

# Installation V8.1

## Required SW/HW for SpeechMiner

### Database

- Microsoft SQL Server 2008 with Reporting Services (Enterprise edition recommended for large installations) (SP1 or above)
- Microsoft SQL Server 2012 with Reporting Services.

### OS

- Servers (DB, Platform and Web): Windows Server 2008 R2 64 bit edition and Windows Server 2012.
- SMART clients: Windows 7 and Windows 8 Professional editions, in addition to Windows Server 2008 R2 64 bit edition and Windows Server 2012.
- SpeechMiner Users (web access): Windows XP Professional (SP3 or above), Windows Vista Business 32 bit , Windows 7 Professional 32 bit, Windows 8 Professional edition, Windows Server 2003, Windows Server 2008, Windows Server 2008 R2 and Windows Server 2012.

### Browser

For all browsers SpeechMiner application does not require JAVA, .NET framework or ActiveX.

- Internet Explorer (IE) 8
- Internet Explorer (IE) 9
- Internet Explorer (IE) 10

### Memory (RAM)

- DB Server: 4GB - 32GB
- Web Server: 4GB
- SMART client: 1 GB/2 GB Minimum/Recommended
- Platform server: 4GB-8GB (1GB per recognizer task as a rule of thumb)

### General

- SMTP support: SMTP server with permissions to send emails (used for emailing reports to SpeechMiner users)
- Microsoft .NET Framework 3.5 SP1

## What is installed

On all Platform servers

- UPlatform service - 20MB disk space for entire runtime folder (+ ~10 GB for recognition packages caching. depends on implementation size)
- On the Recognition server(s) - Recognition Engine ~1GB disk space

On the DB server

- MS-SQL 2005/2008 Server (normally installed beforehand). **Must include MS Reporting Services**
- SpeechMiner Database – initial size is about 20 GB, It may grow depending on call volume and call purging policy.
- SpeechMiner Index - Initial size is about 20 GB, It may grow depending on call volume and call purging policy
- UConnector service - 20MB disk space for entire runtime folder. To integrate with recording systems with very high call volume, a larger (10-200GB) storage area is needed for temporary files, or in some cases a separate server.

On the Web server

- SpeechMiner virtual folder - 20MB (+ space for cached reports and call audio, depending on user activity)

On a user machine running SMART

- Recognition engine - 1GB disk space
- SMART executable and runtime files (.dlls)

## Required Credentials and Permissions

- Functional ID (domain user) with Power Users (and Performance Monitor Users, where applicable) privileges on the machines running

SpeechMiner (UPlatform.exe). This user is used as the credentials for the registered SpeechMiner service. (SMUSER)

- Add SMUSER to "Power Users" group and "Performance Monitor Users" group, if it exists (on each computer)
- Give SMUSER "modify" permissions on (Security tab of a folders properties)
  - UTOPI installation folder (c:\utopy) (where UTOPI installation exists)
  - Utopy data folders (e.g. C:\data) (where data\input and data\filtered exist)
  - Give impersonation user that specified in web.config file read/write permission on C:\utopy\Software\utopy\product\WEBApp\_Data folder
- On data folder: in the sharing tab - > permissions - > add SMUSER with "change" permissions
- Add SMUSER as "content manager" in the reporting server (//webhost/reports properties)
- Give access permissions to SMUSER to the IIS metabase and other directories used by ASP.NET. To do this, an administrator can run:

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

- Functional ID UConnector
  - Have read permissions on the recording system shared folder (Note: it is possible to use SMUSER, no need for dedicated domain user).
  - Have read/write permissions to SpeechMiner data\input folder
- SMART Users (Any user that will run SMART)
  - Read/write access to UTOPI installation folder (c:\utopy)
  - Read/Write access to the "Package Root Path" (see SMConfig documentation)
  - Read/Write access to the Nuance installation folder, for ex: C:\Program Files\Nuance
  - Permission to use .net encryption. To add this, an administrator can run:

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

## Ports Used by SpeechMiner Components

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

### Ports and Protocols required for SpeechMiner UConnector

SpeechMiner UConnector requires access to the recording system database and file storage system.

Access to the database is done using TCP protocol using port 1433 (port number can be configured on the database server).

