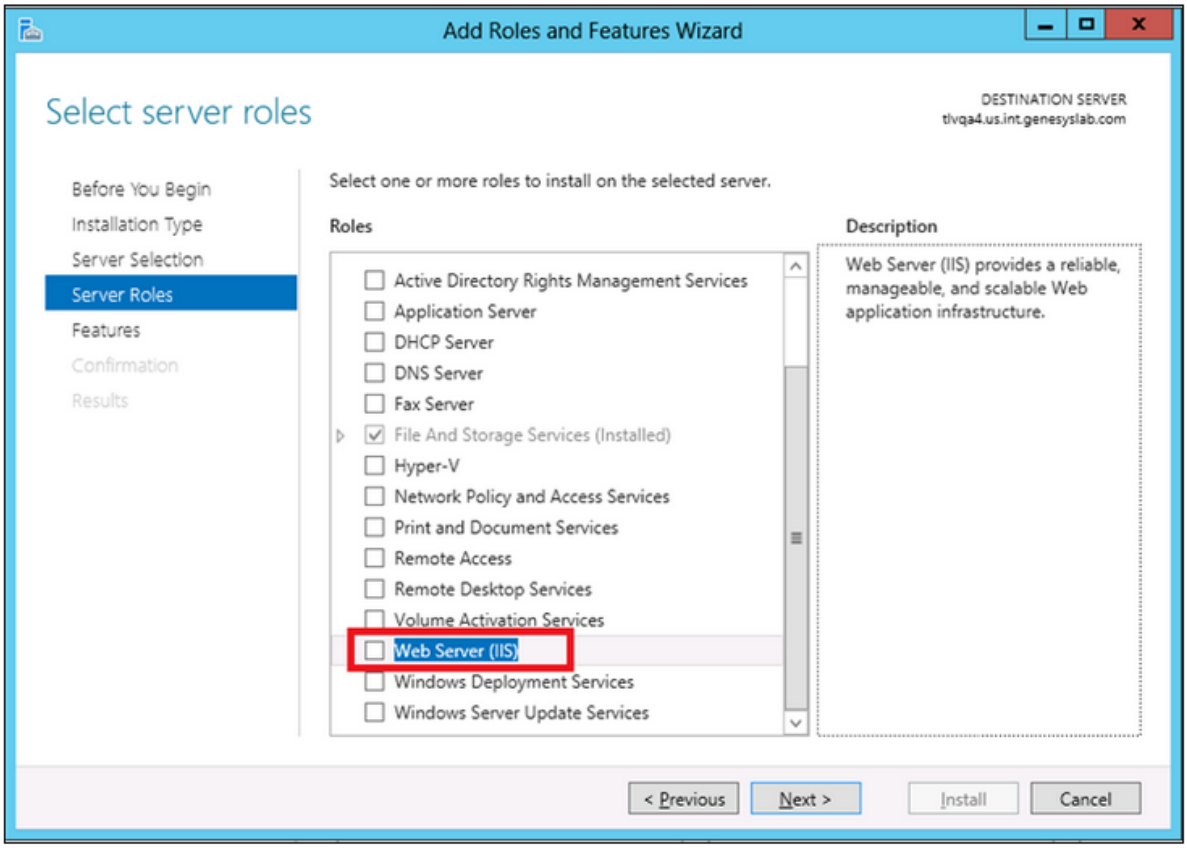
1. Open the **Server Manager**.



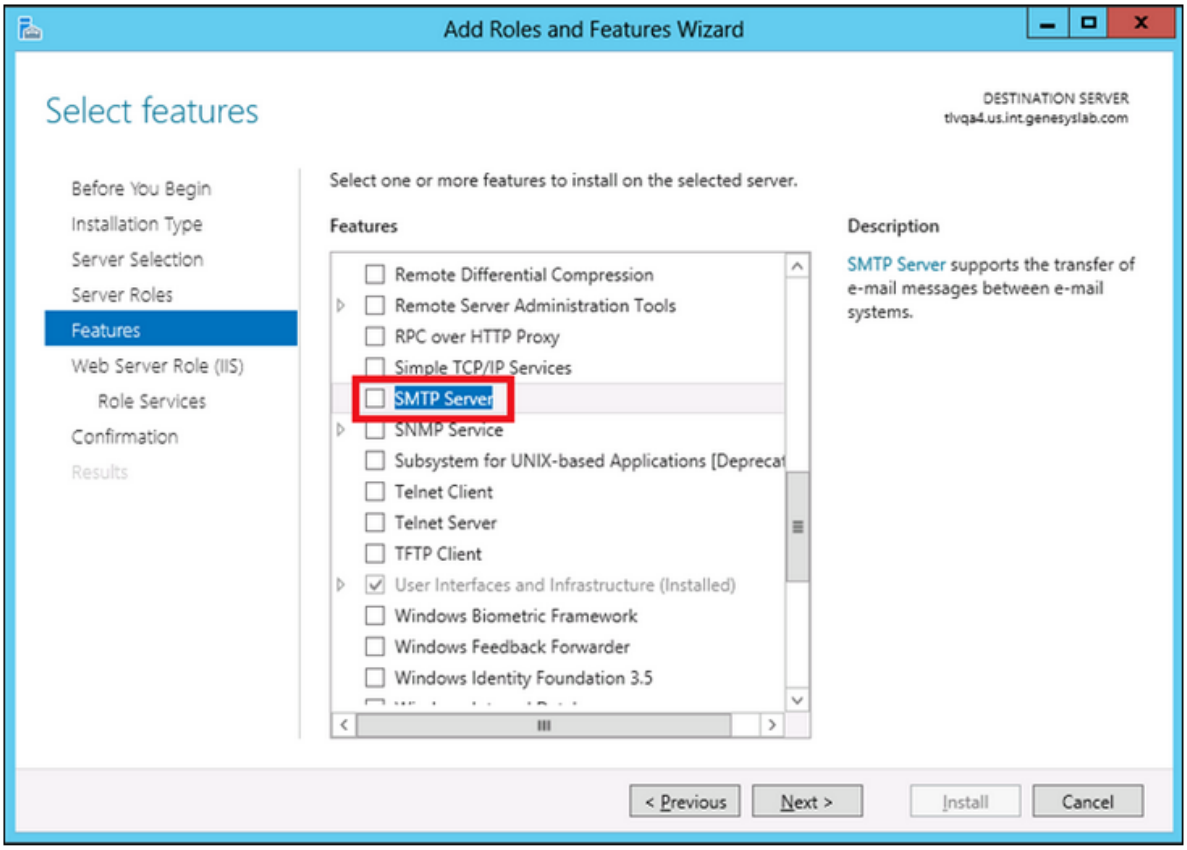

2. From the upper-right side of the window, in the **Manage** menu, select **Add Roles and Features**. The **Add Roles and Features Wizard** opens.




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. From 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.

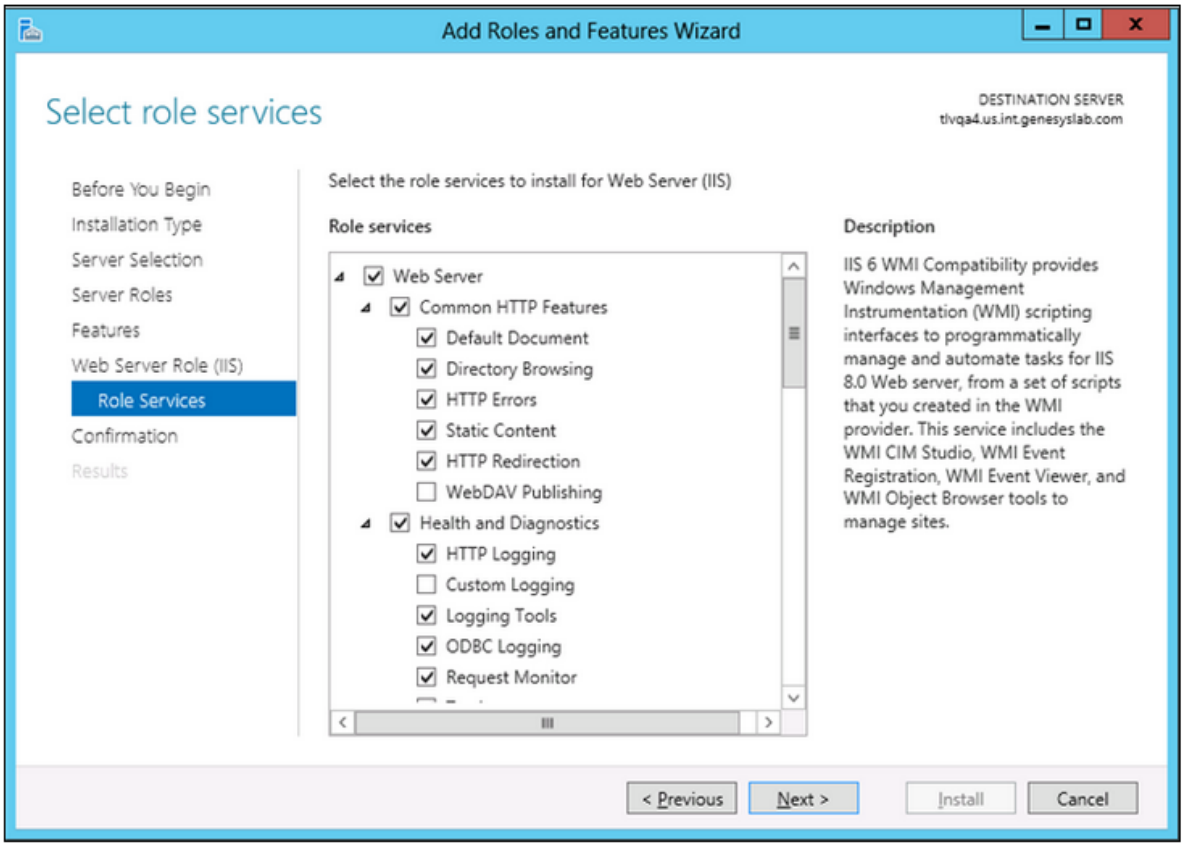



7. From the popup window, select **Add Features**. The pop-up window closes.
8. Select **Next**. The **Features** screen opens.
9. From the list of features, expand **Background Intelligent Transfer Service**, and then select **IIS Server Extention**. A window pops up, and asks you to confirm that you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




12. From the popup window, select **Add Features**. The pop-up window closes.

13. Select **Next**. The **Role Services** screen opens.




14. From 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.

## Pre-installation Checklist

Before you begin installing SpeechMiner, ensure the following:

- You have the required hardware (see System Requirements).
- You have received the following from Genesys:
  - SpeechMiner installation package
  - Licenses
- 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).
- OS check: All machines have supported operating systems (see System Requirements).
- Machine connectivity: All machines are functional and connected to the network.
- 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.
- Verify that all of the following Required Third-Party Software is installed and configured:
  - .NET Framework
  - SQL Server
  - IIS installation
  - Report Viewer
- 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 System Requirements).

## Installing the SpeechMiner 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

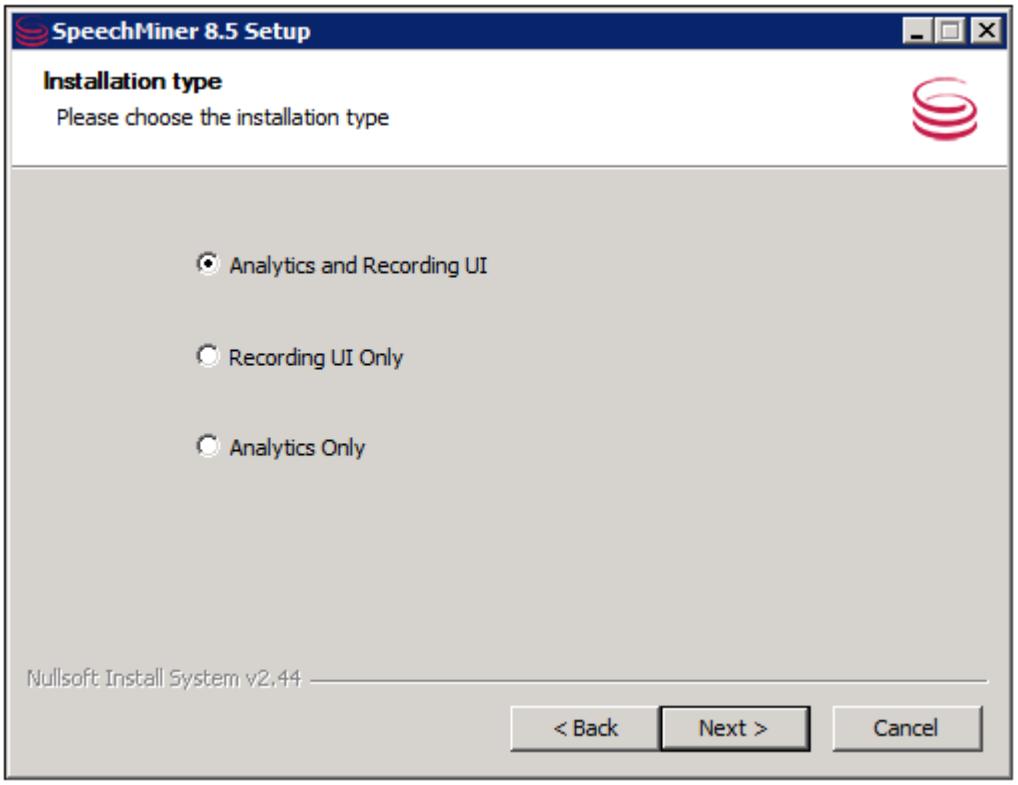
machine, you can select both of them in the setup wizard. In most systems, SMConfig is installed on all server machines.

# Installing Using the Wizard

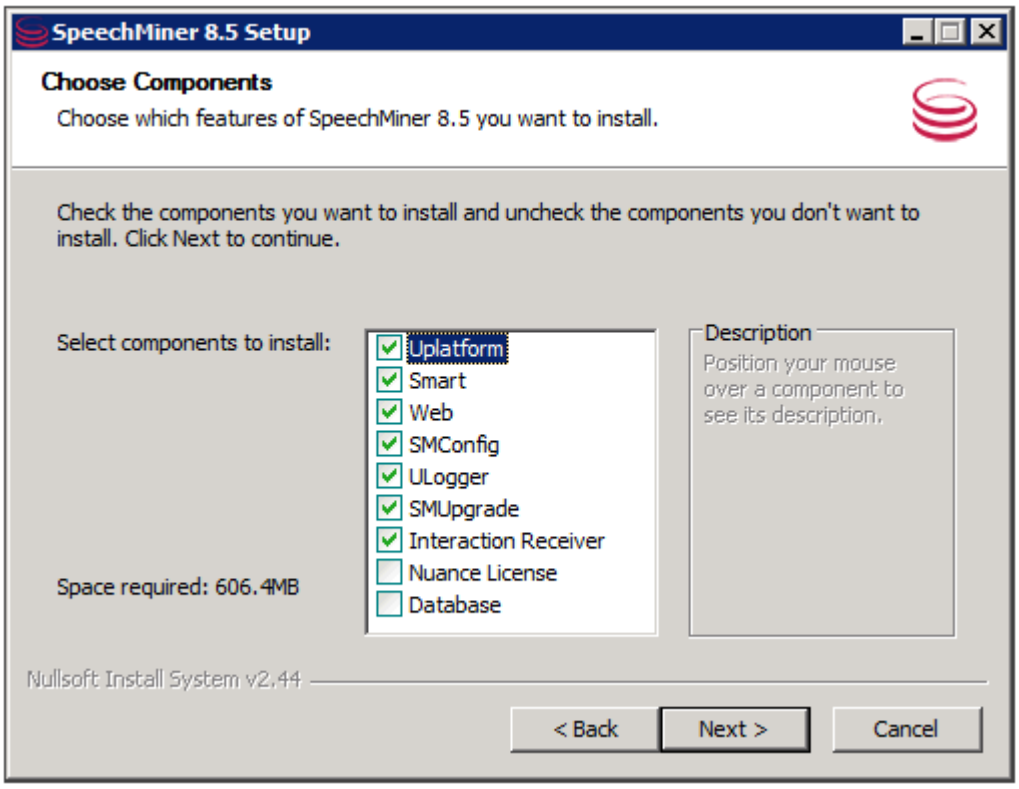
## Installing Using the Wizard

To install components using the setup wizard:

1. Open the installation package.
2. From 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.



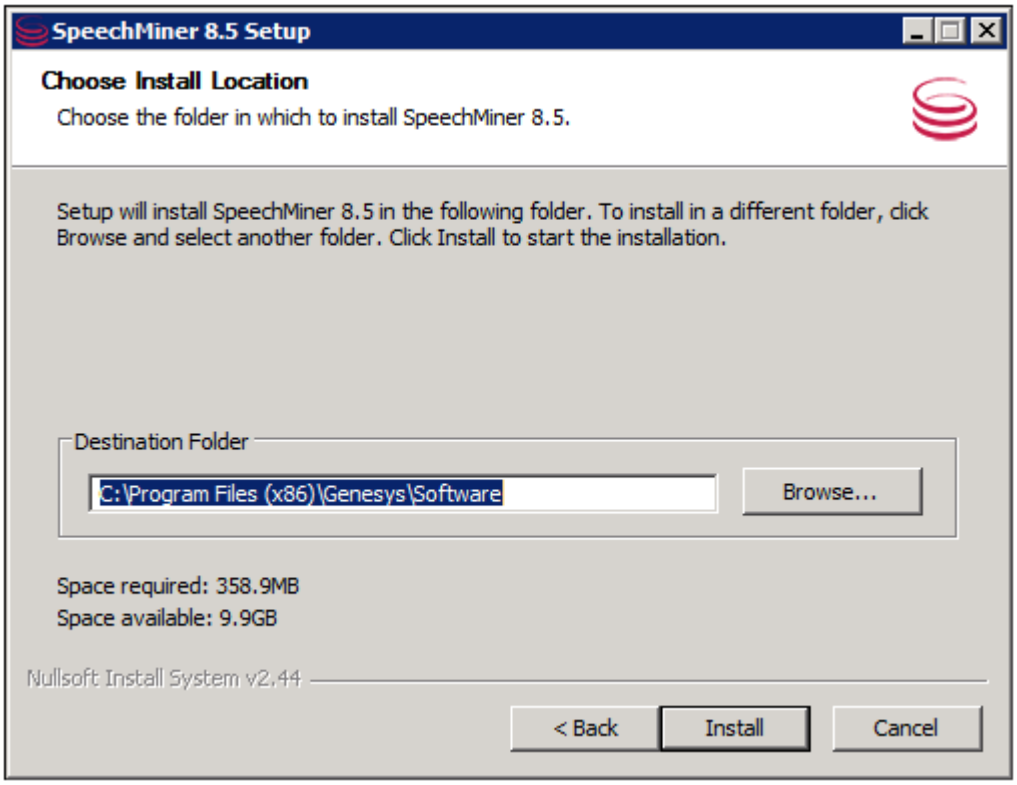
5. Select the installation mode:
    - **Analytics and Recording UI**: SpeechMiner plays back and analyzes interactions recorded with Genesys Interaction Recording.
    - **Recording UI Only**: SpeechMiner plays back the call audio for each interaction in the search results. The contents of the interactions are not processed by the speech-analytics system.
    - **Analytics Only**: SpeechMiner imports interactions and their recorded call audio from any recording system. Once the interactions and their audio is imported SpeechMiner processes the contents of each interaction.
6. Click **Next**. The **Choose Components** screen opens.



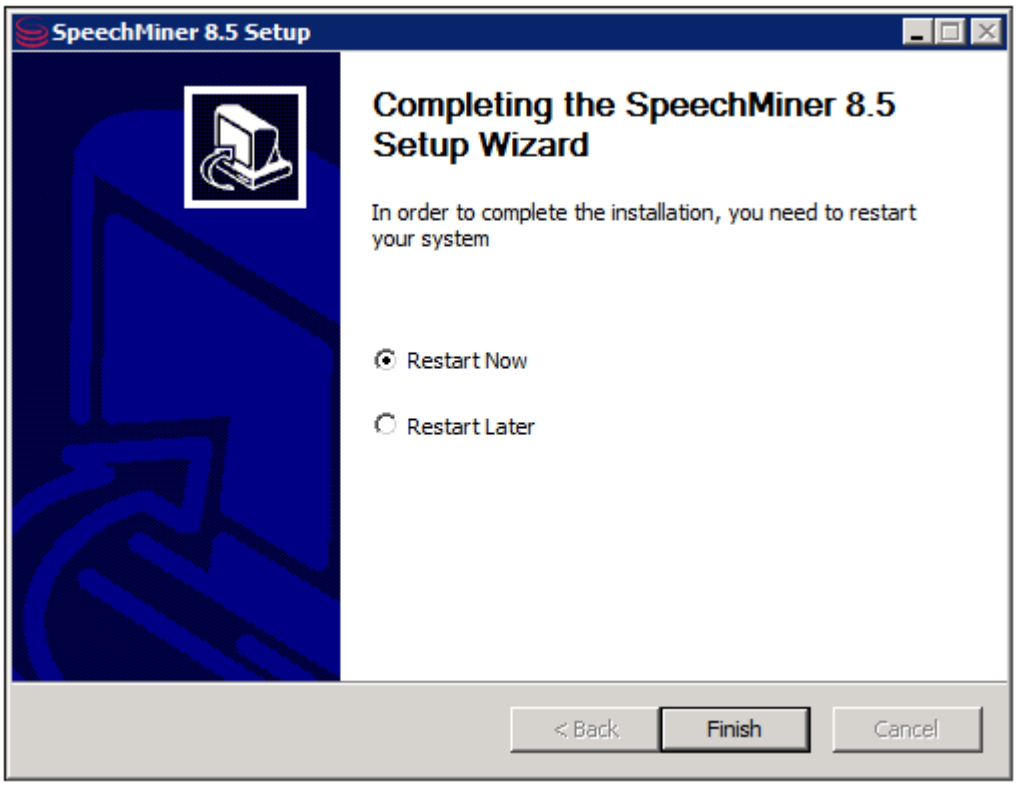

7. In the list of components, select the components you want to install on the machine.
8. Click **Next**. Which screen you see next depends on the components you selected in the previous screen.
    - If you are installing the Uplatform, see Installing the UPlatform Server.
    - If you are installing SMART, see Installing SMART.
    - If you are installing the database, see Installing the SpeechMiner Database.

- Otherwise, the **Choose Install Location** screen opens.

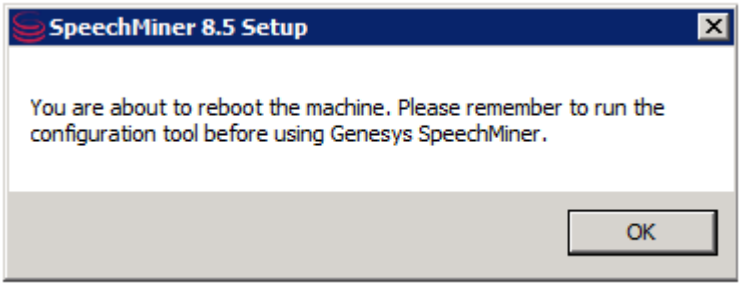
> **Important**
>
> By default, 64-bit SpeechMiner is installed in the following location: C:\Program Files (x86)\Genesys\Software.




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:




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




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

# Installing the SpeechMiner Database

## 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. The following sections explain how to install the SpeechMiner database.

# Setup Wizard

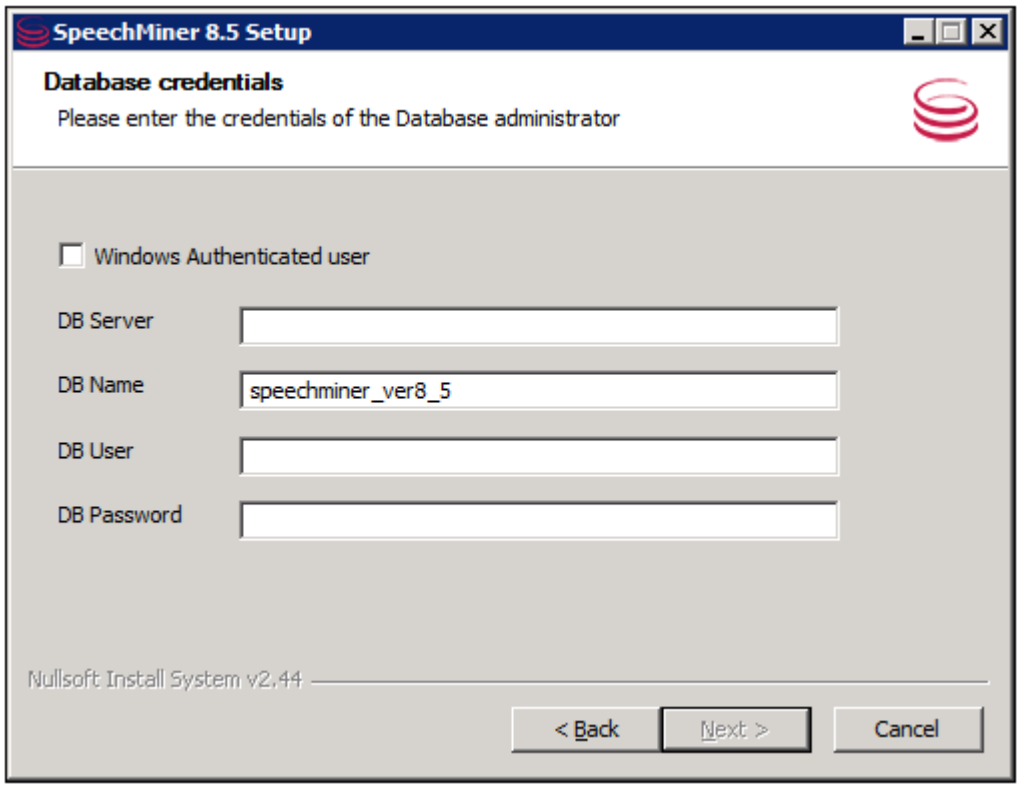
### Running the Setup Wizard

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 Install Using the wizard.