Access to the file storage system is done using SMB over TCP protocol using port 445. Other protocols can be used as well, if it is available by the underlying Storage file system.

## Installation files Check List

Provided by customer

- Windows Installation Media
- Microsoft SQL Server Installation Media

#### Provided by UTOPY

- SpeechMiner setup
- Licenses



Compare existing hardware to the original hardware specifications

## Prerequisites

1. **Space check**  
Make sure there is more than 2 GB of free disk space on the hard drive where you are planning to install.
2. **OS Check**  
Verify that all machines have supported operating system.
3. **Machines connectivity & admin user**  
Verify all machines are functional and connected to the network and that the installing user account is an administrator on all of them.
4. **Adding operational windows user to Power User group**  
Add the designated windows user (operational user) that will run the SpeechMiner services to the Power Users group of all machines.
5. **.NET Framework**  
Install on all machines Microsoft .NET Framework 3.5 SP1 (can be downloaded directly from MS at <http://download.microsoft.com/download/2/0/e/20e90413-712f-438c-988e-fdaa79a8ac3d/dotnetfx35.exe>).



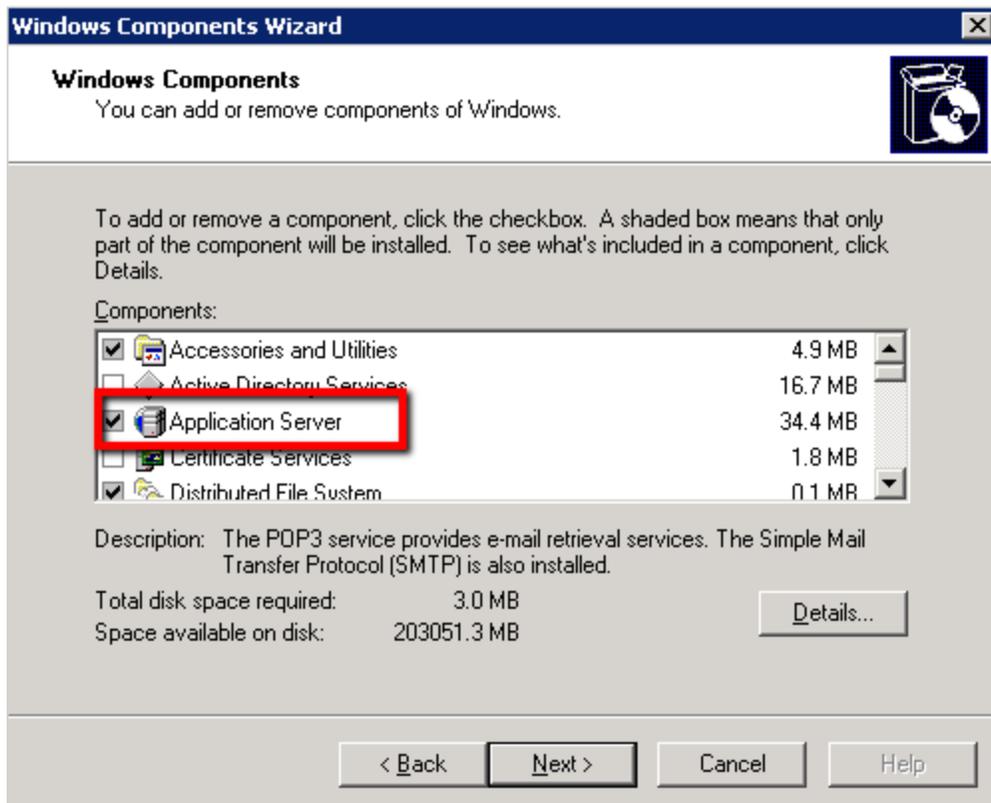
#### Windows Server 2008 R2

In Windows Server 2008 R2, the .NET Framework is a feature and installing it is different than on older versions of the Windows Operating System. In previous versions, one could either download the .NET Framework 3.5.1 install binaries from the link above. Starting with Windows Server 2008 R2, the method of installing .NET Framework 3.5.1 has changed. Follow this link <http://support.microsoft.com/kb/2027770> for explanation how to verify that .NET Framework 3.5.1 is installed and if it is not installed how you can add it.

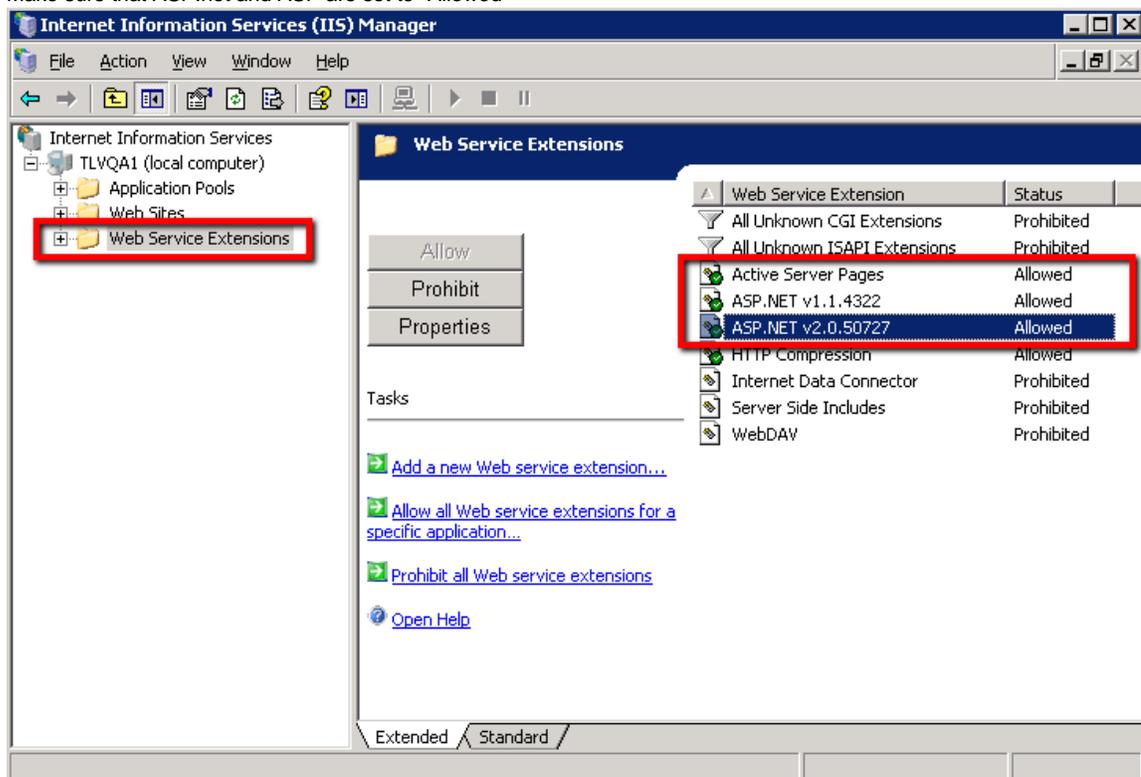
6. **SQL Server installation**  
Microsoft SQL Server 2005 with Reporting Services (follow instructions at SQL2005 Server Installation and Configuration for SpeechMiner) or Microsoft SQL Server 2008 with Reporting Services (follow instructions at SQL2008 Server Installation and Configuration for SpeechMiner)
7. **IIS configuration on Web app machine**  
Make sure Internet Information Server component is installed and operational. Make sure you complete all the following steps:

#### Windows Server 2003:

- a. In Control Panel open Add or Remove Programs
- b. Click on Add/Remove Windows Components