2. Follow the instructions there, until the **Database Credentials** screen opens.

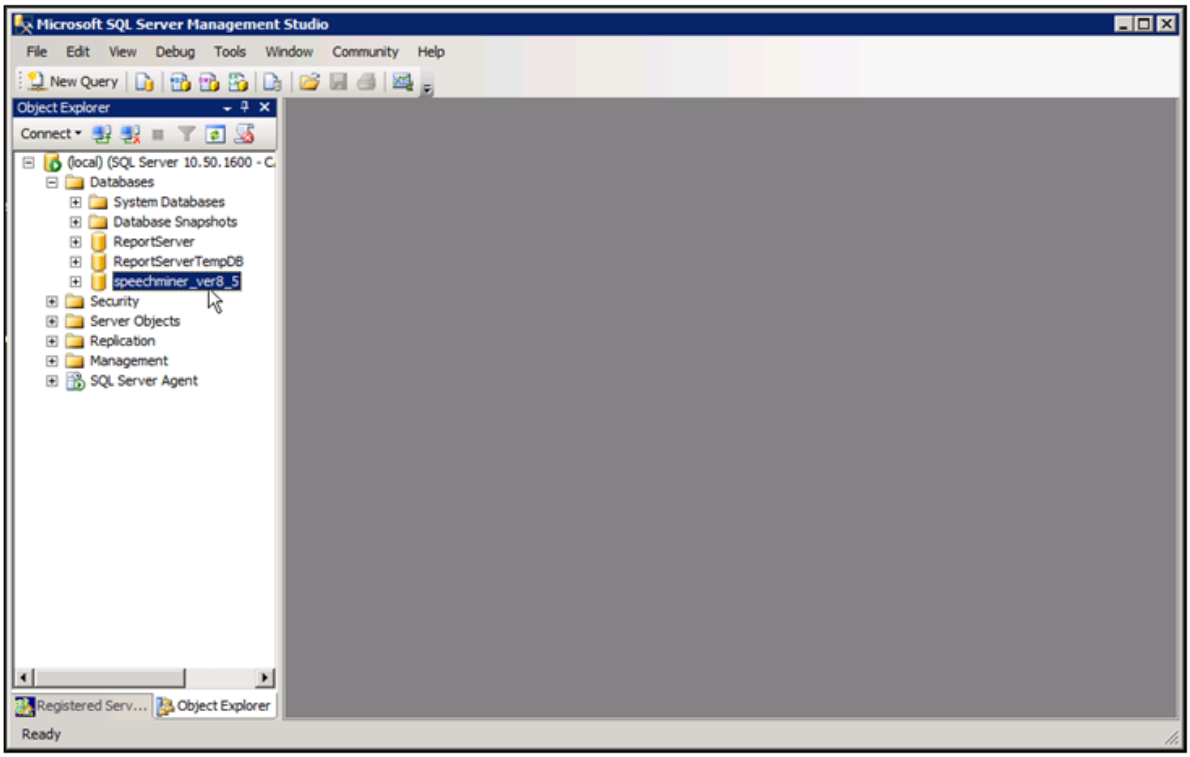



3. In the **Database Credentials** screen, fill in the fields as follows:

| Field | Description |
|---|---|
| Windows Authenticated User | Select this option to use the Windows username and password 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` (for example, `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.) |

| | |
|---|---|
| | **Note:** This field is not available when **Windows Authenticated User** is selected. |
| DB Password | Enter the DB password. Only a user with Administrator permissions can enter password credentials.<br><br>**Note:** This field is not available when **Windows Authenticated User** is selected. |

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. From 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.



# Manual Installation

## Manually Installing the SpeechMiner Database

An alternative way to perform the database installation is to use `data_ver8_5_3_sql2005.bak` (an SQL backup file) deployed in **C:\Program Files (x86)\Genesys\Software\Support** during any regular 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'`

> **Important**
>
> When you manually install the SpeechMiner Database, you must run the database purge using the SQL Server Service Broker.

To enable the SQL Server Service Broker:

1. Run the SP command: `EXEC sp_enableServiceBroker`

   The SP will try to enable the service broker with `ENABLE_BROKER`. If it does not succeed, it will run the command with `NEW_BROKER`. This SP will also use the current DB name correctly.

2. If `sp_enableServiceBroker` does not enable the Service Broker, run the following query:

```
ALTER DATABASE [DB_NAME] SET ENABLE_BROKER WITH ROLLBACK
IMMEDIATE
```

3. Run the following query to verify that SQL Server Service Broker is enabled:

   ```
   SELECT is_broker_enabled FROM sys.databases WHERE
   database_id=DB_ID()
   ```

   A value of 1 indicates that the Service Broker is enabled.

If the enable SQL Server Service Broker query fails:

1. Close all connections to the database.
2. Run the following query:

   ```
   ALTER DATABASE [DB_NAME] SET ENABLE_BROKER WITH ROLLBACK
   IMMEDIATE
   ```

3. Run the following query to verify that SQL Server Service Broker is enabled:
   ```
   SELECT is_broker_enabled FROM sys.databases WHERE
   database_id=DB_ID()
   ```

To disable the SQL Server Service Broker:

1. Run the following query:
   ```
   ALTER DATABASE [DB_NAME] SET DISABLE_BROKER WITH ROLLBACK
   IMMEDIATE
   ```

# Default Database User

## Change the Default Database User

If you want to change the default database user in SpeechMiner, you must assign the user the rights required to access the relevant tables in the database. The UTOPY and Reports roles give the user those rights. If you want to work with the pre-configured database user (dbuser), or a user that already has full access (for example, an administrative user) you do not need to assign the user new or different rights.

To assign the default database user the correct roles:

1. Open the **SQL Server Management Console**.
2. In the new **SpeechMiner Database** folder select **Security > Roles > Database Roles**.
3. Assign the **UTOPY** and **Reports** roles to the new default database user.

# Storage Partitions

## 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
```

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

# Maintenance Jobs

## Configuring the Database Maintenance Jobs

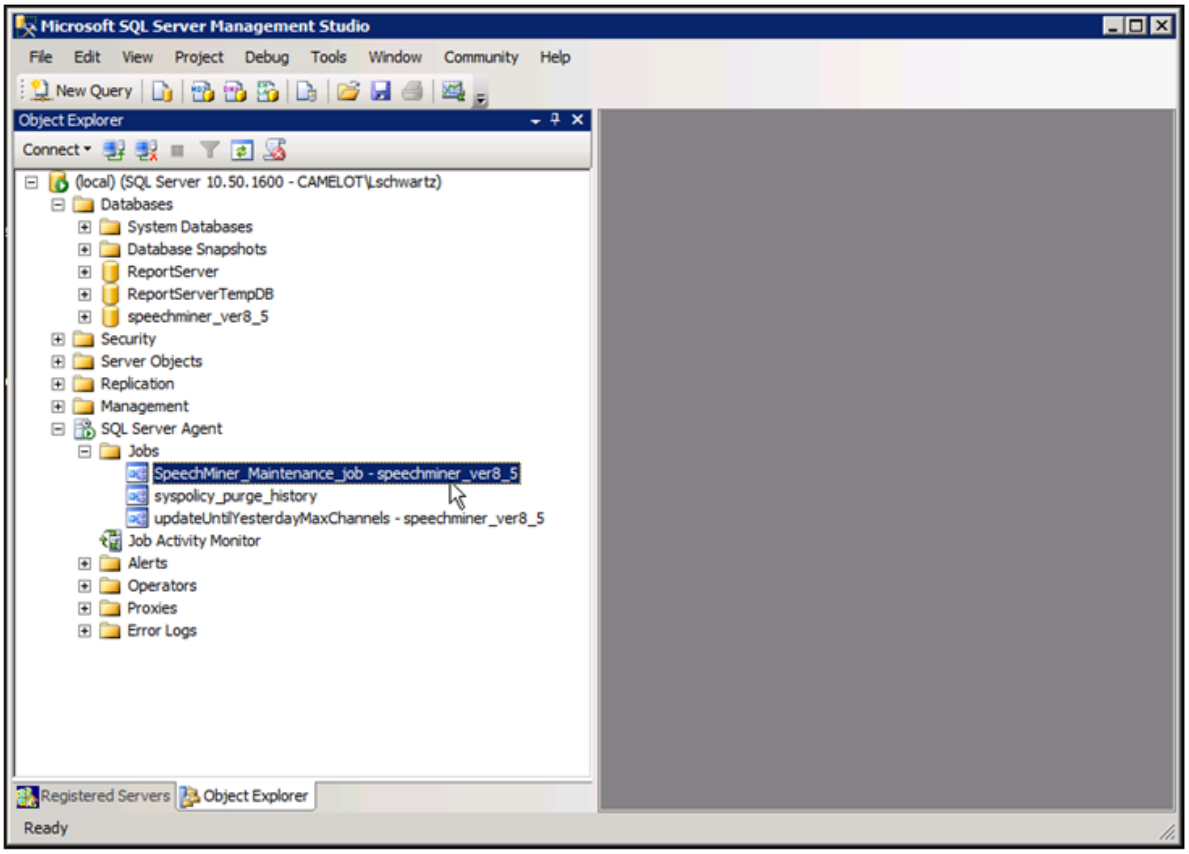
When the database is installed, a database maintenance job (`SpeechMiner_Maintenance_job - <database>`) is automatically created. You should schedule it to run daily or weekly at a time when call volume is expected to be low. In addition to scheduling the job to run, you can also modify it to suit your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

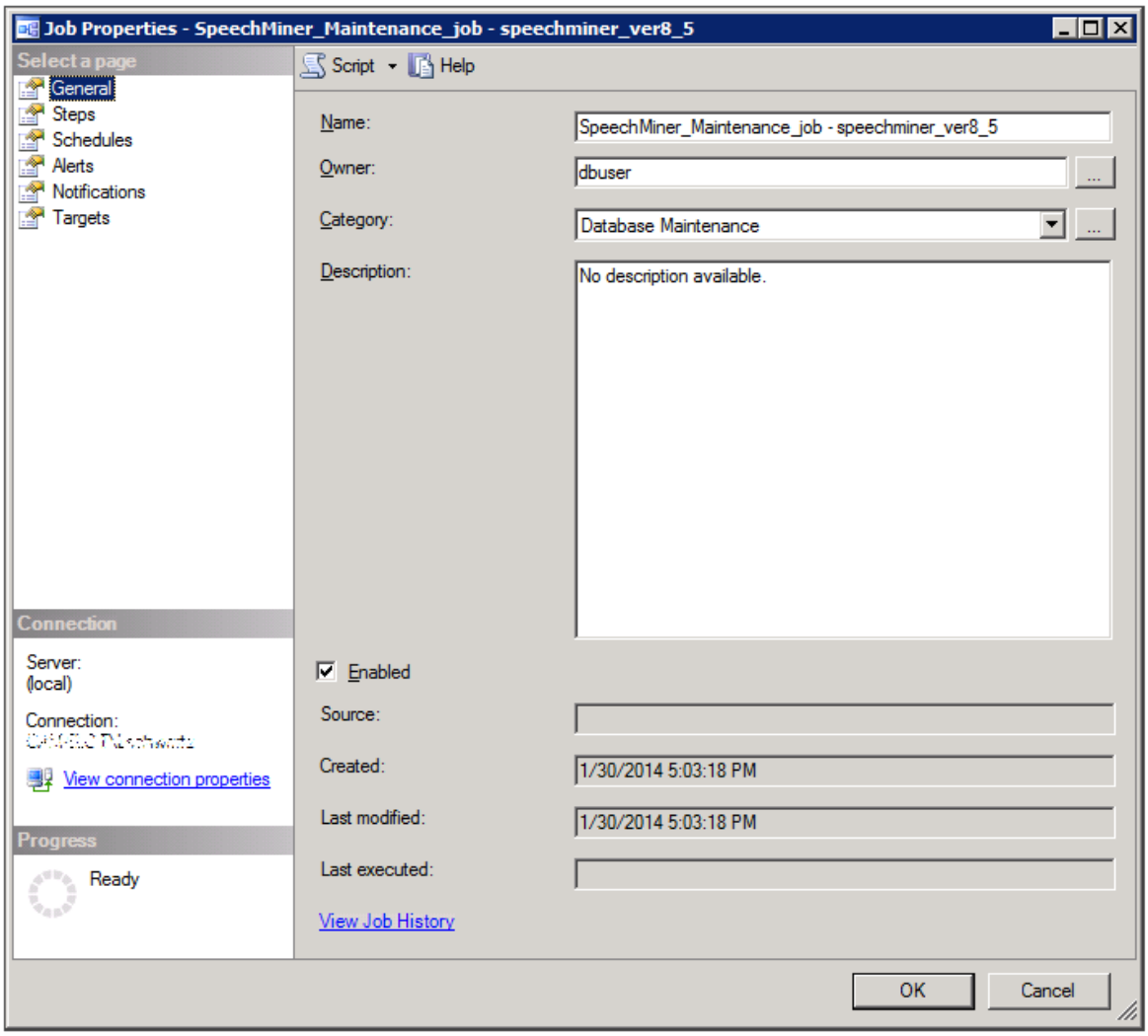
By default, the maintenance job does the following:

- Shuts down the SpeechMiner UPlatform service
- Rebuilds fragmented database table indexes
- Restarts the system
- Purges logs of messages that are older than one month
- Purges logs of user events that are older than one year
- 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:

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






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.

### Important

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 enter change the job owner:

1. Open the SQL Management Tool.
2. Alter the Store procedure called `sp_createMaintenanceJob`.
3. In the following procedure text replace `dbuser` with an existing database user.

   ```
   @owner_login_name=N'dbuser'
   ```

4. Execute the updated Store procedure to create the correct job.

# SQL CLR

## 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.

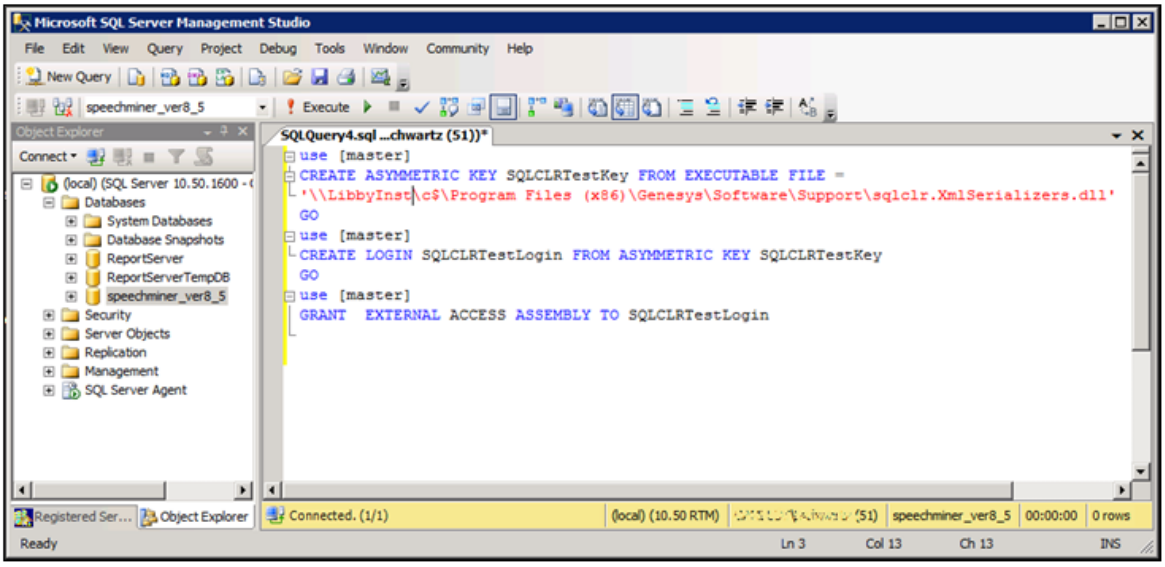
> **Important**
>
> In order to set the permissions, the user running the SQL services must have modify permissions on `sqlclr.XmlSerializers.dll`.

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.




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.

> **Important**
>
> 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—for

example, `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 '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.
9. Open another **New Query**.
10. Browse to **C:\Program Files (x86)\Genesys\Software\Support**.
11. Run the `SQLCLR.sql` script.

    The clr assembly is created with EXTERNAL_ACCESS. To create an EXTERNAL_ACCESS or UNSAFE assembly in SQL Server refer to: http://msdn.microsoft.com/en-us/library/ms345106.aspx

# Recovery Model

## Configuring the Recovery Model

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

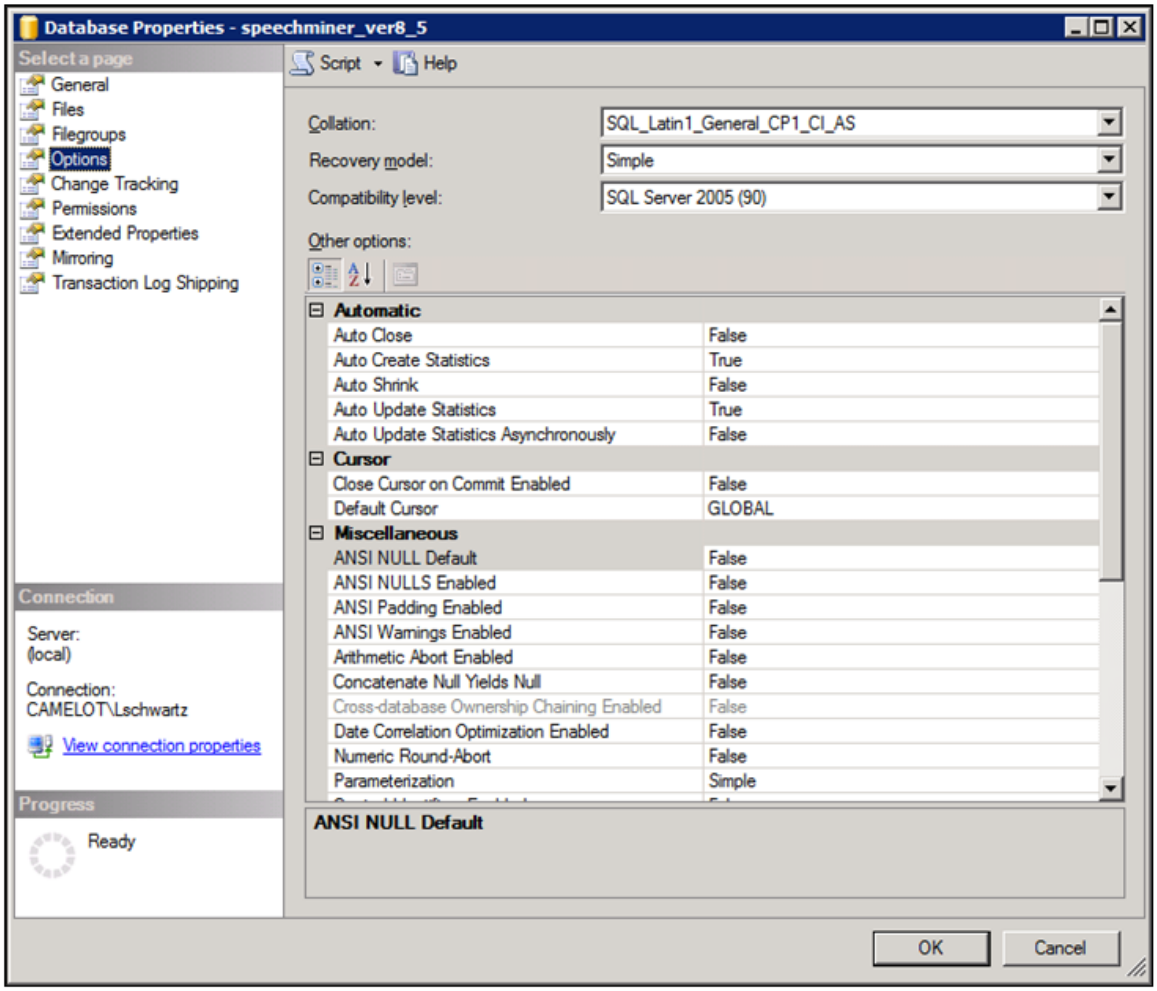
Important

If you use Log Shipping, set the recovery model to a full or bulk-logged recovery model. Ensure that logs are not written to the same hard drive as the database files.

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**.




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

# Autogrowth

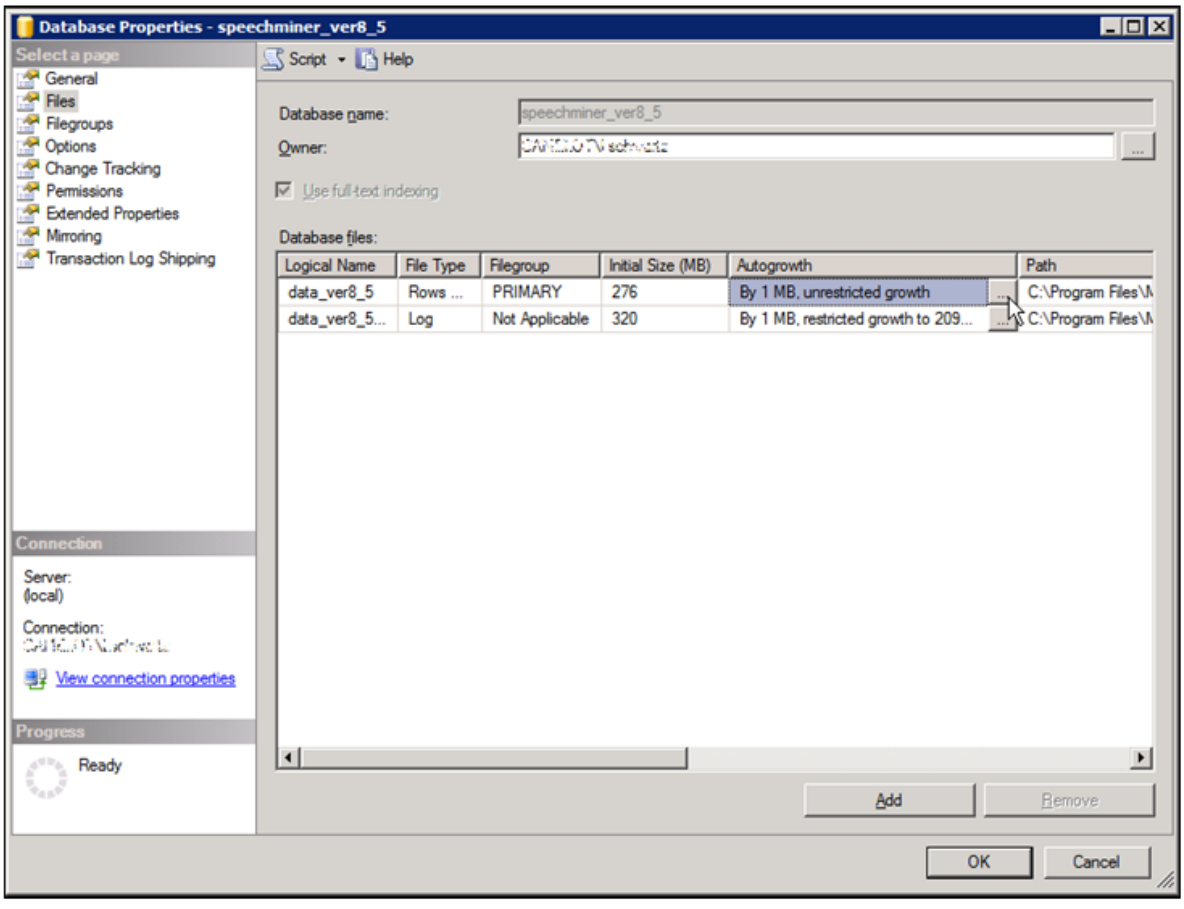
## Configuring the Autogrowth

Important

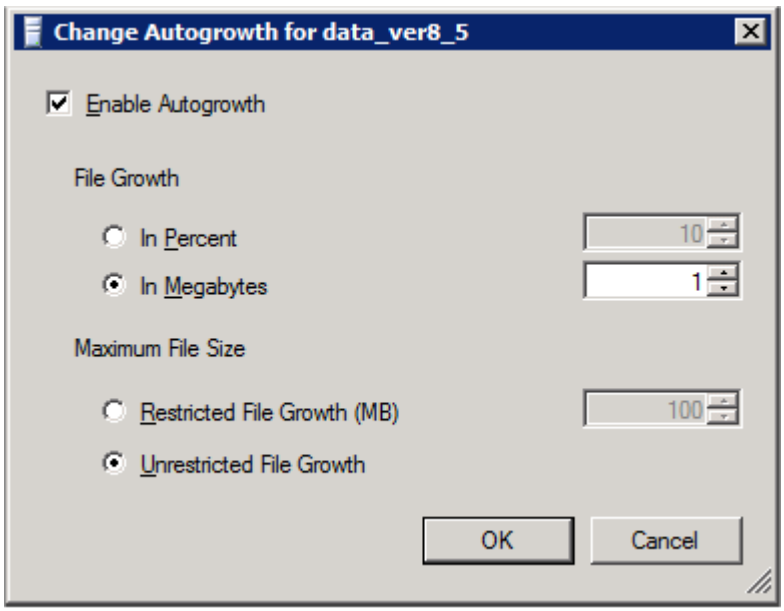
It is recommended that you enable instant file initialization. For details refer to: http://msdn.microsoft.com/en-us/library/ms175935.aspxshould

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**.



4. On the right side of the screen select **Autogrowth** ... in the **Data File** row. The **Change Autogrowth** dialog box opens.




5. Verify that **Enable Autogrowth** is selected.
6. Under **File Growth**, select **Mega Types**, and then, in the text box on the right enter **1024**.
7. Click **OK**. The setting is changed in the **Properties** window.
8. On the right side of the screen select **Autogrowth** ... in the **Log File** row. The **Change Autogrowth** dialog box opens.
9. Verify that **Enable Autogrowth** is selected.
10. Under **File Growth**, select **Mega Types**, and then, in the text box on the right enter **256**.
11. Click **OK**. The setting is changed in the **Properties** window.
12. In the **Properties** window, click **OK**. The setting is implemented, and the window closes.

# QM Manager Role

### QM Manager Role Conflicts

When installing SpeechMiner, the following query should be run on all 8.5.3 databases to avoid role ID conflicts with the new QM Manager role.

```
declare @QMRole int
select @QMRole=roleId from rolesTbl where roleName='QM Manager'
insert into rolesTbl select
20,roleName,internalRole,protectedRole,grantRoles,createdOn,createdBy,lastUpd
from rolesTbl where roleId=@QMRole
update rolesTbl set grantRoles=REPLACE(grantRoles,CAST(@QMRole AS
varchar(10)),'20')
update rolePermissionsTbl set role=20 where role=@QMRole
delete rolesTbl where roleId=@QMRole
```

# Installing the SpeechMiner Web

## Installing the SpeechMiner Web

The SpeechMiner Web runs the interface 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 Install Using the wizard.

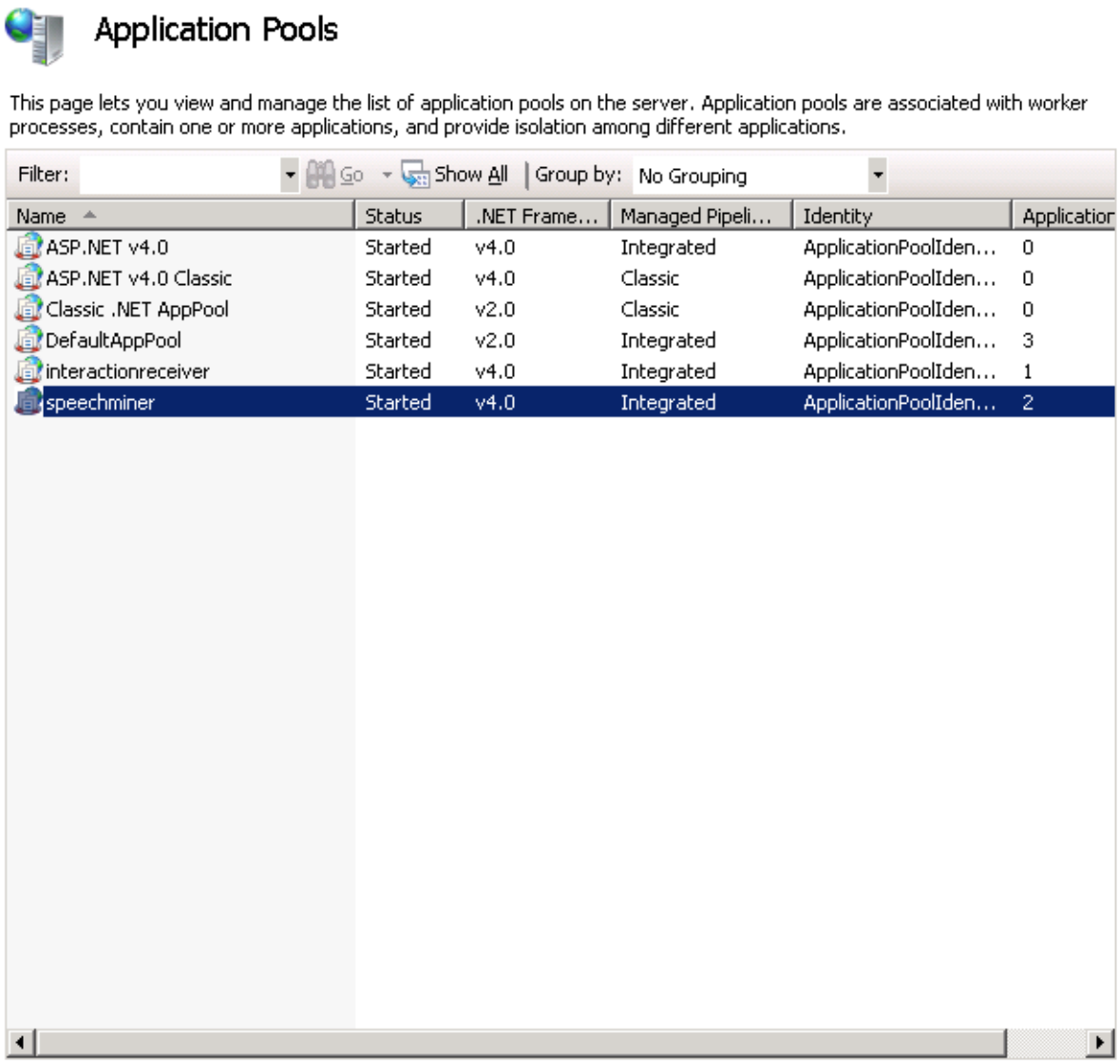
> Important
>
> Once SpeechMiner is installed and configured, users can open the web-based interfaces from their browsers at **http://<webserver_name>/speechminer** (where <web server> is the name of a machine on which the SpeechMiner is installed.

The SpeechMiner application pool uses v4.0 of the .Net framework. After you install the SpeechMiner web server on a machine verify that the SpeechMiner Application Pool is configured with:

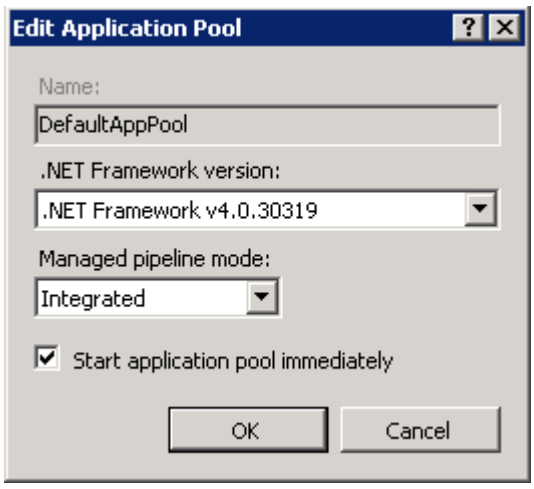
- .Net Framework V4.0
- SMUSER account

### Configure the SpeechMiner Application Pool with .Net Framework V4.0

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.



3. Under **.NET Framework Version**, check the version number listed for the SpeechMiner application pool. If the number is `4.0`, 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 **v4.0**.



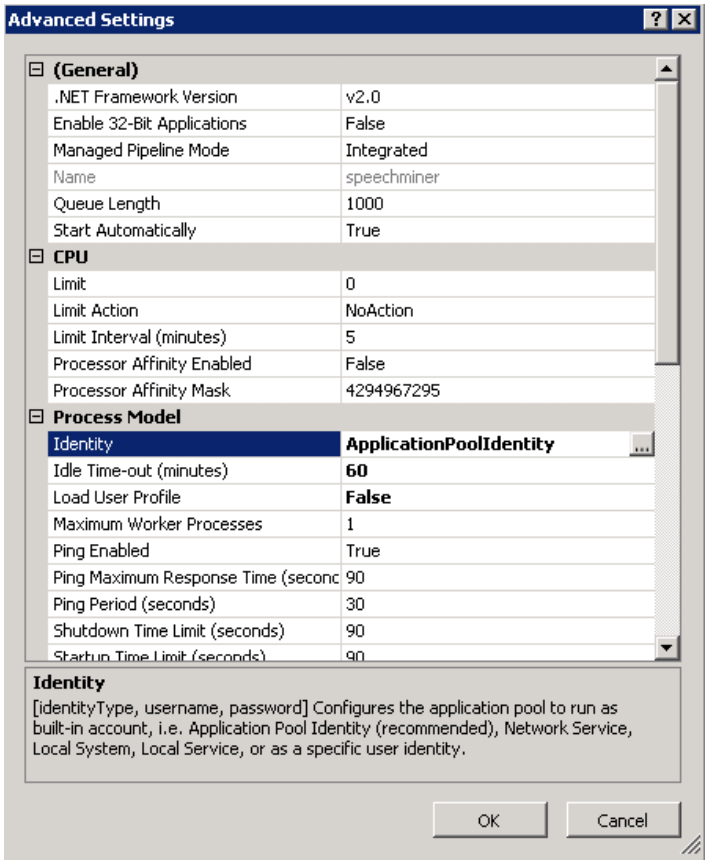

5. Click **OK**.

### Configure the SpeechMiner Application Pool with a SMUSER Account

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**.
3. Right click the **SpeechMiner Application Pool** and select **Advanced Settings**




4. Under **Process Model**, change the **Identity** to **SMUSER account**.
5. Click **OK**.

> **Important**
>
> For additional details about the SMUSER account refer to Configuring Permissions

# Installing the Interaction Receiver

## Installing the Interaction Receiver

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

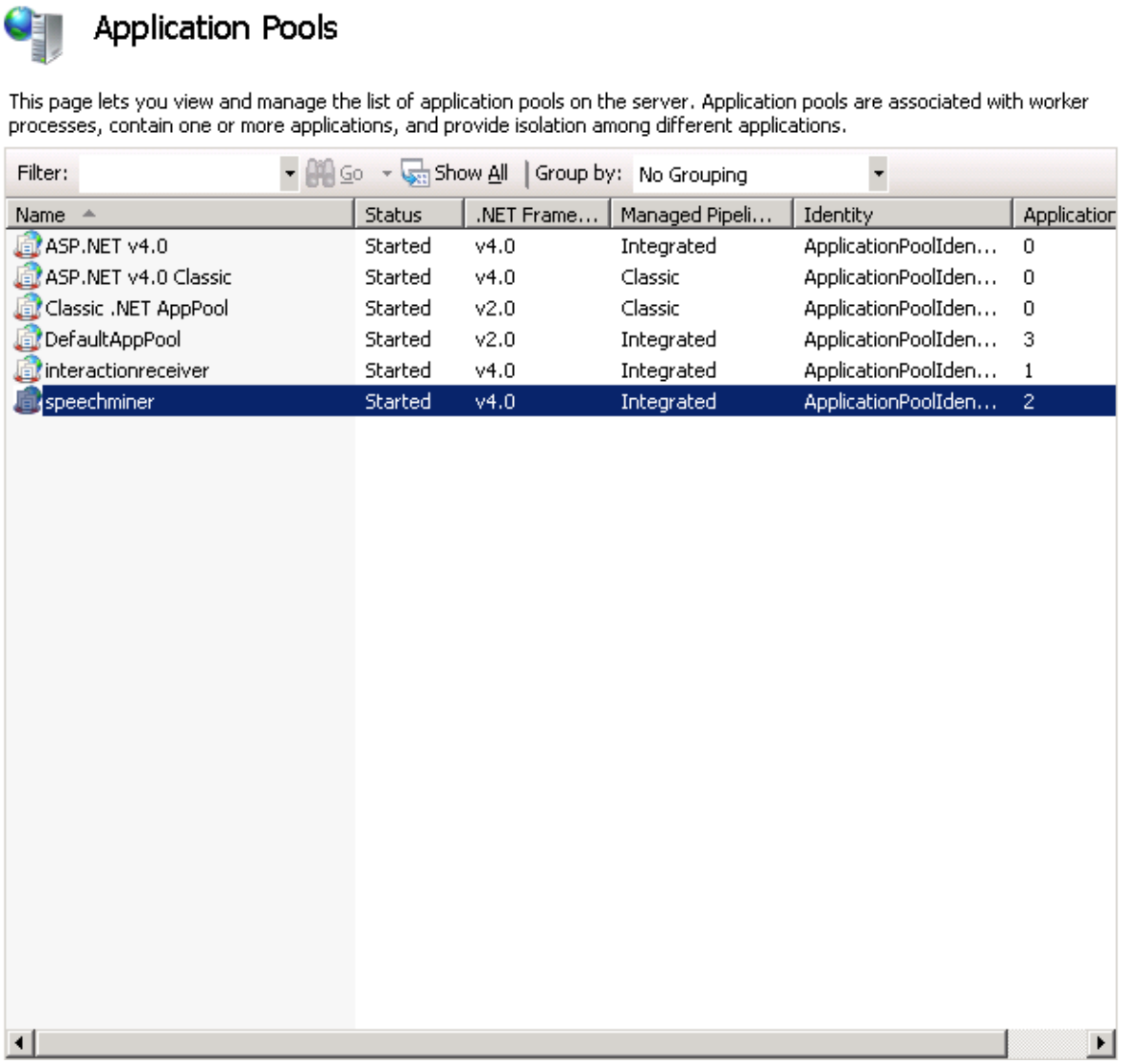
To allow Genesys Interaction Recording (GIR) to send a long audio file to SpeechMiner, configure the Request Filtering Feature in the IIS server, as explained in http://www.iis.net/configreference/system.webserver/security/requestfiltering/requestlimits, and set the Maximum allowed content length to 345600000.

The Interaction Receiver application pool uses v4.0 of the .Net framework, and not a later version. After you install the SpeechMiner web server on a machine verify that the Interaction Receiver Application Pool is configured with:

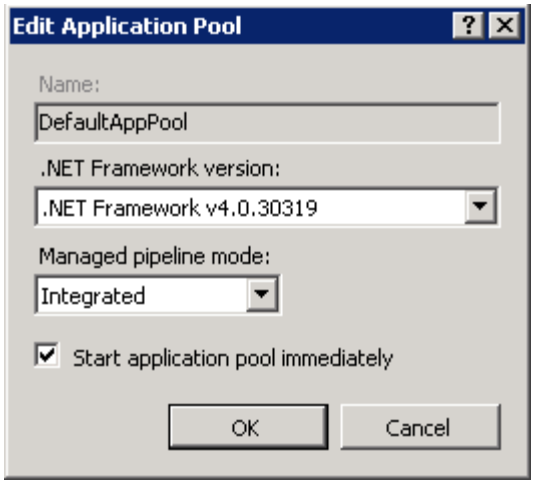
- .Net Framework V4.0
- SMUSER account

#### Configure the SpeechMiner Application Pool with .Net Framework V4.0

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.




3. Under **.NET Framework Version**, check the version number listed for the Interaction Receiver application pool. If the number is `4.0`, 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 **v4.0**.



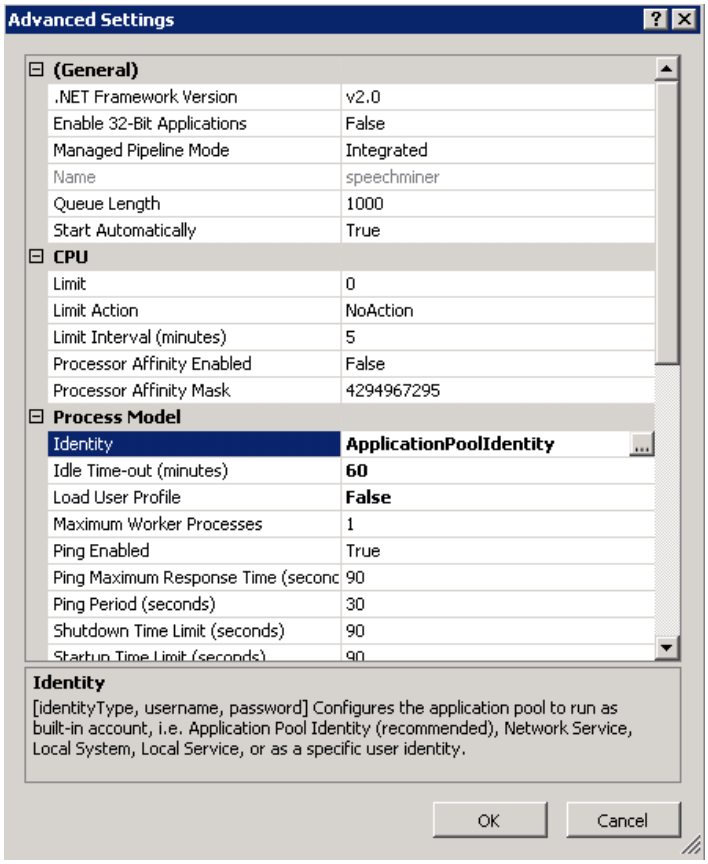

5. Click **OK**.

### Configure the Interaction Receiver Application Pool with a SMUSER Account

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**.
3. Right click the **Interaction Receiver Application Pool** and select **Advanced Settings**




4. Under **Process Model**, change the **Identity** to **SMUSER account**.
5. Click **OK**.

> Important
>
> For additional details about the SMUSER account refer to Configuring Permissions

# Installing the UPlatform Server

## 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.

Important

- 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.
- Regional settings in the Recognition server should be English US or the decimal point separator must be "." and the group separator must be ",", otherwise the recognition will not work well.

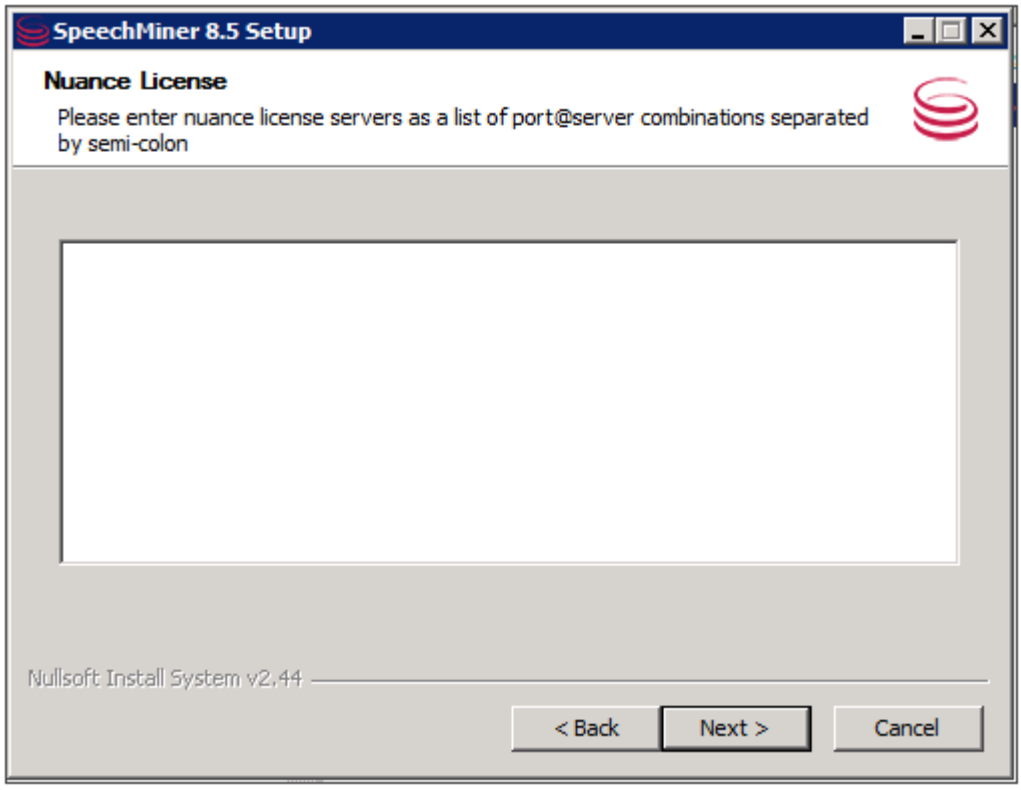
**Procedure**

1. To begin the installation of the Uplatform server, run the setup wizard as described under Installing Using the Wizard on the Uplatform server machine.
2. Follow the instructions, until the **Choose Components** screen opens.
3. Select the following components:
   - Uplatform
   - ULogger
   - Interaction Receiver
   - Nuance License
   - SMConfig
4. Click **Next**.

   Important

   - If you included **Nuance License** in the components, 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**.


SpeechMiner 8.5 Setup
Nuance License
Please enter nuance license servers as a list of port@server combinations separated by semi-colon
Nullsoft Install System v2.44
< Back
Next >
Cancel

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


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.

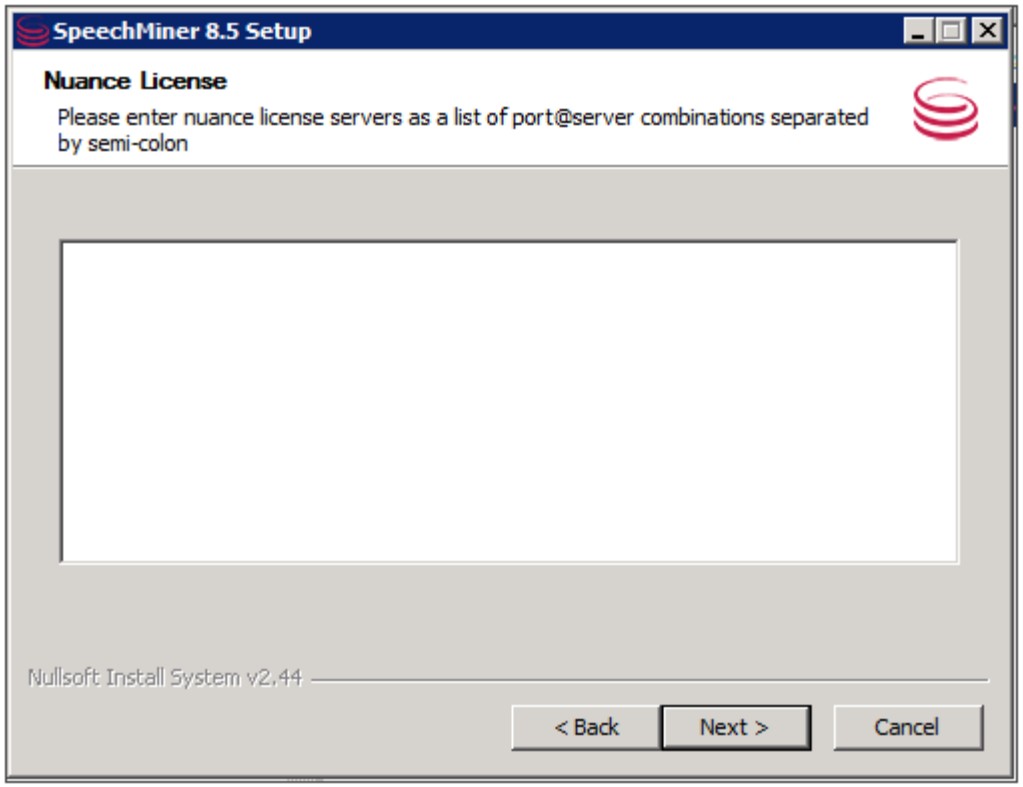
# Installing SMART

## Installing SMART

The SpeechMiner Administration Tool (SMART) 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.

To install SMART on a user's computer:

1. On the Uplatform server machine, run the Setup Wizard, as described under Installing Using the Wizard.
2. Follow the instructions until the **Choose Components** screen opens.
3. Select the following components:
    - Smart
    - ULogger
    - Nuance Licence
    - SMConfig
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 us, then click **Next**.



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


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

# Required Folders

## Creating the Required Folders

After you install the SpeechMiner components, manually create the shared folders as listed in the table. These folders will be used by SpeechMiner to store the audio, index, and backup files used by the system.

> **Important**
>
> Ensure that enough storage space is available for these purposes on the machines on which you create the folders. By default, the minimum space required for each folder is 15GB. The minimum value is configurable in the minimumFolderSpaceMB field in the monitorTbl table in the SpeechMiner database.

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 configuring SpeechMiner to use these folders, see Sites & Machines.

> **Important**
>
> 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><br>**Note:** This is a different folder than the Input folder which is used by fetchers. | One for the entire system. |
| **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><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><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.

## Uninstalling SpeechMiner

SpeechMiner components can be installed on one machine or numerous machines. If SpeechMiner components are installed on more than one machine, you must perform the following procedure on each machine.

### Procedure

1. Double click **uninst.exe** in the C:\Program Files (x86)\Genesys\software.
   The SpeechMiner component is uninstalled.

Important

Uninstall does not remove **Nuance** data files from the Recognition computers. Delete the **Nuance Recognizer** folder from C:\Program Files (x86)\Nuance if you do not plan on using this machine for recognition. Nuance data files are only located in machines on which UPlatform and SMART were installed

# Configuring SpeechMiner

This topic explains how to configure SpeechMiner after it is installed. SMConfig is used to perform the majority of the SpeechMiner configuration. For information about installing SMConfig, see Installing the Components.

SMConfig is a Windows application that can be installed on any machine on your network. Once installed it can be used to configure the entire SpeechMiner system.

The following sections describe the steps that you must perform before you can begin working with SMConfig:

# Permissions

## 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**.

For more information on the permissions required for the other SpeechMiner components, see Configuring Permissions.

# Database Connection

## 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 are 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.

# Starting SMConfig

## Starting 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:

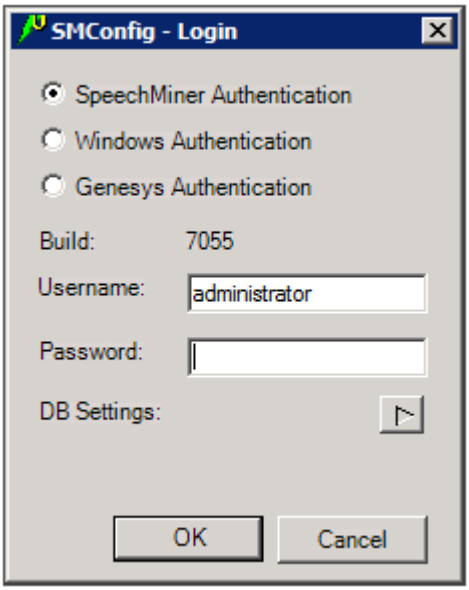
- Using a SpeechMiner user account
- Using the Windows account you used to log onto the PC
- Using a Genesys user account and connecting to a Genesys configuration server for confirmation

> **Important**
>
> Genesys Authentication is only implemented if SpeechMiner is deployed with GIR.

To open SMConfig:

1. On the desktop of the computer, double-click the 

icon. The **SMConfig - Login** dialog box appears.




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.

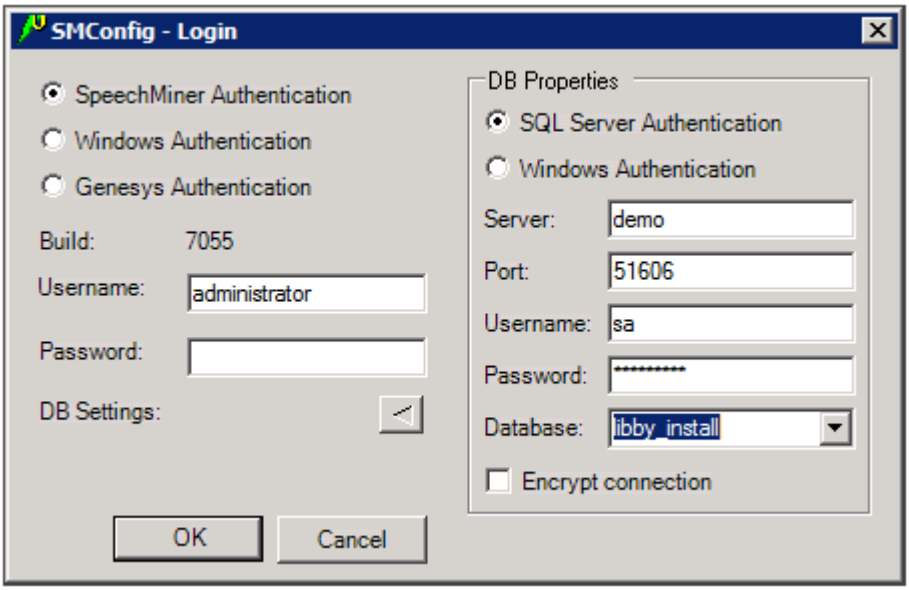
> **Important**
>
> Genesys authentication users can only be set in Genesys Administration Extension (GAX).

3. In the **Username** and **Password** fields, type your username and password.

> **Important**
>
> If you are logging in using Windows Authentication, your username and password are inserted automatically, 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.

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




5. Fill in the fields as follows:

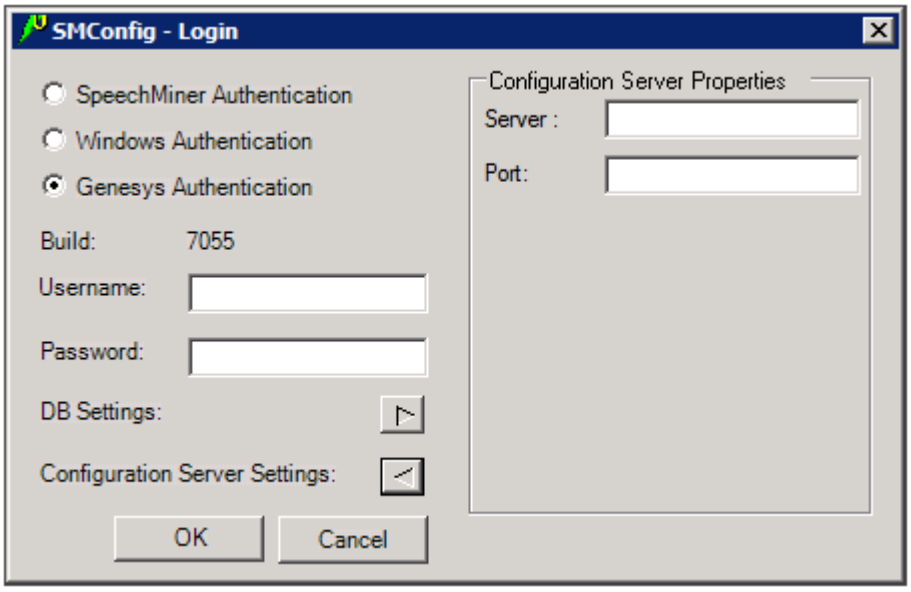
| Field | Description |
|---|---|
| SQL Server Authentication / Windows Authentication | Select SQL Server Authentication if the username and password for accessing the database are managed on the SQL server. SelectWindows Authentication if you log into the database using the same username and password you used to log into Windows.<br><br>**Note:** If you are not sure which option to choose, consult your system administrator. |

| | |
|---|---|
| Server | The name of the database server<br><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><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><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><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><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 stating, `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.

**Important**

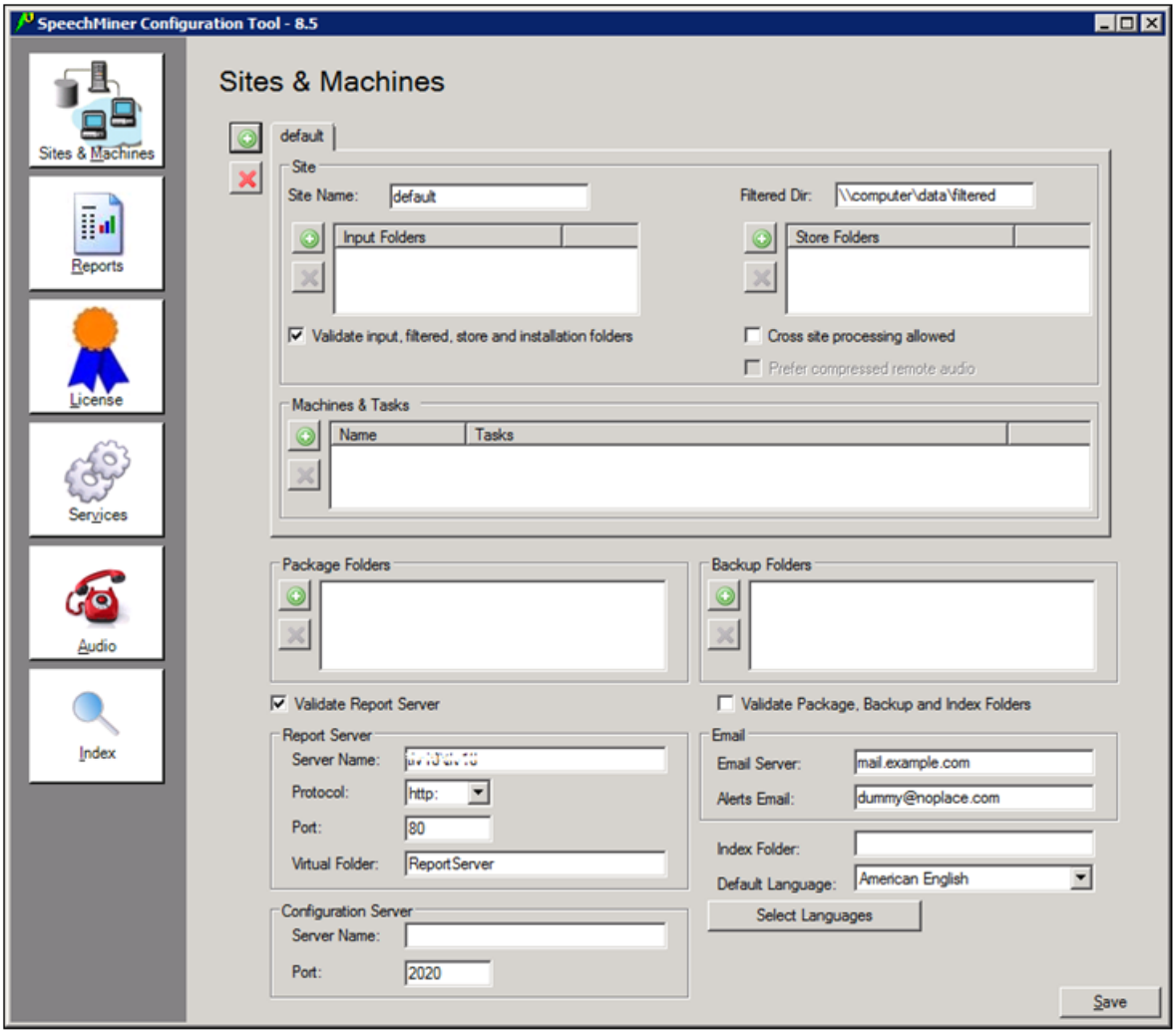
If you do not need to set or modify the Genesys authentication settings, skip this and the next step.




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

   After setting or updating the configuration server host and port in SMConfig (either in the Login window, or in the Sites and Machines panel), the IIS should be restarted.

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.




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.

## Saving Changes

## Saving the Changes in SMConfig

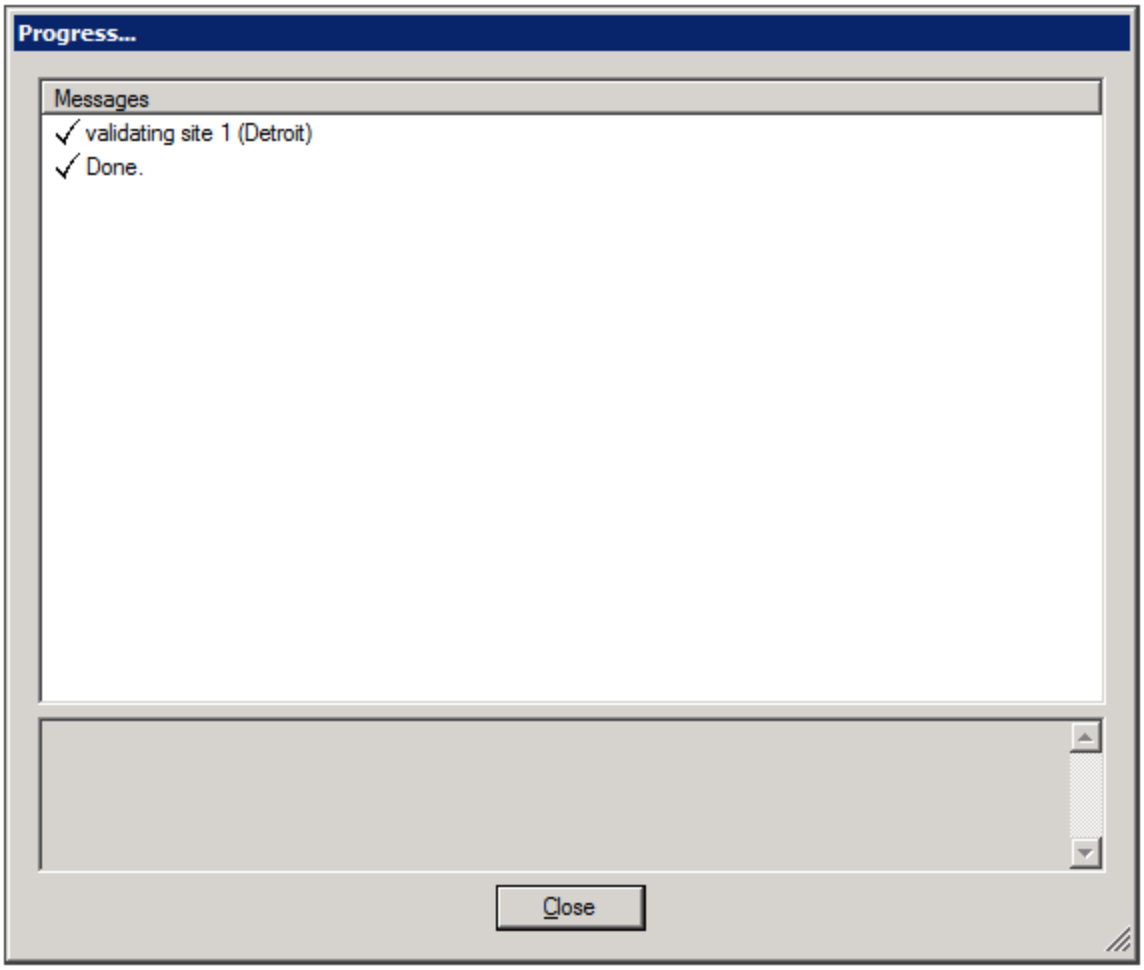
Changes you make in one panel of SMConfig are saved temporarily if you open a different panel. Nonetheless, you must click **Save** in each panel to save the settings in that panel.

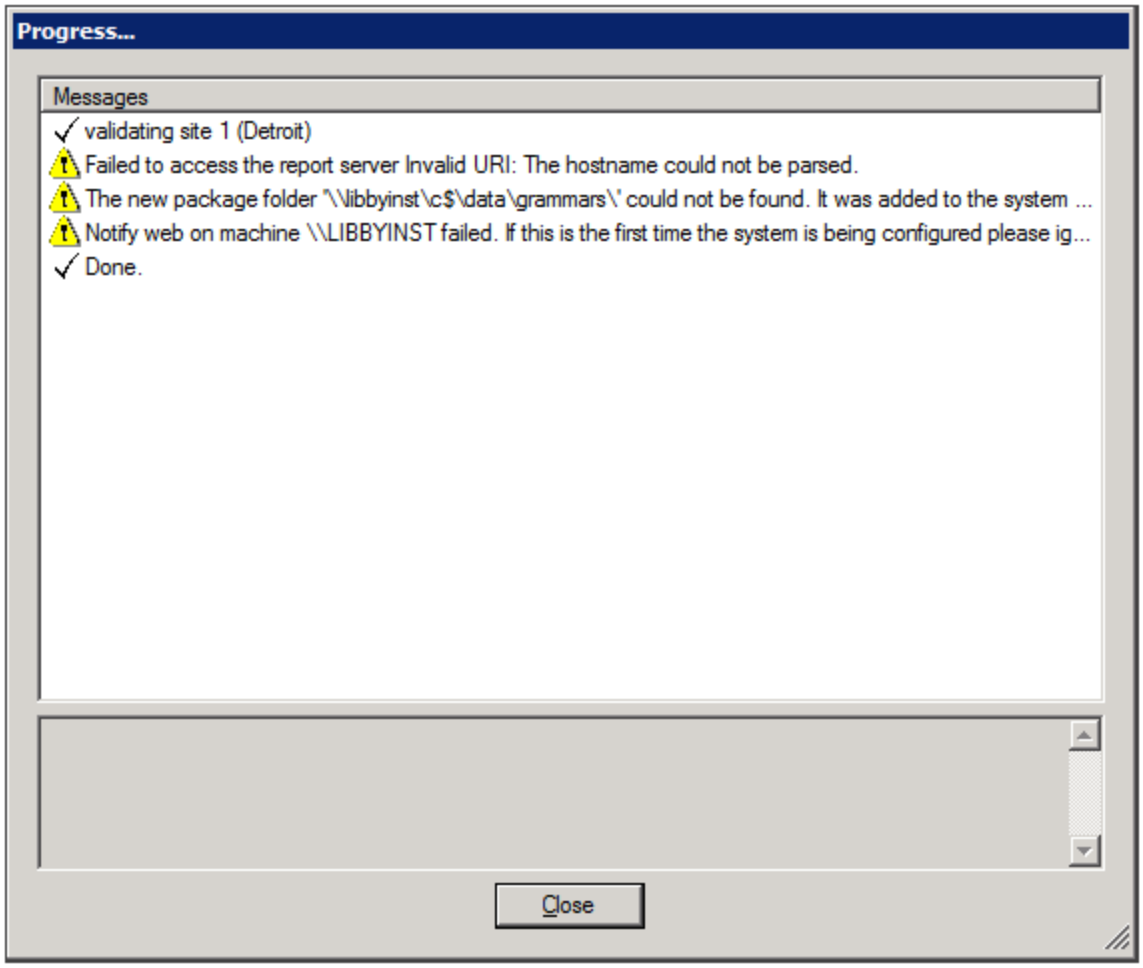
After you click **Save**, before the settings are actually saved, some settings go through a validation process. Validation ensures that the locations specified for folders and files exist and can be accessed, and checks that certain important parameters are configured properly. Certain key settings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

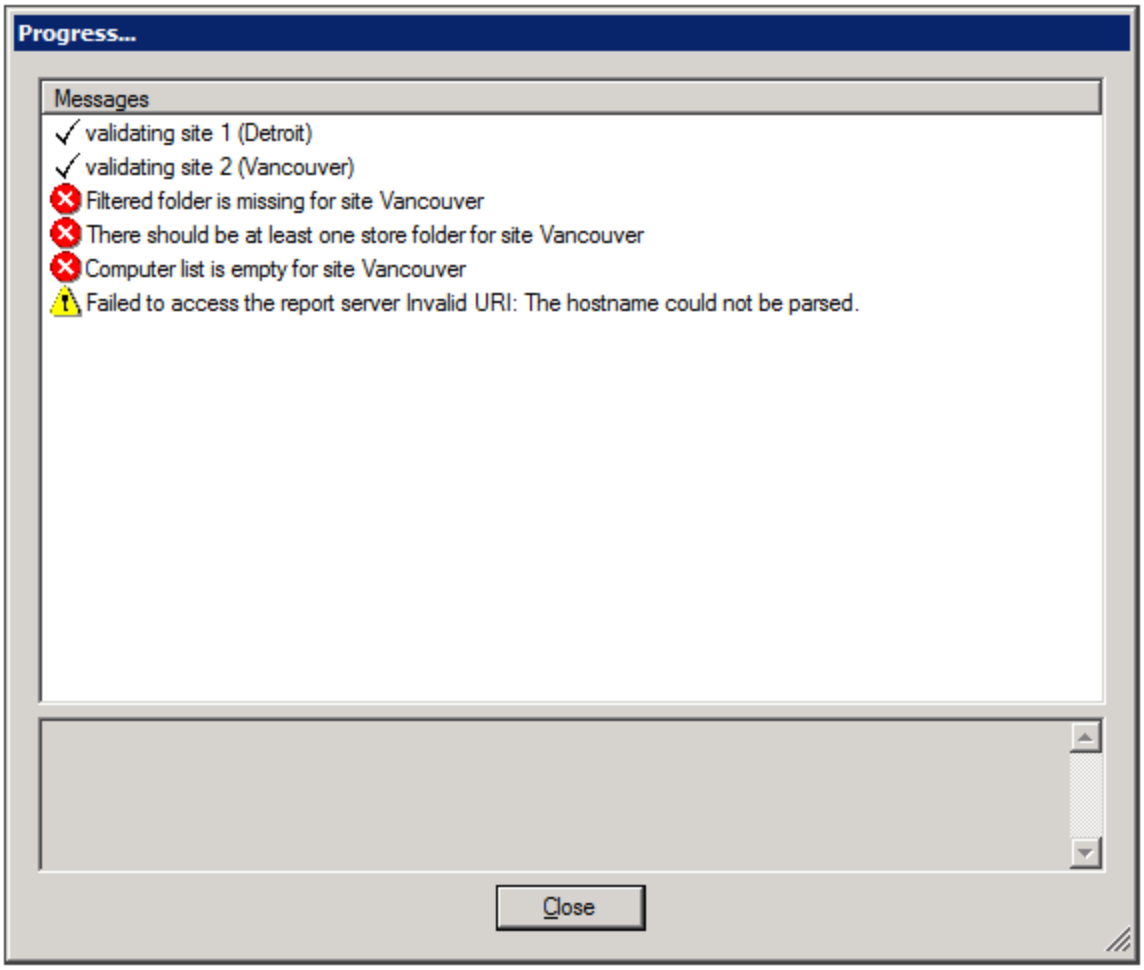
During the validation process, a Progress window is displayed. The window lists the stages of the validation process as they are completed, with an icon indicating the status of each stage.