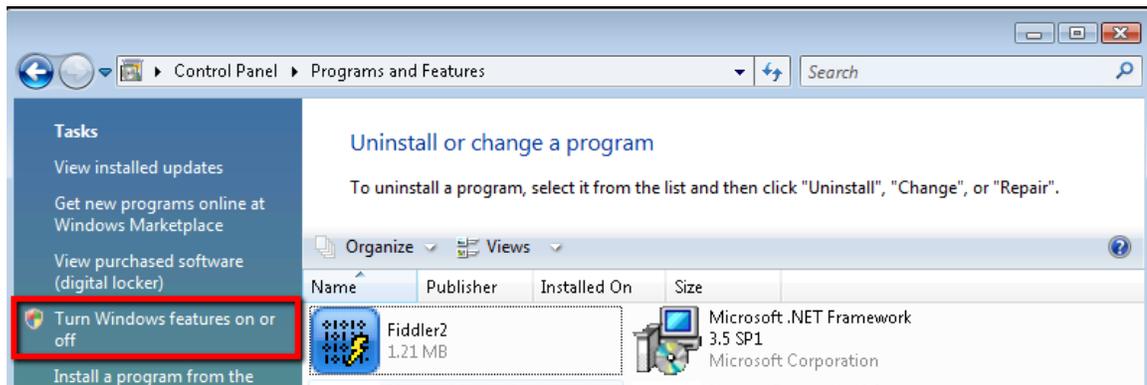


- c. Click Next and Finish to complete the installation
- d. When the installation is completed open Internet Information Services Manager (Start -> Run and type inetmgr)
- e. Click on Web Service Extensions
- f. Make sure that ASP.net and ASP are set to "Allowed"

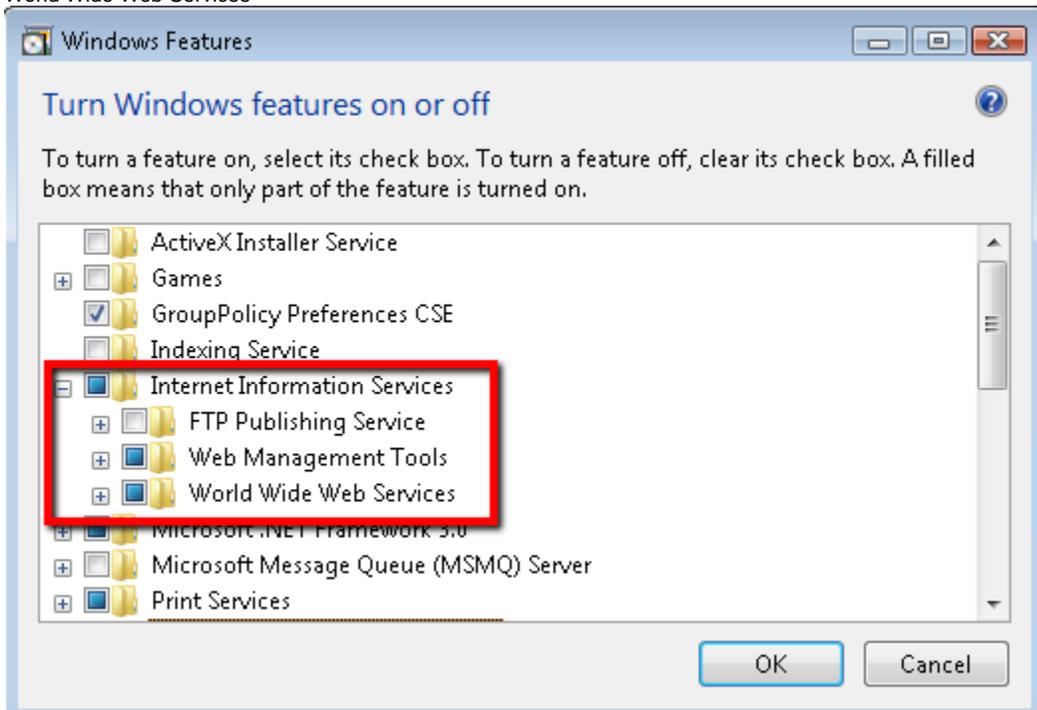


**Windows Vista & Windows 7:**

- a. In Control Panel click on Programs and click on Turn Windows features on or off. If the User Access Control dialog appears click Continue



- b. Expand Internet Information Services, make sure that the following items are selected:
  - Web Management Tools
  - World Wide Web Services