| 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. The following screenshots depict examples of each status:

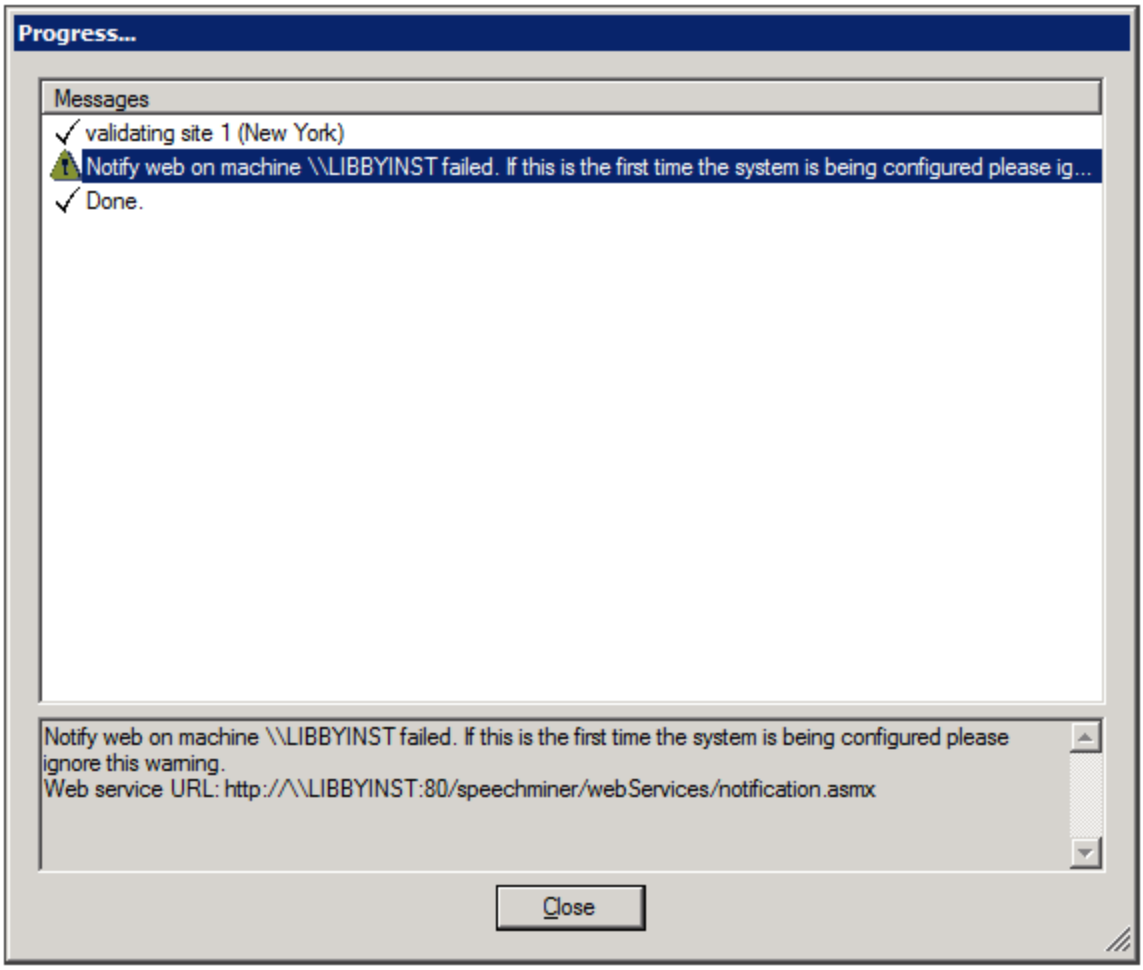

Progress...
Messages
validating site 1 (Detroit)
Done.
Close


Progress...
Messages
validating site 1 (Detroit)
Failed to access the report server Invalid URI: The hostname could not be parsed.
The new package folder '\\libbyinst\c$\data\grammars\' could not be found. It was added to the system ...
Notify web on machine \\LIBBYINST failed. If this is the first time the system is being configured please ig...
Done.
Close

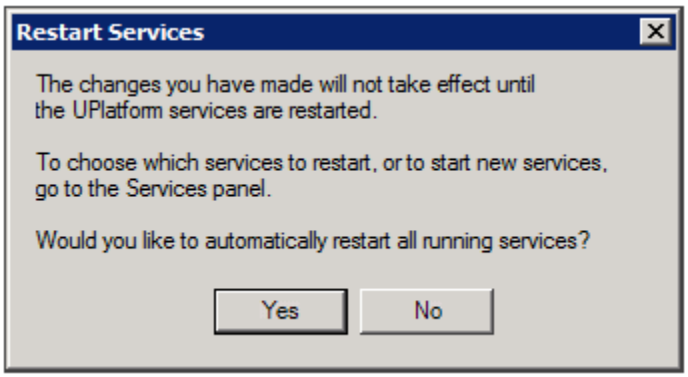



To see details about a warning or failure:

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




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



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.)

# Using SMConfig

This section describes how to use SMConfig to configure the Enterprise.

## Using the SMConfig to Configure SpeechMiner

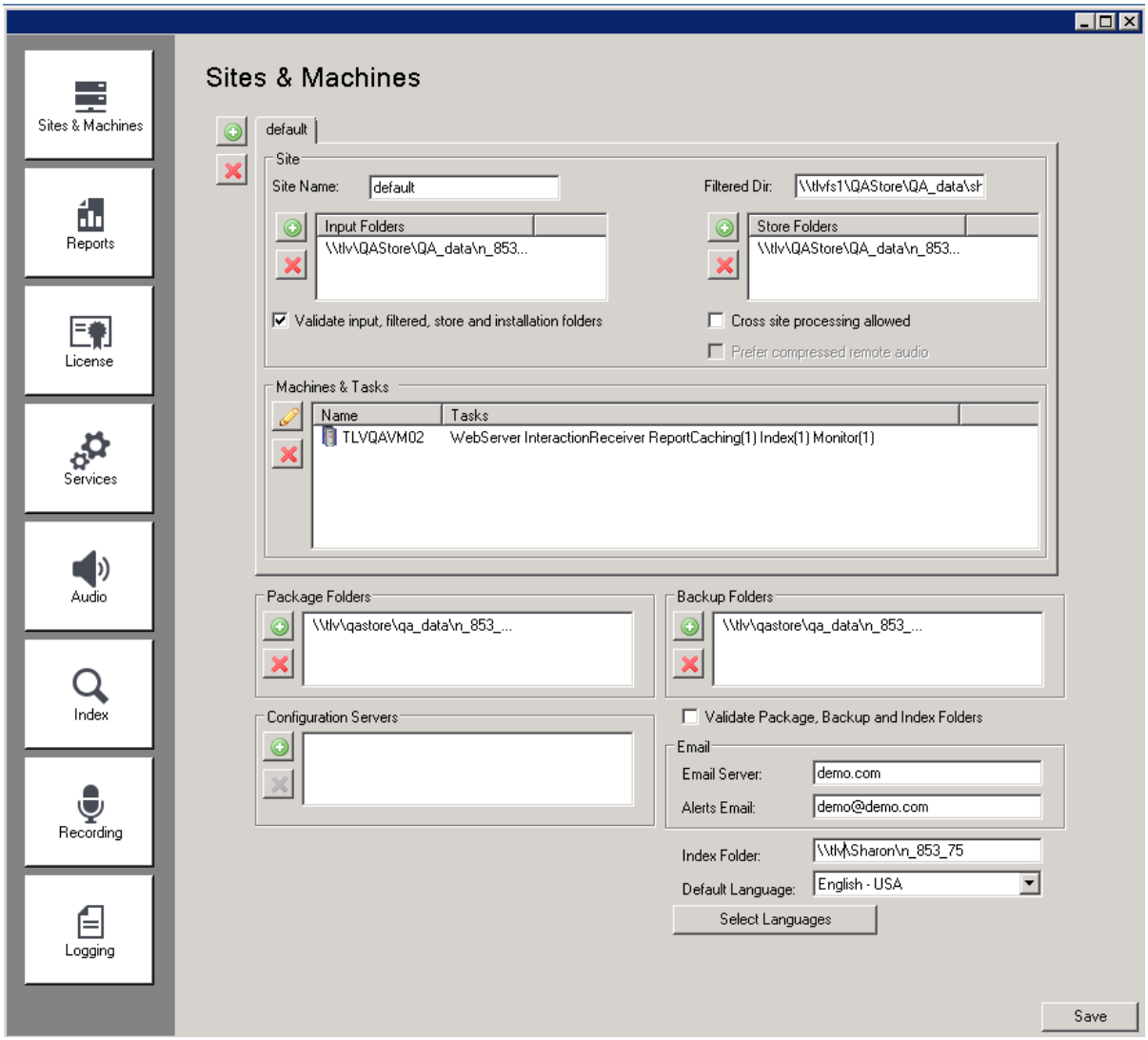
The section describes the sections of SMConfig.

# Sites & Machines

### Sites & Machines

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

This tool enables you to configure sites, machines and tasks, and system index searches.




## Configuring Sites

A *site* is a single geographical location in which SpeechMiner servers are installed. One SpeechMiner system, which has one database, can have a number of sites. All the sites configured in the **Site** section of the **Sites & Machines** panel are locations that connect to the SpeechMiner database. 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. 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.

# Permissions

## 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.

# Default Site

## Configuring the Default Site

Some of the settings in the **Sites & 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 & 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 & 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><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).<br><br>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. |

| | |
|---|---|
| | **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><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><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. SMConfig will check that the parameters are correct.<br><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 Configuring Permissions for UPlatform). 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: |

| | |
|---|---|
| | ◦ **Server Name:** The name of the machine on which the report server is installed<br>◦ **Protocol:** The protocol SpeechMiner must use to connect to the report server<br>◦ **Port:** The port SpeechMiner must 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><br>**Note:** If you plan to use the report server, select **Validate Report Server**. |
| Email | Fill in the fields in this area as follows:<br>◦ **Email Server:** The name of the email server SpeechMiner must use to send alerts, notifications, and reports<br>◦ **Alerts Email:** The email address SpeechMiner must 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><br>For example, the required path format is `\\computer\data\index`. |
| 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><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. |

| | |
|---|---|
| | **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). **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 & Tasks**. |
| Configuration Server | If users will use Genesys credentials to log into any of the SpeechMiner components from this site, Click  to add a line to the list and modify it so that it points to the location of the Genesys Configuration server (that is, <config_server>:<port>).<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<br><br>To configure backup configuration servers, add additional lines with their details. After setting or updating the configuration server host and port in SMConfig (either in the Login window, or in the Sites and Machines panel), the IIS should be restarted. |

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.

# Add a Site

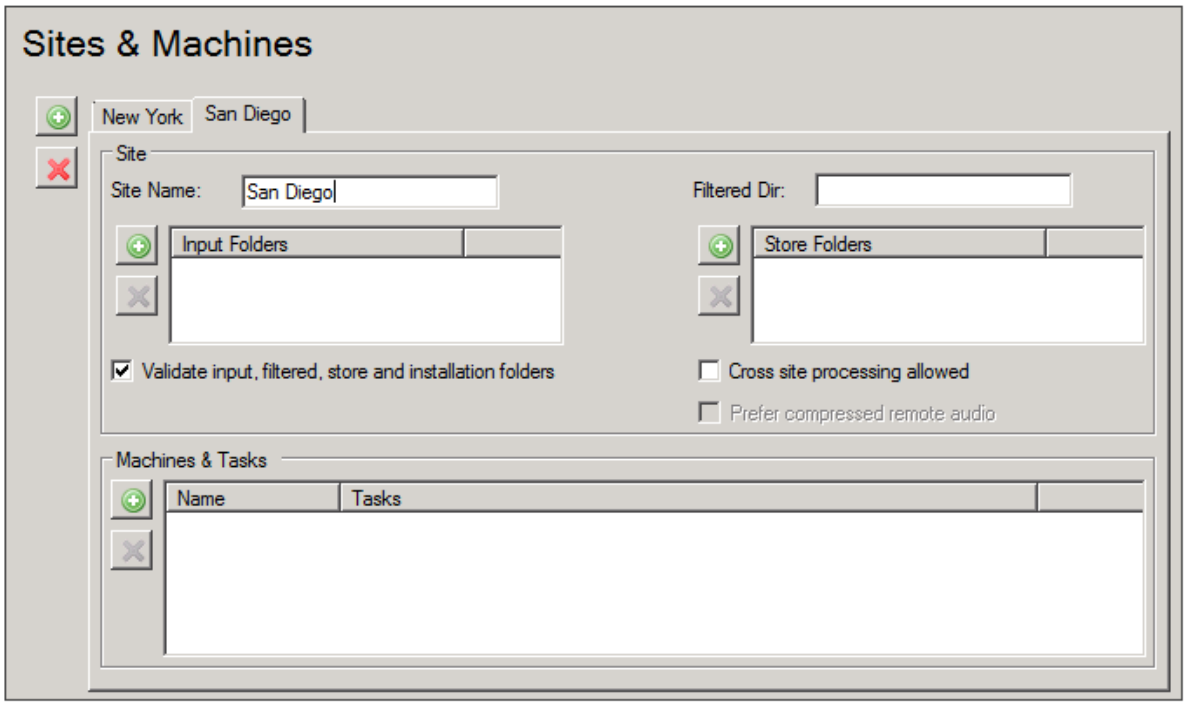
## Adding a Site

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 & Machines** panel for each site you create. The settings in the upper half of the panel, under **Sites** and **Machines and Tasks** are configured for each site. The settings in the lower half of the panel are configured for each 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 & 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.




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

## Configuring Machines and Tasks

The **Sites & Machines** panel must 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.

Important

In SMConfig, in the Sites and Machines panel, when the system tasks are saved, warning messages indicate that the system does not include Categorizer, Active Search and Exploration tasks. These messages can be ignored when working in Recording UI Mode, since these tasks are not available in this mode.

# Choose the Task

### 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 processin.
- **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.

> **Important**
>
> The Exploration and Active Search tasks use the Index folder. Machines that perform these tasks must be physically connected to the same LAN as the Index folder and the Index task).

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.)

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

#### Optimizing the Number of Fetchers

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. A general starting point on a new SpeechMiner installation is to assign 0.5 fetcher tasks per core on each fetcher machine. Normally, two fetchers will maximize the CPU usage on a quad-core machine.

#### Optimizing the Number of Call Recognizers

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. A general starting point on a new SpeechMiner installation is to assign 1.5 Recognizer tasks per core on each Recognition machine. Normally, six Call Recognizers will maximize the CPU usage on a quad-core machine.

> **Important**
>
> The total number of recognition tasks cannot exceed the number in the SpeechMiner license under <maxCallProcessing>xx</maxCallProcessing>.

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 necessary 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.

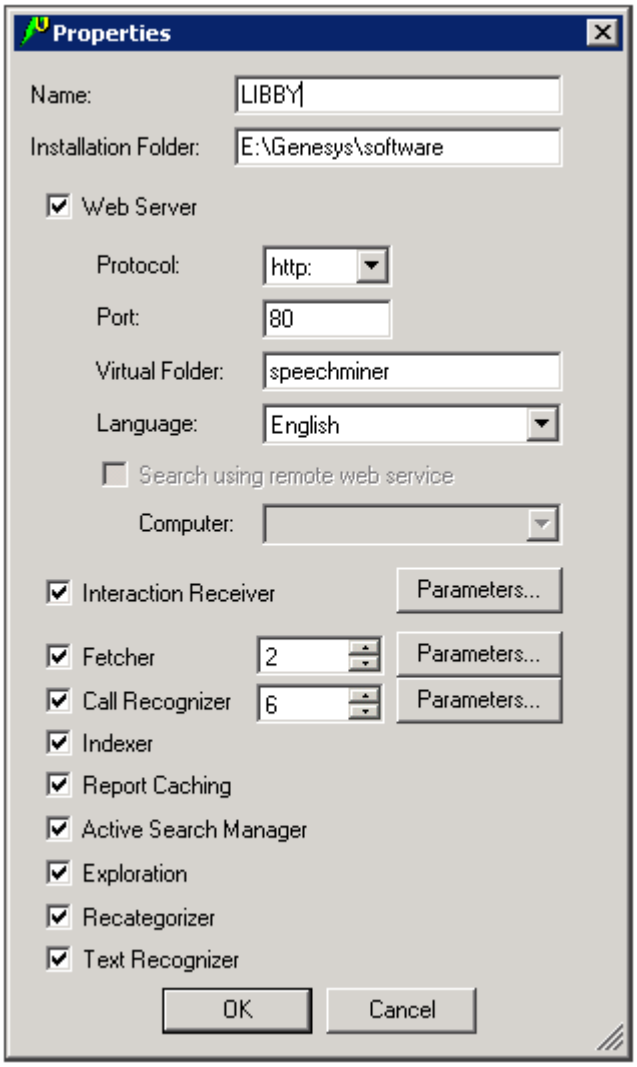
## Configure the Machine

### 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.



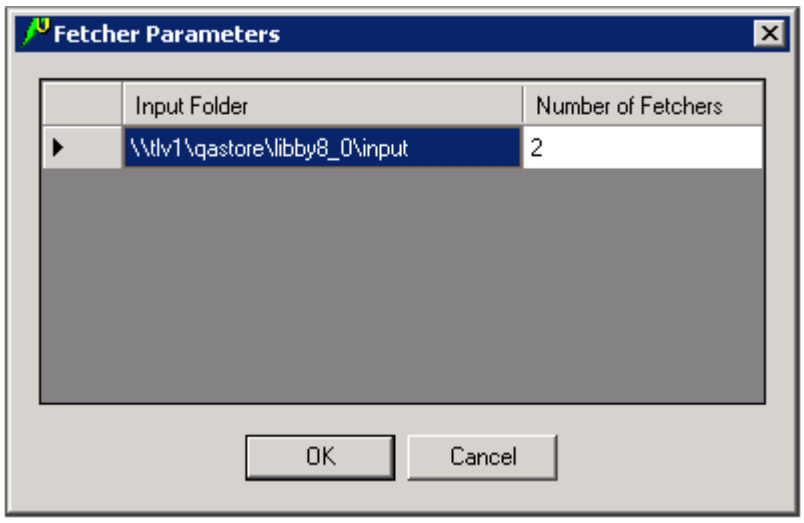

2. Select all of the tasks the machine should perform.

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, it is recommended that you configure your web server to work with the remote web service. For additional information about this option, see Remote Index Search.
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.

#### Configuring the Settings of the Fetchers

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.

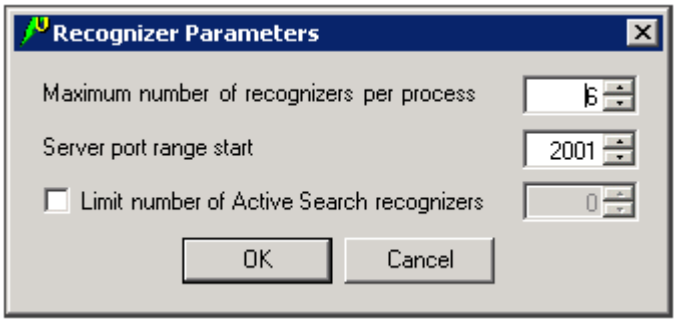


3. Under **Number of Fetchers**, specify how many fetchers should retrieve interaction data from each input folder. Modify the values so that the sum of all the fetchers defined matches the number of fetchers that you specified should run on the machine.
4. Click **OK**.

### Configuring the Settings of the Call Recognizers

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.




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, beginning 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 | 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. |
| Search recognizers | 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.
3. Click **OK**. The machine is added to the list of machines at the site.

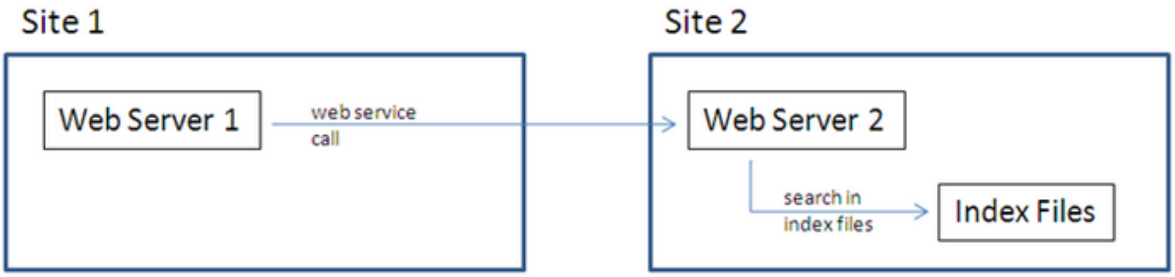
## Configuring Remote Index Search

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.

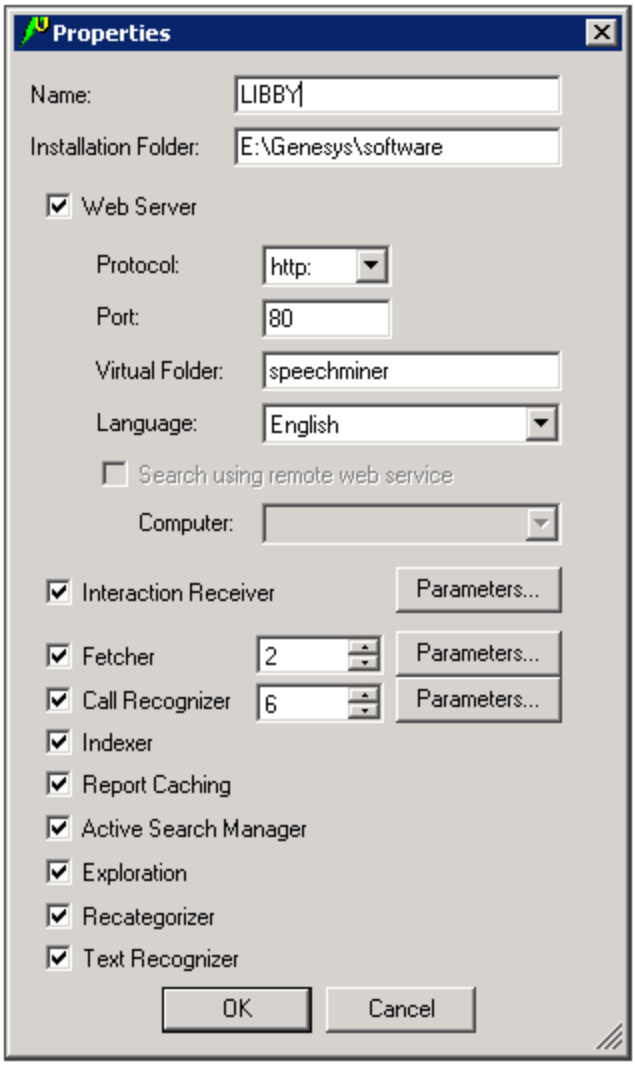
Whenever the index folder is on a different machine from the Web server performing the search, Windows sharing is used to enable the Web server to access the index files. If both machines are on the same LAN, this arrangement should not cause any performance issues. But when the Web machine and the index 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 following diagram:




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




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:

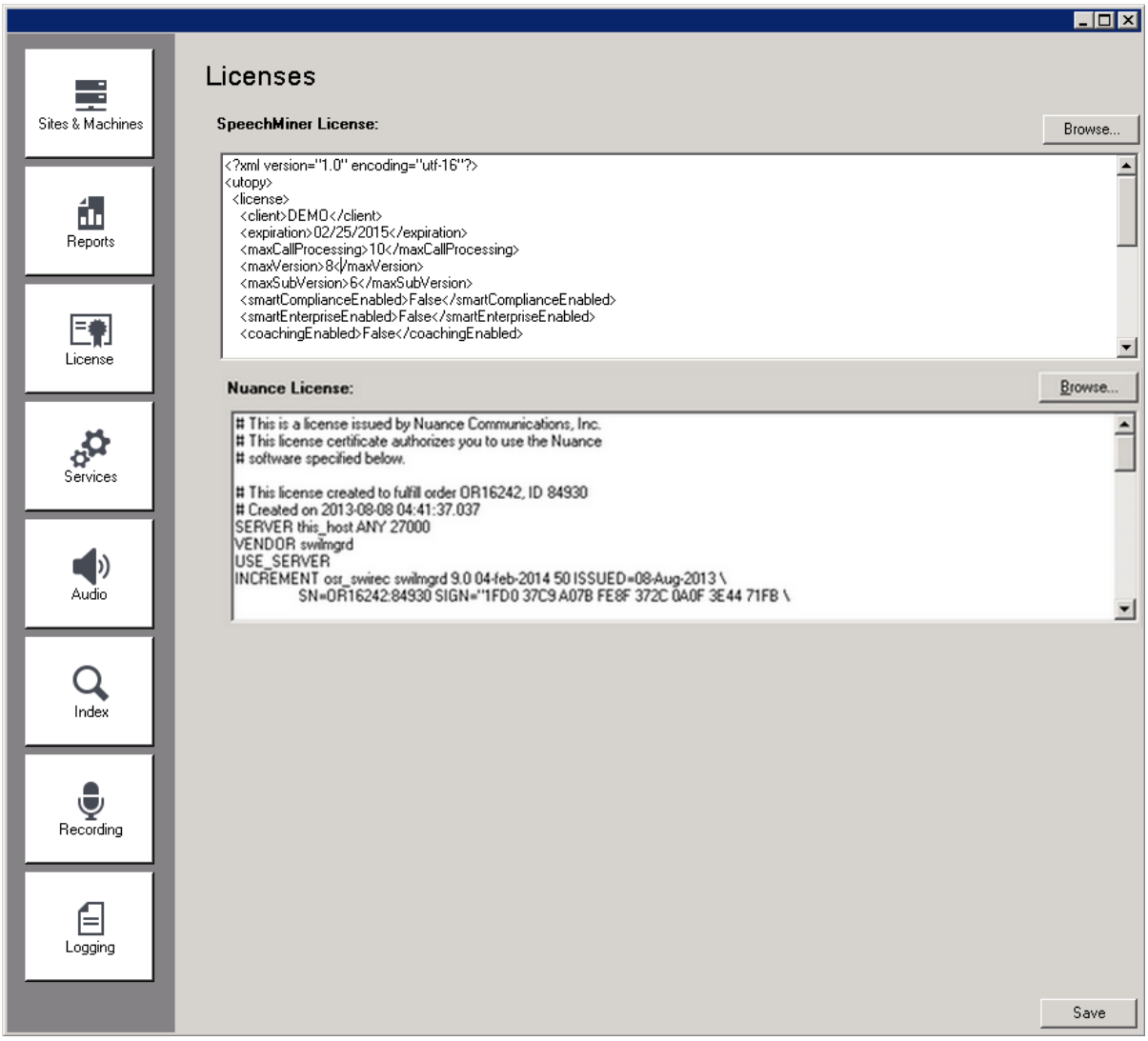
- In the **Properties** window of the Web server, select the **Search using remote web service** checkbox. The **Computer** field becomes active.

- In the **Computer** field, select the Web server to which search requests should be sent.

# Licenses

## Licenses

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



To update the licenses:

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

> **Important**
>
> 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.

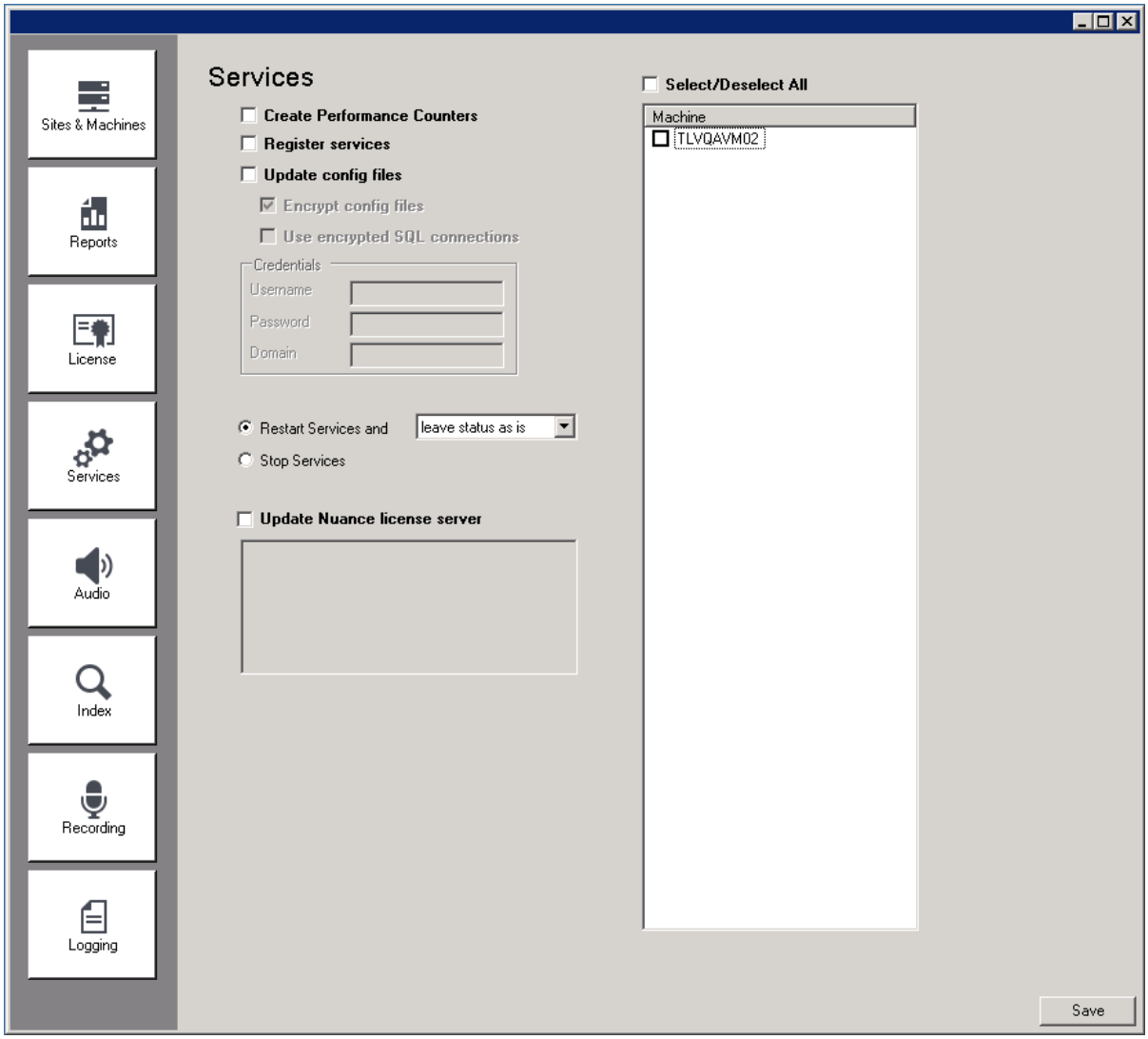
# Services

## 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.




# 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><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><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>**Notes:**<br>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. 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><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><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><br>If you want SMART to access a central license server, add this environment variable to the machine on which SMART is installed: `SWILicenseServerList-port@server`<br><br>**Notes:**<br>◦ Select this option for all machines when you first install SpeechMiner. 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>◦ 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.<br>◦ If you want a machine to work with a local license server, clear the text box, verify that the check box is selected and save. |
| 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.

## 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 in the following table:

| 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. |

## Starting and Stopping the System

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 configuration 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.

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

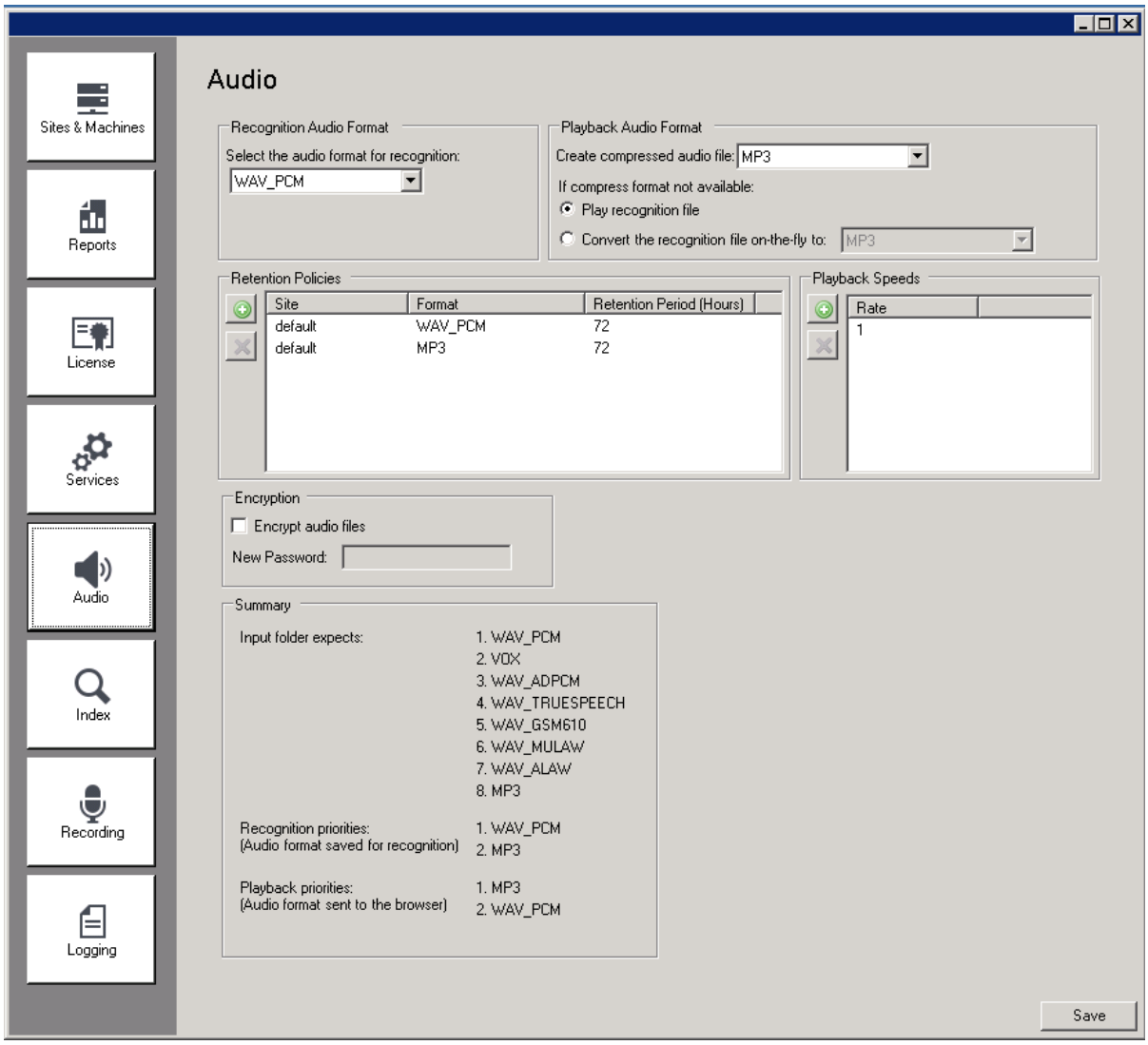
To start, restart, or stop SpeechMiner services:

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

# Audio

## 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 is a summary of the audio formats that are supported for each audio function.




## Configuring the Audio Settings

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

> **Important**
>
> 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 must 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 must be set to WAV_PCM. |
| Create compressed audio file | Select the format of the call audio that must 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><br>If the system is used in the Recording UI mode, or Recording and Analytics mode, this must be set to **Do Not Generate**. |
| If compress format not available | Select one of the SpeechMiner actions to be performed 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.):<br>◦ **Play recognition file**: The player plays the recognition audio file directly without any format conversion.<br>◦ **Convert the recognition file on-the-fly to**: The player first converts the recognition audio file to the format selected here, and then play it for the user. |

| | |
|---|---|
| | For Internet Explorer users, select the **Convert the recognition file on-the-fly to MP3** option. |
| 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 1 MB of disk space can contain roughly one minute of uncompressed audio data or 15 minutes of compressed audio data.<br><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><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><br>**Notes:**<br><br>◦ Selecting these options prevents the creation of unnecessary audio files and the storage of files for longer than is necessary.<br>◦ 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>◦ 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 must 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, and so on. |

| | |
|---|---|
| | 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><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

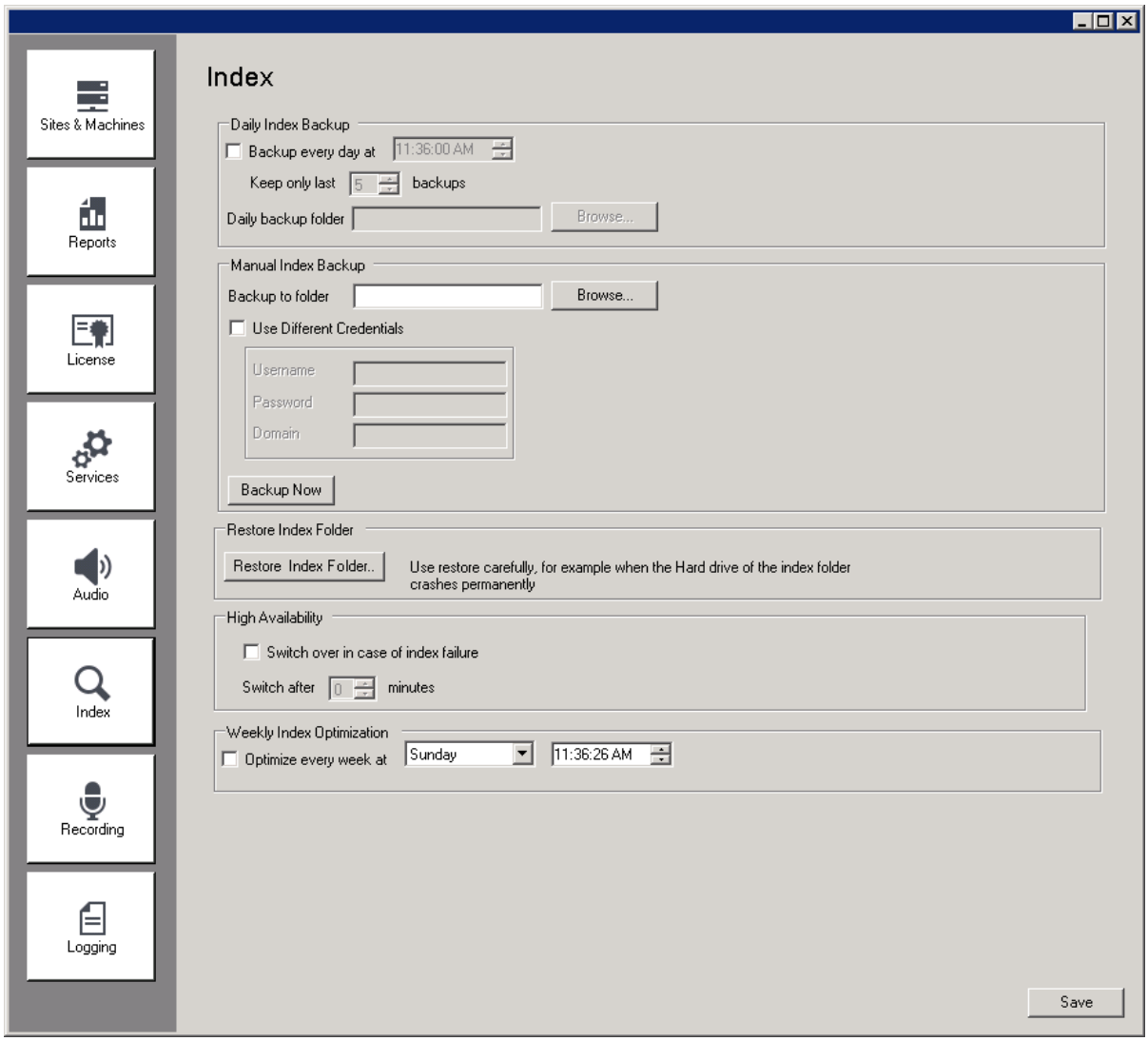
The **Audio** panel summary lists the preferred formats that SpeechMiner supports:

| 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. |

# Index

## Index

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




# Backup the Index

## 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.


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.


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 folder | Select the folder in which to store the backup data. |
| Use different credentials | If different credentials are required to access the index folder, select the **Use Different Credentials** check box, 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.

# Restore the Index

## Restoring the Index

Restoring the index can be done in two different ways:

- Restoring the index from a backup, using SMConfig
- Creating_a_New_Index_from_Scratch|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.

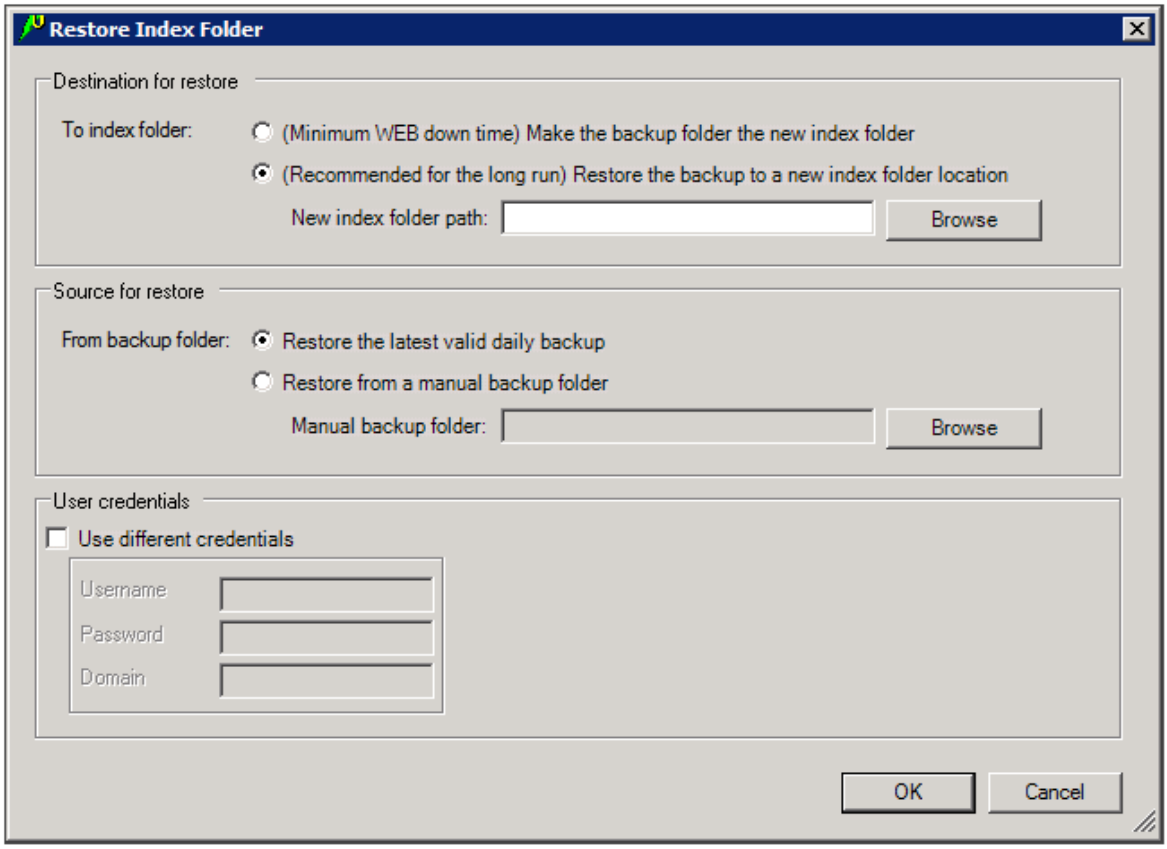
Two alternative methods for restoring the index from a backup are available:

- Use the backup folder as the current index folder.
- 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.




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><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. |

| | |
|---|---|
| | 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:
   - Checks the validity of the new index folder, and, if it is not valid, abort the process.
   - Inserts indexing requests into the index queue for all the calls that were processed or updated after the backup was created.
   - Notifies 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:

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, run `exec dbo.sp_reindexTextDataByParams 3,0,0,`

> **Important**
>
> 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.

# Optimize 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 optimization, and specify the time to begin the process.
3. Click **Save**. The setting is saved, and the **Progress** window opens and shows information about the saving process.

# High Availability

High Availability is an automatic process for restoring an index backup. When the High Availability feature is selected in the SMConfig Index panel, the system will detect when the Index folder is not accessible and perform the following:

1. Switch the roles of the Index folder and the Daily Backup folder, so that the current backup becomes the primary folder and the current index becomes a secondary backup folder.

   Indexing will take place on the new primary folder.

2. Re-index all the interactions that were indexed after the latest daily backup was created.

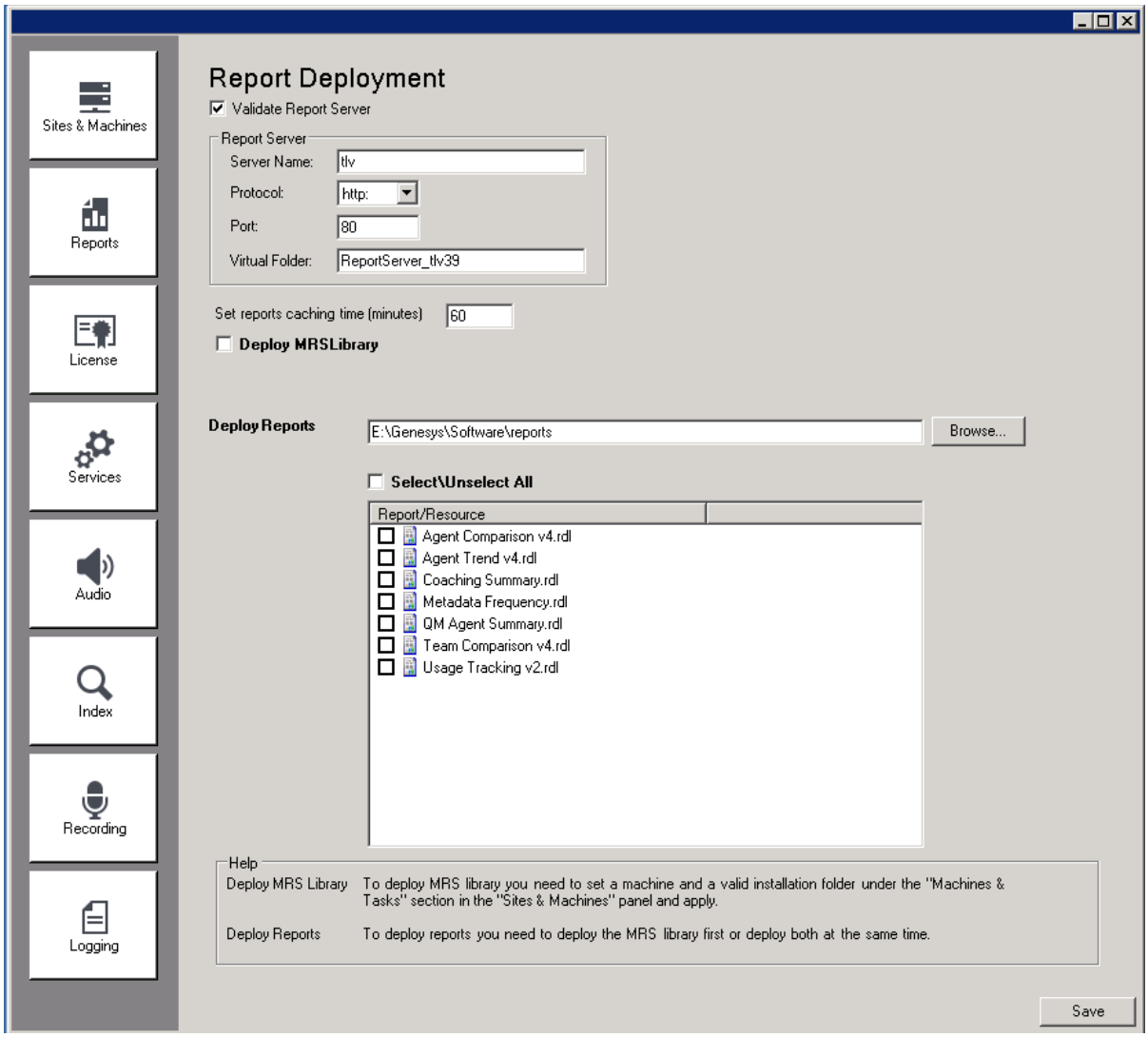
   Whenever the primary folder becomes inaccessible, the folder roles will change.

   The time between when the index is detected as inaccessible and when the switch over is performed can be configured in the **High Availability** section of the **Index** Tab. (That is, Switch after # minutes)

# Reports

## 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 & Machines** panel, specified as the **Server Name** parameter under the **Report Server** panel.




## Required Permissions

To check if the MRS Library has been deployed on the report server, and to deploy the MRS LIbrary, SMConfig reads the report server's Registry to locate the report server’s bin folder and then accesses the folder using the $ share. 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

To deploy reports on the report server, you must first 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 without redeploying the library.

> **Important**
>
> 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 caching time | If you chose to use report caching in the **Sites & Machines** panel, specify how long report results 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><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><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><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.

# Recording

## Recording

When working with a Recording mode, the following configurations are required in the Recording panel. The Recording panel only appears when you are working in a Recording + Analytics environment or a Recording Only environment:

- **Configuration**

  The following must be configured in the systems Configuration Server:

  - Tenant
  - Application Name
  - Users Access Group

- **Interaction Receiver**

  In systems with Call Recording mode or Call Recording and Analytics mode licenses, the Program ID is normally assigned to calls by the recording processor.
  The recording processor adds the Program ID to the call's metadata. If the call arrives in the `SpeechMiner system` without a `Program ID`, SpeechMiner assigns

it the default Program ID.
By default, this value is `default`.

If you want to change this default value to a different value, perform the following:

- 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 SMConfig Recording panel, set **Default Program** to the Program's external ID.
- For **Call Recording Mode** set **Default Program** to the desired value.

Set **Extension Speaker Type** and **Trunk Speaker Type** as configured in the GIR system.

> **Important**
>
> For additional information see Recording Modes.

- **RP Authorization**

  Set the User and Password to the values configured for the RP.

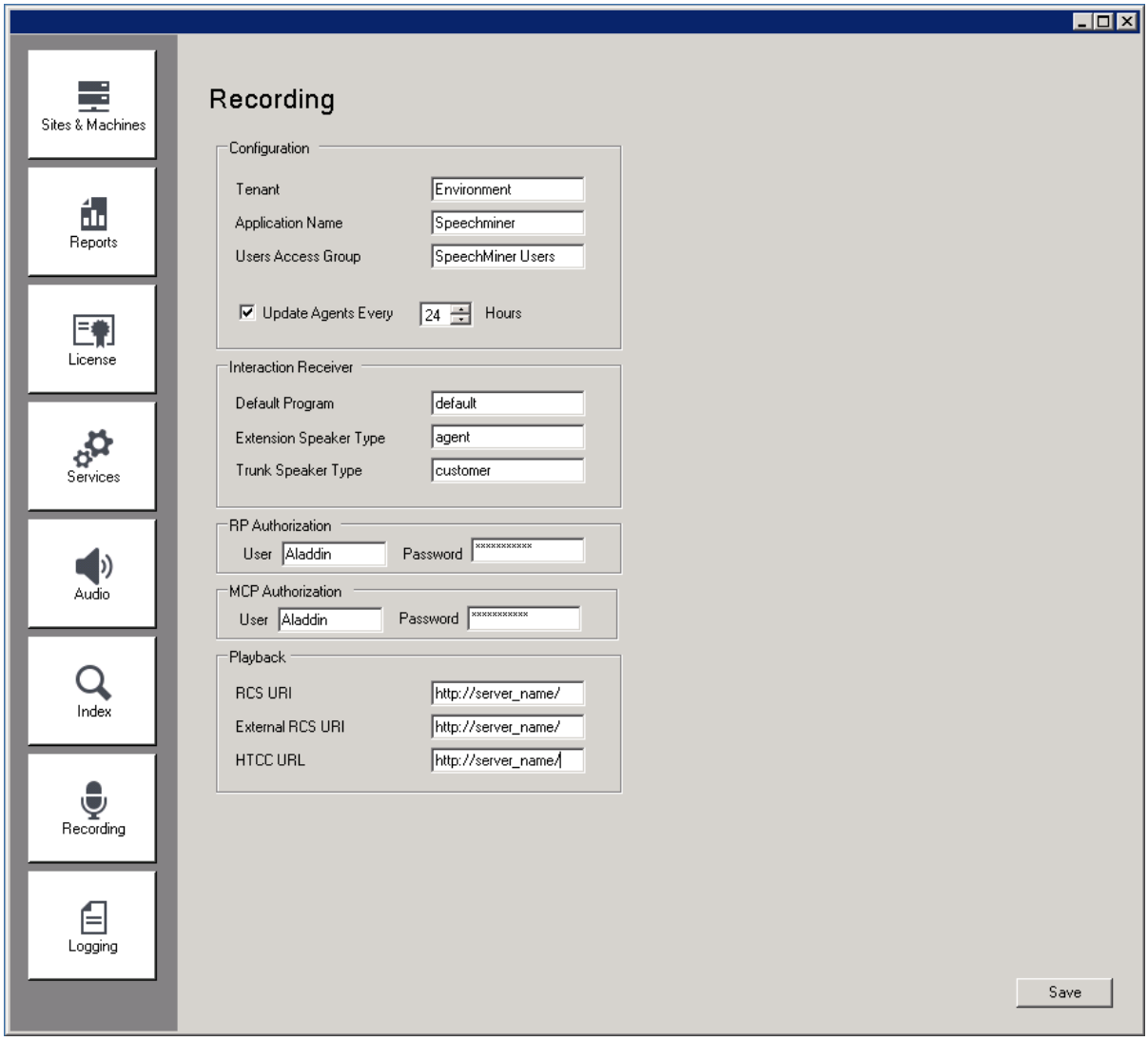
- **MCP Authorization**

  Set the User and Password to the values configured for the MCP.
  The MCP authorization option is only available when working in an environment with SpeechMiner Analytics.

- **Playback**
  - Set the **RCS URI** value using the format: `http://rcs_host:port/rcs`, or `https://rcs_host:port/rcs` (Web Server connection).
  - Set the **External RCS URI** value (when working with encrypted Screen Recording), using the format: `http://rcs_host:port/rcs`, or `https://rcs_host:port/rcs` (Browser connection).

- Set the **HTCC URL** value (when working with Screen Recording), using the format: `http://htcc_host:port`, or `https://htcc_host:port` (Browser connection).
  If you are not working with Screen Recording, leave the HTCC URL field empty.

> **Important**
>
> Use https for the RCS and HTCC connections if the connection to the SpeechMiner web server was configured with https.



## Additional Configurations

The following configurations are recommended for the successful completion of the SpeechMiner configuration process:

# Browser

## Configuring the Browser

End users of SpeechMiner access its browser-based interface from Internet Explorer or Google Chrome, which connects to the SpeechMiner Web server through the local network. In order for the SpeechMiner interface to work properly, you must configure each user's browser 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 web pages.

In addition, if Internet Explorer is running on a Windows Server 2008 machine or Windows Server 2012 machine, the Enhanced Security Configuration feature should be turned off. Refer to the *Turning Off the Enhanced Security Configuration Feature on Windows Server 2008 / Windows Server 2012* section below.

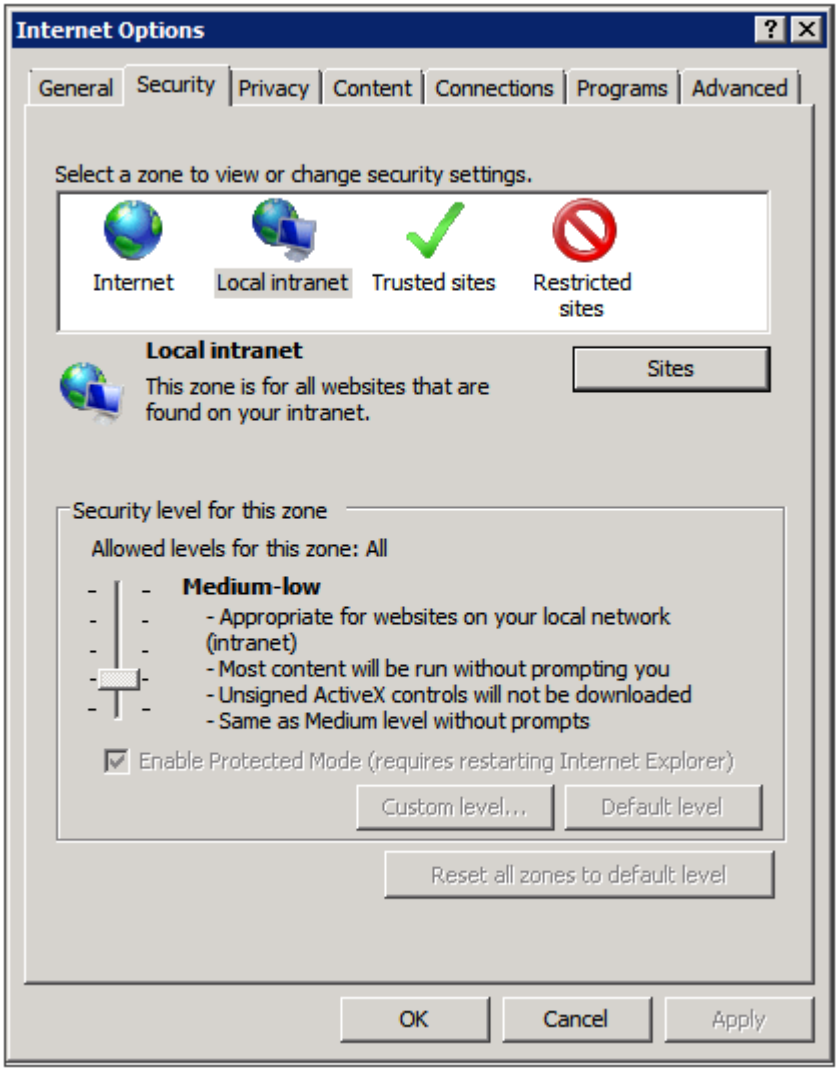
Tip

To run SpeechMiner 8.5.3 you must use a minimum resolution of 1366X768. We recommend that you work with a 1680x1050 resolution.

# Internet Explorer

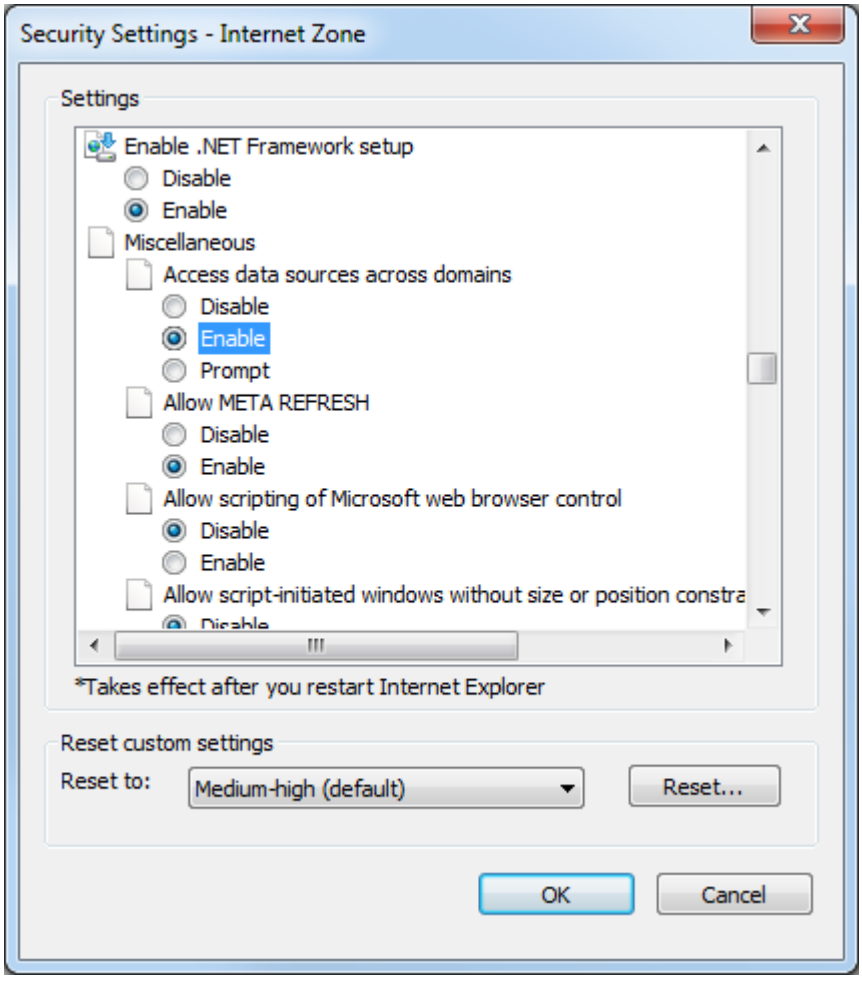
## Configuring Internet Explorer

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



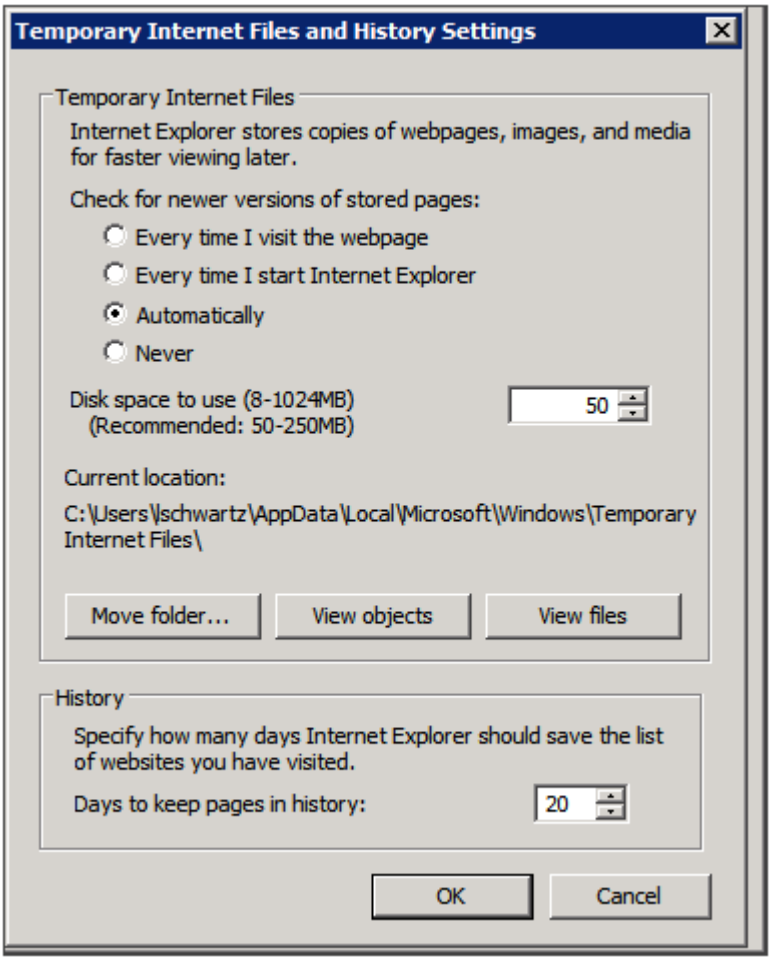

2. Add the SpeechMiner domain to the list of web sites in the **Local Intranet** zone.
3. Click **Custom Level** and select **Miscellaneous > Access data sources across domains**.
4. Under **Access data sources across domains**, select **Enable**.

   Selecting Enable makes Screen Recording playback possible because it allows access from the browser to HTCC.



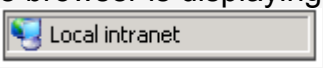

5. In the **Privacy** tab, add the SpeechMiner domain to the list of web sites that are permitted to open pop-ups.
6. In the **General** tab, under **Browsing history**, select **Settings**.

7. Under **Check for newer versions of stored pages**, select **Automatically**.



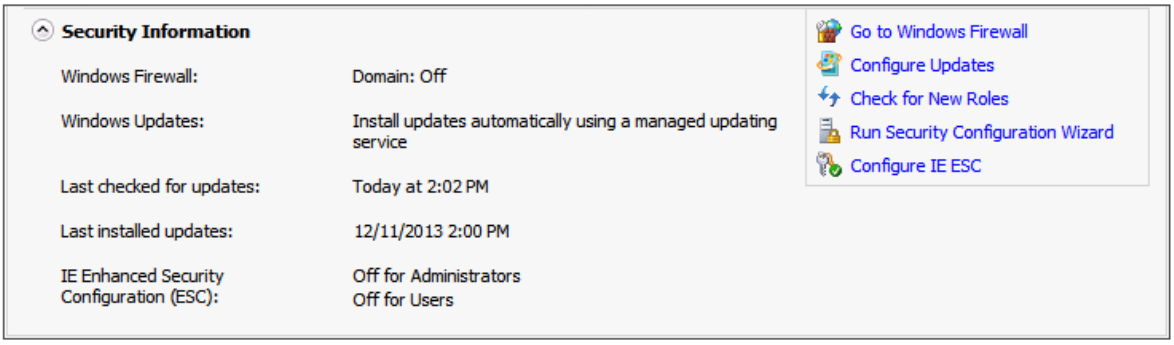

8. Click **OK** to save the changes.

## Important

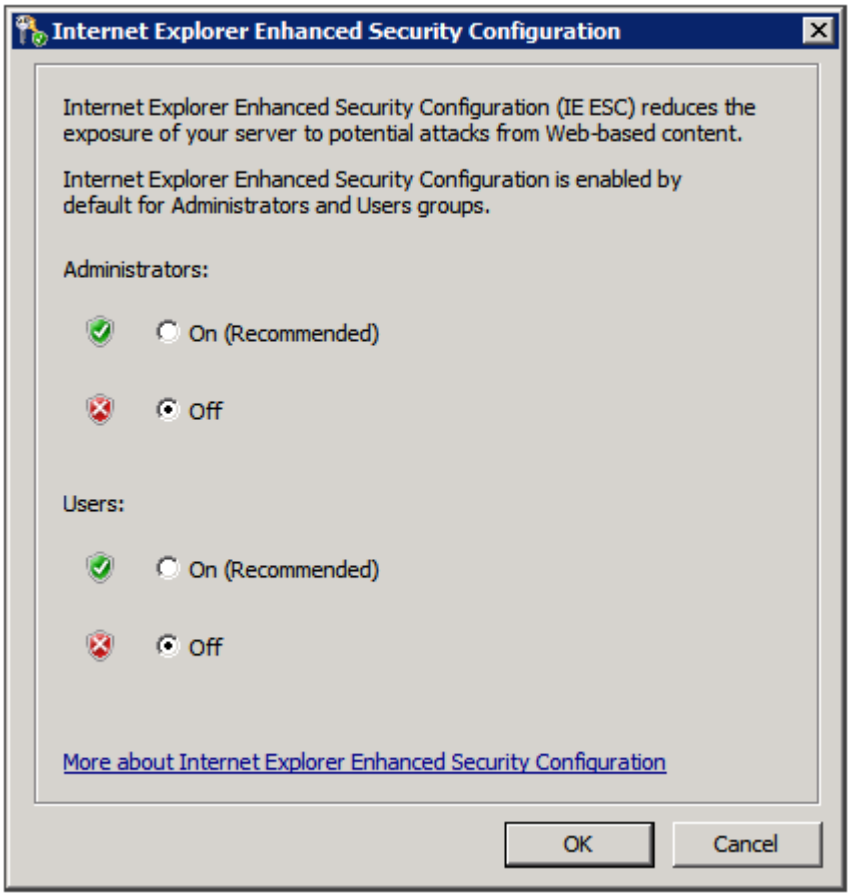
If the SpeechMiner domain is treated as part of the local intranet, **Local intranet** should appear in the **Status Bar** at the bottom of the Internet Explorer window whenever the browser is displaying a SpeechMiner page. 

**Turning Off the Enhanced Security Configuration Feature on Windows Server 2008 / Windows Server 2012**

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)**.




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.

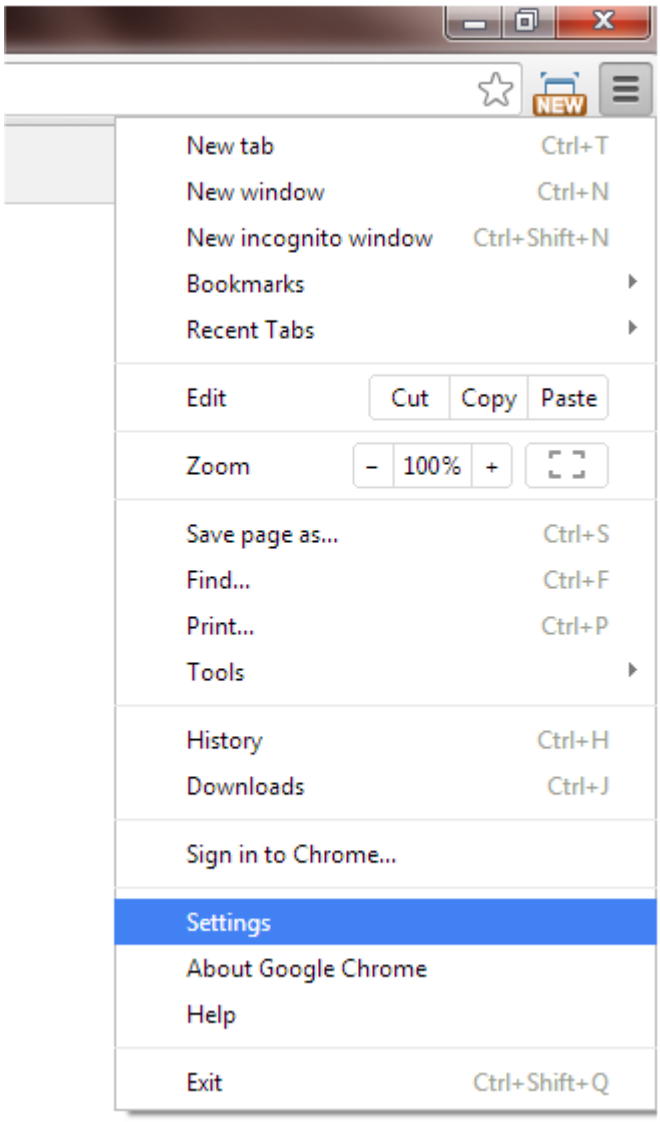



3. For both **Administrators** and **Users**, select **Off**.
4. Click **OK** to save the changes.

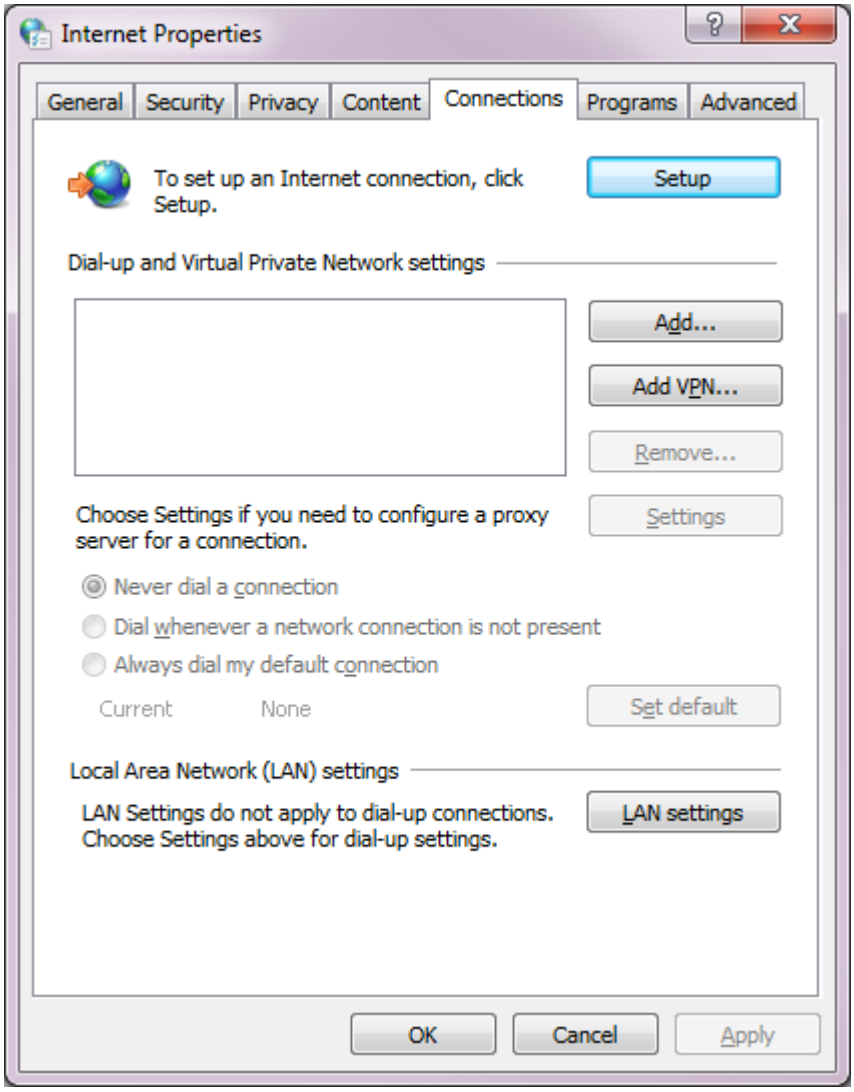
# Chrome

## Configuring Chrome

1. In the Chrome browser, select **Customize and control Google Chrome**, and then select **Settings**.




2. Select **Show advanced settings...**, and then under **Network**, click **Change proxy settings...** The **Internet Property** dialog box opens.

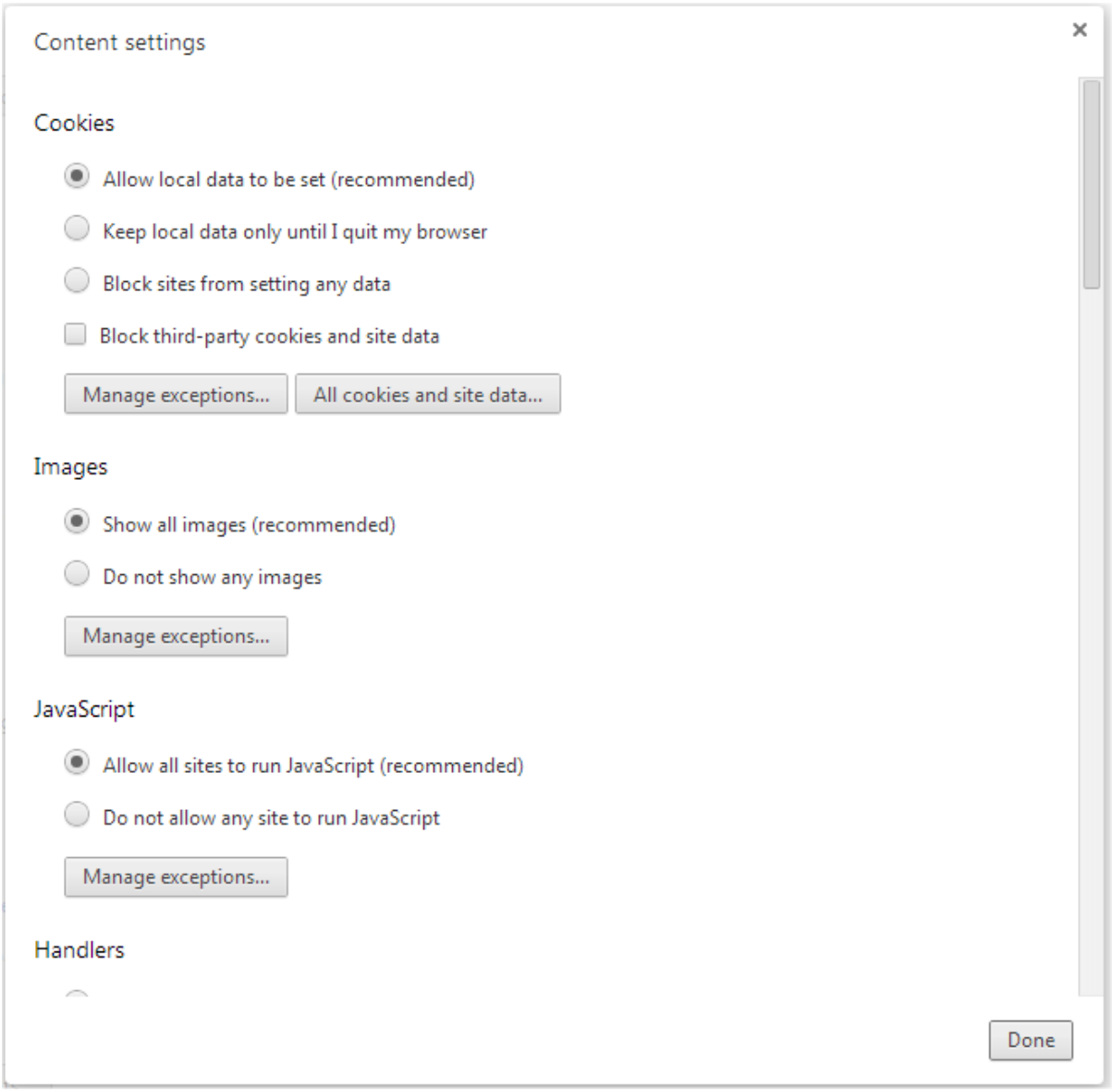



3. On the **Connections** tab, add the SpeechMiner domain.
4. On the **Privacy** tab, turn off **Pop-up Blocker**.
5. In the **General** tab, under **Browsing history**, select **Settings**.
6. Under **Check for newer versions of stored pages**, select **Automatically**.
7. Click **OK** to save the changes.

#### Verify that Java Script is Enabled

To verify that Java Script is enabled:

1. In the Chrome Broswer, navigate to **Chrome Settings/Show Advanced Settings/ Privacy/Content Settings**.




2. Under **Java Script**, select **Allow all sites to run Java Script (recommended)**.

For more information about enabling Java Script, see http://support2.constantcontact.com/articles/FAQ/1334?l=en_US&fs=RelatedArticle.

# Date and Time

### Setting the Date and Time

The `webServiceParam` 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.

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`.