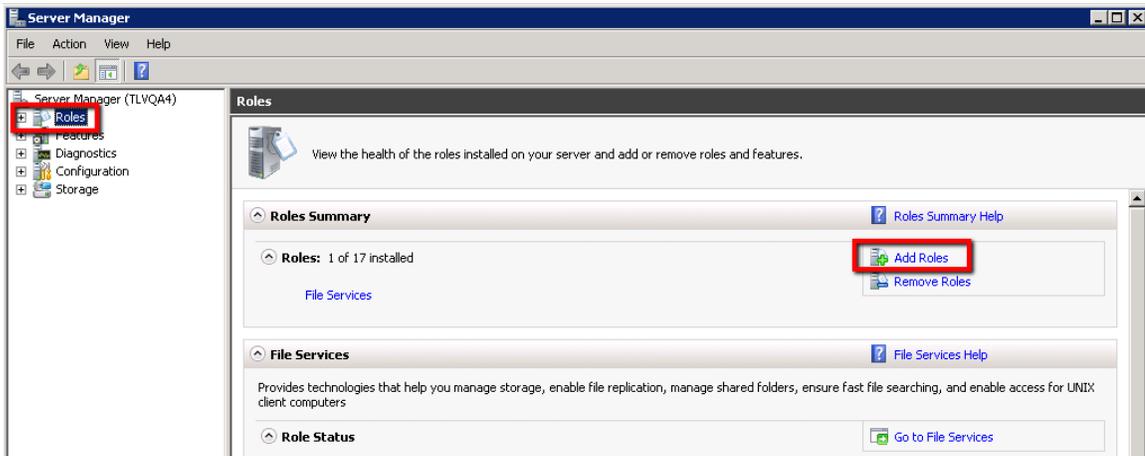


- c. Expand World Wide Web Services, make sure that the following items are selected:
  - i. Under Common HTTP Features:
    - Static Content
    - Default Document
    - Directory Browsing
    - HTTP Errors
    - HTTP Redirection
  - ii. Under Application Development Features:
    - ASP.NET
    - ISAPI Extensions
    - ISAPI Filters
  - iii. Under Security:
    - Windows Authentication
- d. Expand Web Management Tools, expand IIS 6 Management Compatibility, make sure that the following items are selected:
  - IIS 6 WMI Compatibility
  - IIS Metabase and IIS 6 configuration compatibility
- In IIS 8 installation (server 2012) IIS management console should be added as well.