## Forget Password Configuration

### Set the Forget Password Login Option

When configuring SpeechMiner you can give users the option of recovering forgotten passwords.
If you choose to enable users to recover their forgotten passwords, the SpeechMiner log in screen will contain a **Forget Password?** link.
When the user clicks the Forget Password? link, the user will be required to enter his email address.
The user will then receive an email with a **Reset Password** link.
By default the Reset Password link is only available for 4 hours. This default number can be changed.

**To enable a user to recover his password perform the following:**

1. Access the `webServiceParam` table.
2. Change the `PasswordRecovery` field from `false` to `true`.

**To change the Reset Password link default:**

1. Access the `webServiceParam` table.
2. Change the `resetPasswordTokenExpirationTime` field from 4 hours to the amount you prefer.

Important

If more than one user has the same email address, the Forget Password option will not be available.

**To change the email message the user receives:**

1. Access the `webServiceParam` table.
2. Change the `resetPasswordMailBody` field to the content you prefer the user to receive.
   The email message content should contain `<resetLink>`.
   `<resetLink>` represents the Reset Password link.
3. Change the `resetPasswordMailSubject` field to the subject you prefer the user to receive.

# Resource Type

## Setting the Resource Type

The `resourceTypeId` table contains a list of all the possible resource types.

To enable/disable a resource type in SpeechMiner, update the `isEnabled` field in the `resourceTypeId` table with the relevant status.

# VMWare

## 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.

# HTTPS for SpeechMiner

## Enable HTTPS for SpeechMiner

> Important
>
> The following procedure is intended for a WIndows 2008 Server

1. Create a self signed server certificate to enable the https protocol:
    a. Open the **Microsoft Management Console (MMC)**.
    b. Select **File > Add / Remove Snap-in**.
    c. Select **Certificate** and click **Add**.
    d. Click **OK**.
    e. Select **Computer account** and click **Next**.
    f. Selelct **Local computer** and click **Finish** and **OK**.
    g. Under **Certificates (Local Computer)**, right-click **Personal, All Tasks, Request New Certificates**

    The following **Certificate Enrollment** window appears:

    h. Click **Next**
    i. Under **Active Directory Enrollment Policy**, Select **Computer**.
    j. Click **Enroll** and **Finish**.
11. Configure the Report Server:
    a. Open the **Reporting Services Configuration Manager**.
    b. Select **Web Service URL**.
    c. Select **Advanced**.
    d. Under **Multiple SLL Identities**, click **Add** and select the certificate you created.
    e. Click **OK** and select the **https URL**.
    f. Under **Multiple SSL Identities**, click **Add** and select the certificate you created.
    g. Click **OK** and select the **Report Manager URL**.

8. Create an SSL Binding:
    a. Open **IIS Manager**.
    b. Select **Default Web Site** and in the right **Action** pane click **Bindings**.
    c. Click **Add**.
    d. In the **Type** list select **https**.
    e. In the **IP address** list select **All Unassigned**.
    f. In the **Port** field enter the relevant port number.
    g. In the **SSL Certificate** list select the relevant SSL Certificate.
8. Configure SSL settings:
    a. In the **IIS Manager**, click **Default Web Site**.
    b. Under **IIS**, select **SSL Settings**.
    c. Select **Require SSL** and click **Apply**.
4. Restart the **IIS Server**.

> **Important**
>
> If the following error occurs after you restart the IIS Server, it maybe due to the fact that your Skype process is using the same ports and should be stopped:
>
> ```
> IIS Manager Error: The process
> cannot access the file because it
> is being used by another process.
> (Exception from HRESULT:
> 0x80070020)
> ```

Additional information abouat SSL on IIS 7 can be found here: http://learn.iis.net/page.aspx/144/how-to-set-up-ssl-on-iis-7/

# Recording Modes

## Additional Configuration for Recording Modes

- Create a new application for SpeechMiner with a Genesys Generic Server template in the **Genesys Administration Extension**:

- Follow the Creating Applications Objects procedure in the **Procedures** tab of the **Applications** page in the Genesys Administration Extension document.
- Verify that the name of the application that you create is the same as the **ApplicationName** field in the **configServer table** of the SpeechMiner database.
- Creating a SpeechMiner application does not require configuring connections or options and is not integrated with LCA.

# SpeechMiner Web Application

## Configuring a SpeechMiner Web Application

Configure a new SpeechMiner Web application when your default web site is not sufficient for your systems demands.

1. Open the **IIS Manager**.
2. Under **Connections**, select **Sites > Default Web Sites** and right-click **SpeechMiner**.
3. Click **Remove** to remove the existing SpeechMiner Web Application.
4. Under **Connections** right-click the web site to which you want to add the SpeechMiner Web Application.
5. Select **Add Application**.
6. In the **Application Name** field enter **SpeechMiner** for the new web application.
7. Click **Select**.
8. Open the **Application Pool** list and select **SpeechMiner**.
9. Click **OK**.
10. In the **Physical Path** click the **Browse** button and select the **Installation > Web** folder. The default folder is c:\Program Files (x86)\Genesys\Software\utopy\product\web.
11. Click **OK**.
    The SpeechMiner Web Application appears under the web site to which you selected to add the SpeechMiner Web Application.

# Enabling CMD for SMART

## Configuring Command Line availability for SMART

To update the database configuration perform one of the procedures:

#### SMConfig

1. Log into **SMConfig**.
2. Select **Services**.
3. In the Services window, select **Update config files**.
4. Click **Save**.

#### SMART

1. Manually log into **SMART**.
2. Go to **C:\Program Files (x86)\Genesys\Software\utopy\product\bin\release**.
3. Make a copy of **smart.exe.config** and name the copy **smartc.exe.config**.
4. When asked to replace a file with the same name click **Yes**.

# Define Caching Reports

## Defining Caching Reports

All Caching tasks are listed in the **Report Caching Params** table.

In the default database there is one Caching task that caches all the reports in the expanded widgets for all the active partition sets during the last 30 days.

You can select different reports to cache then those defined by default. You can also delete the existing cache and create a new cache.

To define a new cache report:

1. Access the **Report Cache Params** table in the database and insert a new row.
2. Define the following parameters:

| Parameter | Description |
|---|---|
| Enable | True |

| | |
|---|---|
| Report Query | The query that retrieves the report id's and the partition strings associated with the report you want to cache. |

Within the Report Query you can use the following parameters:

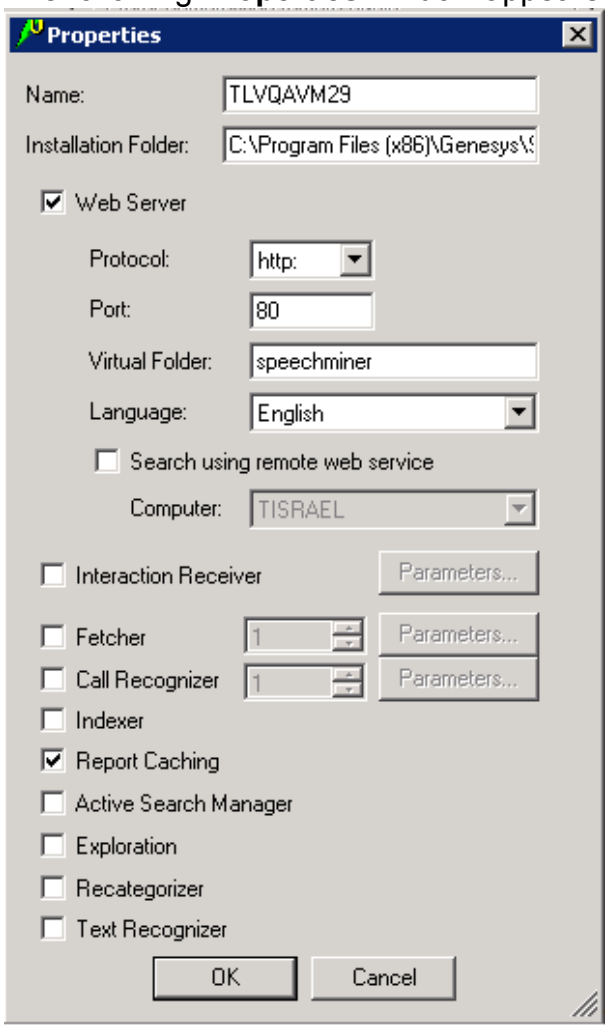
| Parameter | Description |
|---|---|
| @templatesToExclude | The templates to exclude from caching. |
| @usersToExclude | The users to exclude from caching. |
| @daysUserIsActive | The users that should be cached. For example, if this is 7, then only users that are active in the last 7 days should be cached. |
| numberOfProcesses | The number of parallel threads that should be cached (at the same time). |
| keepLogMessages | The number of days log messages associated with caching tasks be should be kept. |
| NotificationMail | The email address belonging to the users to whom the caching task report should be sent when the caching is complete. |
| webComputerName | The name of the web server to which the reports are cached. |
| RunAtTime | Defines when the caching task will run within 24hrs. The maximum is 1440 minutes for 24hrs. For example, if you want the cache task to run at 12 midnight and your UTC difference is +2, enter -120. It is the difference between UTC and the local time you want it to run in. The difference is in minutes. |
| nextTimeToRun | The next time the Caching task is set to run. Set this parameter to a low value. During the initial run the task automatically sets the correct value. |

3. Log into SMConfig.
4. Under **Machines & Tasks**, select one or more machines on which the Caching task will run.

   If you select more than one machine the Caching task will be divided equally between the machines that run simultaneously. The more machines the faster the Caching task will be completed.

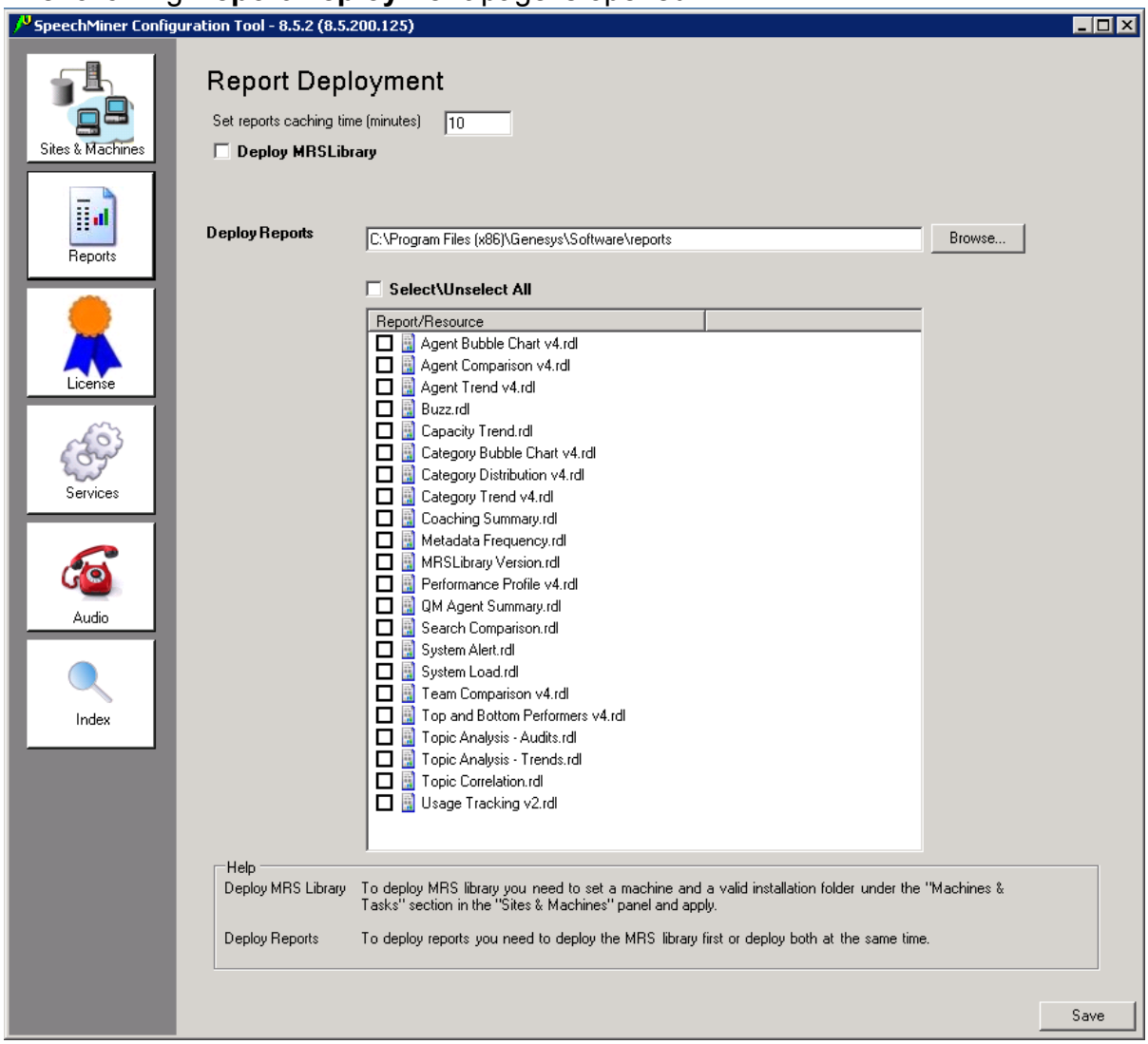
5. Click **Edit**.

The following **Properties** window appears:




6. Select **Report Caching**.
7. Click **Ok**.
8. Click **Save**.
9. Select the **Report** tab.

The following **Report Deployment** page is opened:




10. In the **Set reports caching time (minutes)** field enter **1440** (this number represents 24 hours).
11. Select all the report templates and click **Save**.
12. Verify that the Caching task is running:
    a. Access the **reportCachingLog** table.
    b. Select the table records and verify that the Caching task ran.
    c. Access the **ulogger** and verify that it is caching the selected reports.

Important

If the Report Caching task fails, the Partition Failure error will appear in the reportCachingLog table. To resolve this error copy the Microsoft.ReportViewer*.* dlls from the web\bin folder to the platform bin folder utopy\product\bin\release or Install MS Report Viewer 2005.

# Report Server Email Configuration

## Report Server Email Configuration

Configure the Report Server email as follows so that the report schedule and report deliverable functions operate as expected.

1. Access the **Report Server** machine.
2. Open **Reporting Services Configuration Manager**.
3. Click **Connect** to connect to the Report Server.
4. Select **Service Account** and define a user account with access to the SMTP server.
5. Click **Apply**.
6. Select **E-mail Setting** and define the **SMTP Server** and default **Sender Address**.
7. Click **Apply**.

# Integrated Windows Authentication

## Integrated Windows Authentication

Integrated Windows Authentication enables you to ensure that your SpeechMiner users are not required to log into SpeechMiner every time they want to access the application.

Tip

To configure your application to use Integrated Windows Authentication, you must use IIS Manager to configure your application's virtual directory security settings and you must configure the <authentication> element in the Web.config file.

1. Open IIS Manager and navigate to the level you want to manage. For information about opening IIS Manager, see Open IIS Manager (IIS 7).

   For information about navigating to locations in the UI, see Navigation in IIS Manager (IIS 7).

2. In **Features View**, double-click **Authentication**.
3. On the **Authentication** page, select **Windows Authentication**.
4. In the **Actions pane**, click **Enable** to use Windows authentication and **Disable** to use Anonymous authentication.
5. In your application's Web.config file or in the machine-level Web.config file, ensure that the authentication mode is set to Windows as shown here.

```
...
<system.web>
 ...
 <authentication mode="Windows"/>
 ...
</system.web>
...
```

## Configuring Permissions

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

# UPlatform

## Configuring Permissions for UPlatform

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

> **Important**
>
> In this guide, this functional user account is called **SMUSER**.

### Groups

SMUSER must 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:

> **Important**
>
> **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 | For example, `C:\data` - where the `data\input` and `data\filtered` folders are located |

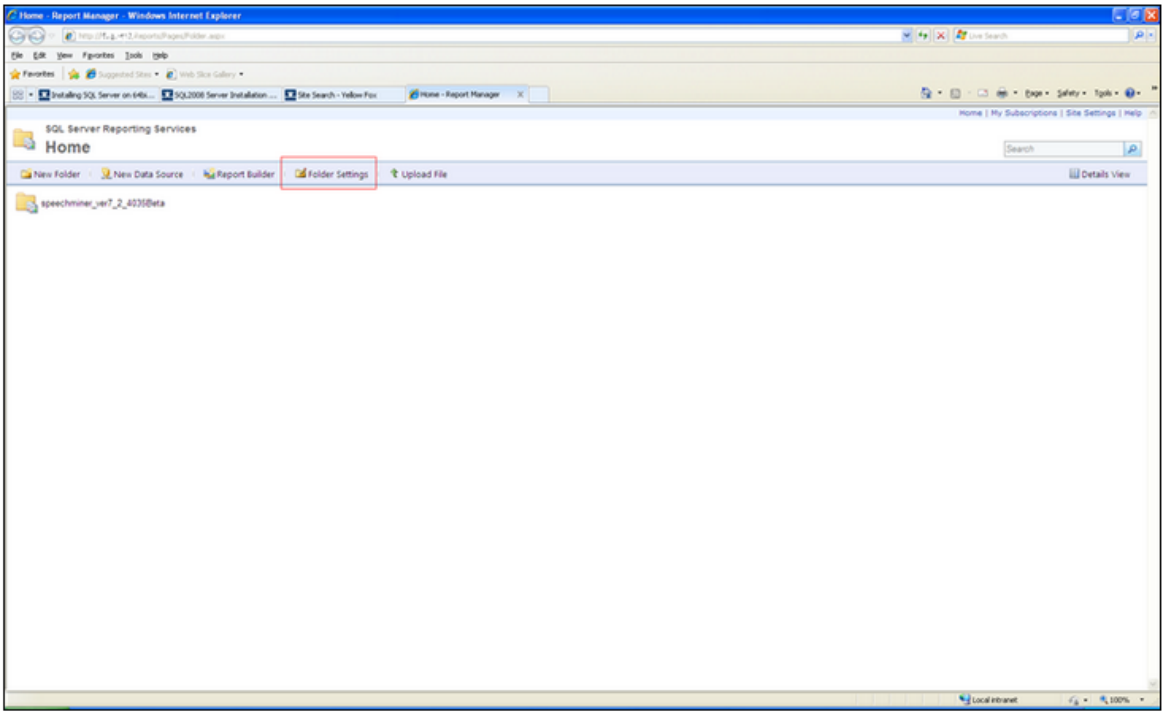
| | | | |
|---|---|---|---|
| Genesys data folders | Sharing | Change | For example, `C:\data` - where the `data\input` and `data\filtered` folders are located |
| `C:\Program Files (x86)\Genesys\Software\utopy\product\WEB\App_Data` | Security | Read/Write | This is for the impersonation user specified in the `web.config` file. |

### Report Server

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

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

> **Important**
>
> If the Windows UAC (User Account Control) is active on the server, open the browser by right-clicking its icon and then selecting **Run as administrator**.

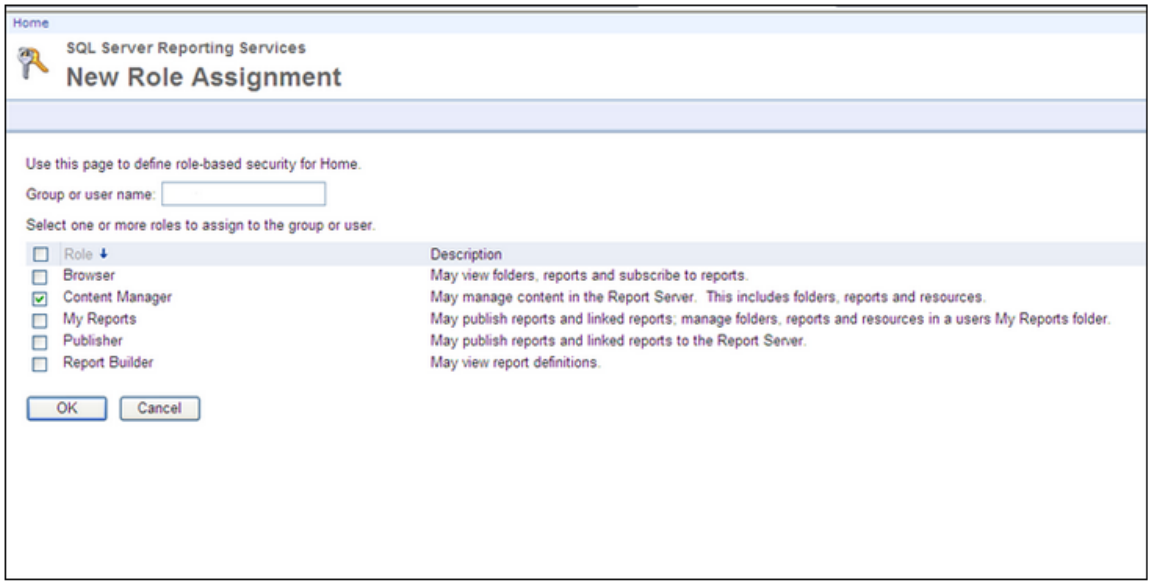



2. Select the **Folder Settings** tab.

> **Important**
>
> 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. In **Group or user name**, enter the user name (`SMUSER`).
7. Select the **Content Manager** checkbox.




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}"
```

# Uconnector

### Configuring Permissions 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

## SMART

### Configuring Permissions 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 | For example, `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}"
```

## Web Server

### Configuring Permissions 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 (For the SMUSER, see Configuring Permissions for UPlatform).
- Set `read/write/modify` permissions to the IIS user/group (IIS_IUSRS in Windows server 2008 and above) and the operational domain user (SMUSER) on the SpeechMiner installation folder.
- Set `read/write/modify` permissions to the IIS user/group (IIS_IUSRS in Windows server 2008 and above) on the windows temp folder.

## Working with Chat Interactions

SpeechMiner supports numerous metadata for chat interactions.

This page describes the required system specifications for the successful implementation of chat interactions.

# Supported Formats

### Supported Formats for SpeechMiner 8.5 and Above

- Text File
- Chat XML file (.chtx)

# File Format

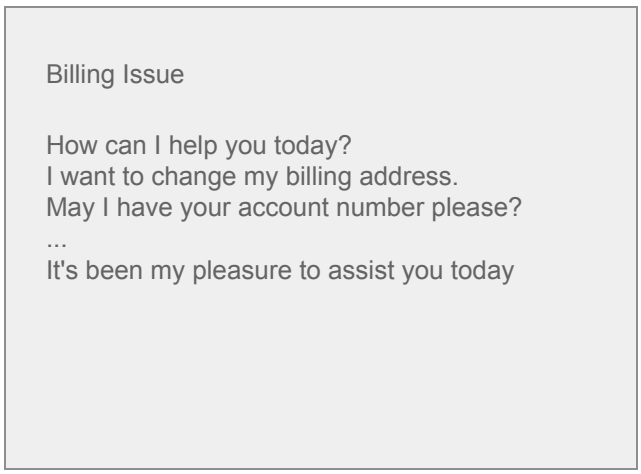
### Chat File Format Specifications

#### Text File

A chat interaction in a text file format only requires a subject and the conversation. The file does not require information about the participants.

The first line in the text file should be the subject. The second line in the text files should be empty. The remaining lines should contain the chat conversation.

For example:




#### Chat XML File (.chtx)

When using an XML file (.chtx format), the chat interactions should be configured as follows:`<textFormat>XML</textFormat>`

Additional information can be added as meta data in the interaction XML file.

> **Important**
>
> The .chtx format and specification that is described here is not an official format or standard. This file format was specifically created for SpeechMiner purposes. The assumption is that the UConnector or any other ETL tool will create the chat conversation in this format before sending the file to SpeechMiner.

A chat conversation in .chtx format can contain one subject, multiple conversation messages and a description of the parties in the conversation. The subject and each message is not limited to one line (they can contain multiple lines).

Each `message` element can contain the following:

- **Time stamp** - the time format is ISO_8601. For example: '2013-12-04T18:26:46'
- **Display name** - the display name of the message sender.
- **Party ID** - the string identifier of the sender/party id. The party ID can be described in two places, in both cases the ID will be used to match the party/speaker type. If the

party ID cannot be found in one of these places it will be ignored and identified as a different party in the call.
- In the 'speakers' element in the meta data xml file
- In the 'parties' element in the chtx file (see below)

Messages without a party ID or messages with a party ID that were not found, will be treated as one party. This configuration is similar to the channels speakers configuration in dual channel calls

Each `party` element can contain the following:

- **Party ID** - used to match the id from each 'message' element
- **Party type** - used to identify the type of the party/speaker when you configure categories with speakers or limit the search in the web to specific speakers.

If one of these attributes are missing this party configuration will be ignored.

Important

The additional information in each message is not mandatory.

The order of the messages in the file should be the original order. Since it's not mandatory, the system will not sort the messages according to the time stamp value. If the sender name is not specified in the message the system will not use the speaker name from the speakers configuration (the UI will not show any name)

#### File Format Examples

**Example 1**:

```
<?xml version="1.0" encoding="us-ascii"?>
<chat>
 <parties>
  <party partyId="FIRST SPEAKER ID" partyType="FIRST SPEAKER TYPE"
/>
```

```
  <party partyId="SECOND SPEAKER ID" partyType="SECOND SPEAKER TYPE"
/>
  ...
 </parties>
 <subject>SUBJECT LINE</subject>
 <message time="FIRST MESSAGE DATE AND TIME" partyId="FIRST MESSAGE
    SPEAKER ID" displayName="FIRST MESSAGE SENDER NAME">
    FIRST MESSAGE CONTENT
 </message>
 <message time="SECOND MESSAGE DATE AND TIME" partyId="SECOND
MESSAGE
    SPEAKER ID" displayName="SECOND MESSAGE SENDER NAME">
    SECOND MESSAGE CONTENT
 </message>
 ...
</chat>
```

**Example 2**:

```
<?xml version="1.0" encoding="us-ascii"?>
<chat>
 <parties>
  <party partyId="customer" partyType="customer" />
 </parties>
 <subject>Billing issue</subject>
 <message time="2013-04-18T12:10:42" partyId="agent"
   displayName="Agent 1"> How can I help you today?
 </message>
 <message time="2013-04-18T12:10:51" partyId="customer"
   displayName="Customer 1"> I want to change my billing address
 </message>
 <message time="2013-04-18T12:10:58" partyId="agent"
   displayName="Agent 1"> May I have your account number please?
 </message>
   ...
 <message time="2013-04-18T12:15:23" partyId="agent"
   displayName="Agent 1"> It's been my pleasure to assist you today
 </message>
</chat>
```

Important

Any white space around the message content or subject content will be removed (including the first and last new lines). New lines inside the content will be preserved. Since the format is XML, any reserved XML characters need to be encoded if they appear in the subject content, message content or attributes. Any other XML information will be ignored

# PartyID Configuration

## PartyID Configuration

PartyID can be configured in two places:

- In the chat meta xml file, in the `speakers` element. The `speakers` element in the meta xml file is used for mapping the interaction to an agent and work group. Since `speakerType` is defined in the meta xml file, the file is used as part of the `parties` configuration.
- In the `parties` element in the chtx file. The `parties` element contains parties that are not linked to the interaction as agents or work group (for example, a customer).

The `chtx fetcher` will search for each PartyId used in the message in the `speakers` configuration. If the PartyId does not exist in the `speakers` element, the `chtx fetcher` will check the `parties` element. If the PartyId is not defined in both places the PartyId will be ignored.

#### Example 1: 2 Parties (Agent + Customer)

In this example, the agent is defined as the speaker and the customer is defined in the `parties` element.

**Meta XML File**:

```
<?xml version="1.0" encoding="us-ascii" ?>
<callInformation>
 <mediaType>Chat</mediaType>
```

```
 <textFormat>XML</textFormat>
 <textTime>2014-01-07T10:54:04</textTime>
 <programID>english</programID>
 <speakers>
  <speaker id="ag1" speakerType="agent">
  <workgroup>/W1/W2</workgroup>
  </speaker>
 </speakers>
</callInformation>
```

**CHTX File**:

```
<?xml version="1.0" encoding="us-ascii"?>
<chat>
 <parties>
  <party partyId="customer1" partyType="customer" />
 </parties>
 <subject>Billing issue</subject>
 <message time="2013-04-18T12:10:42" partyId="ag1"
  displayName="Agent 1"> How can I help you today?
 </message>
 <message time="2013-04-18T12:10:51" partyId="customer1"
  displayName="Customer 1"> I want to change my billing address
 </message>
 <message time="2013-04-18T12:10:58" partyId="ag1"
  displayName="Agent 1"> May I have your account number please?
 </message>
</chat>
```

As shown in the above example the agent with `ag1` ID is configured in the `speakers` element, in the meta xml file and the customer with the `customer1` ID is configured under `parties` in the chtx file.

#### Example 2: 3 parties - agent, supervisor and customer

In this scenario there are two options. You can configure the supervisor as a speaker (the common scenario) or as the party in the chat. When configured as the party a link to an agent or work group is not possible.

**Option 1: Supervisor as a speaker - Meta XML File**

```
<?xml version="1.0" encoding="us-ascii" ?>
<callInformation>
 <mediaType>Chat</mediaType>
 <textFormat>XML</textFormat>
 <textTime>2014-01-07T10:54:04</textTime>
 <programID>english</programID>
 <speakers>
  <speaker id="ag1" speakerType="agent">
  <workgroup>/W1/W2</workgroup>
  </speaker>
  <speaker id="sup1" speakerType="supervisor">
  <workgroup>/W1/Sup1</workgroup>
  </speaker>
 </speakers>
</callInformation>
```

### Option 1: Supervisor as a speaker - CHTX File

```
<?xml version="1.0" encoding="us-ascii"?>
<chat>
 <parties>
  <party partyId="customer1" partyType="customer" />
 </parties>
 <subject>Billing issue</subject>
 <message time="2013-04-18T12:10:42" partyId="ag1"
   displayName="Agent 1"> How can I help you today?
 </message>
 <message time="2013-04-18T12:10:51" partyId="customer1"
   displayName="Customer 1"> I want to change my billing address
 </message>
 <message time="2013-04-18T12:10:58" partyId="ag1"
   displayName="Agent 1"> May I have your account number please?
 </message>
 <message time="2013-04-18T12:11:02" partyId="customer1"
   displayName="Customer 1"> I want to talk to supervisor!
 </message>
 <message time="2013-04-18T12:11:03" partyId="sup1"
   displayName="Supervisor A"> I'm the supervisor, how can I help
you?
 </message>
</chat>
```

### Option 2: Supervisor is not a speaker - Meta XML File

```
<?xml version="1.0" encoding="us-ascii" ?>
<callInformation>
 <mediaType>Chat</mediaType>
 <textFormat>XML</textFormat>
 <textTime>2014-01-07T10:54:04</textTime>
 <programID>english</programID>
 <speakers>
  <speaker id="ag1" speakerType="agent">
   <workgroup>/W1/W2</workgroup>
  </speaker>
 </speakers>
</callInformation>
```

### Option 2: Supervisor is not a speaker - CHTX File

```
<?xml version="1.0" encoding="us-ascii"?>
<chat>
 <parties>
   <party partyId="customer1" partyType="customer" />
   <party partyId="sup1" partyType="supervisor" />
 </parties>
 <subject>Billing issue</subject>
 <message time="2013-04-18T12:10:42" partyId="ag1"
   displayName="Agent 1"> How can I help you today?
 </message>
 <message time="2013-04-18T12:10:51" partyId="customer1"
   displayName="Customer 1"> I want to change my billing address
 </message>
 <message time="2013-04-18T12:10:58" partyId="ag1"
   displayName="Agent 1"> May I have your account number please?
 </message>
 <message time="2013-04-18T12:11:02" partyId="customer1"
   displayName="Customer 1"> I want to talk to supervisor!
 </message>
 <message time="2013-04-18T12:11:03" partyId="sup1"
   displayName="Supervisor A"> I'm the supervisor, how can I help
you?
 </message>
</chat>
```