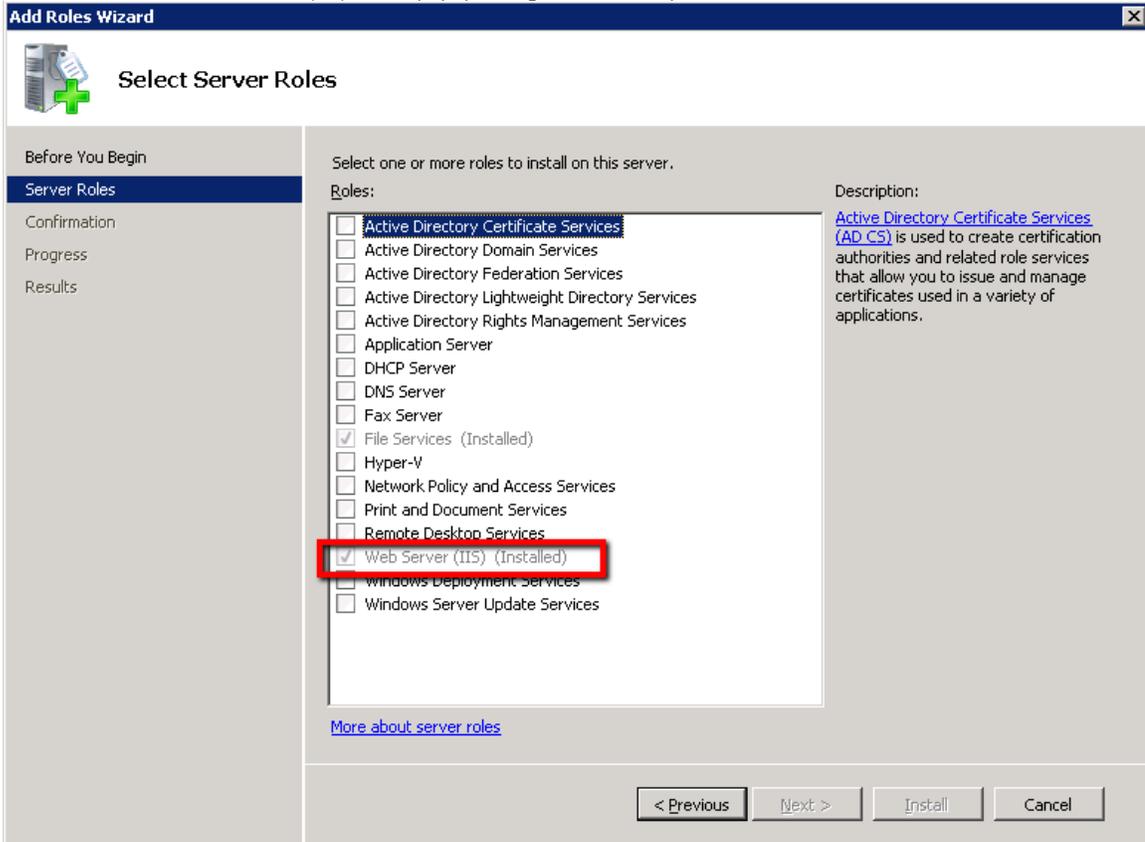
Click OK to complete the installation

**Windows Server 2008:**

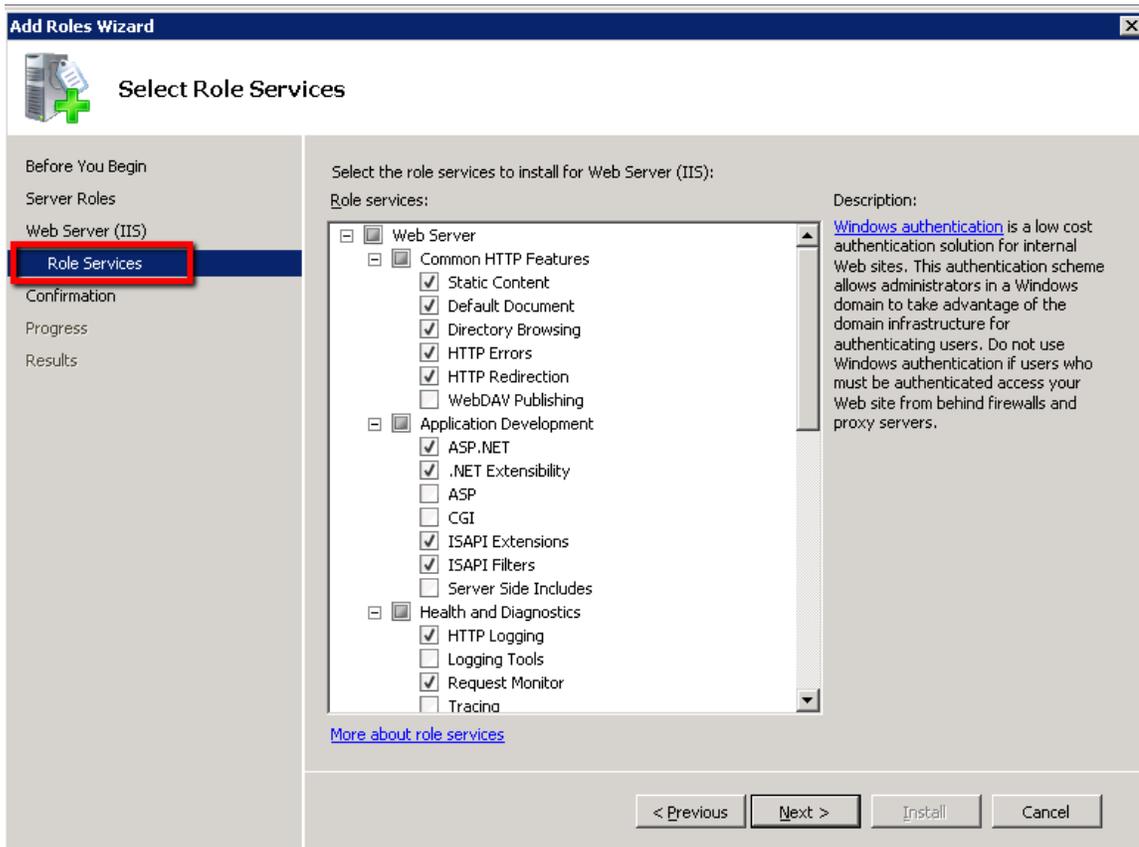
- a. Click Start Menu -> All Programs -> Administrative Tools -> Server Manager.
- b. Select Roles and click on Add Roles



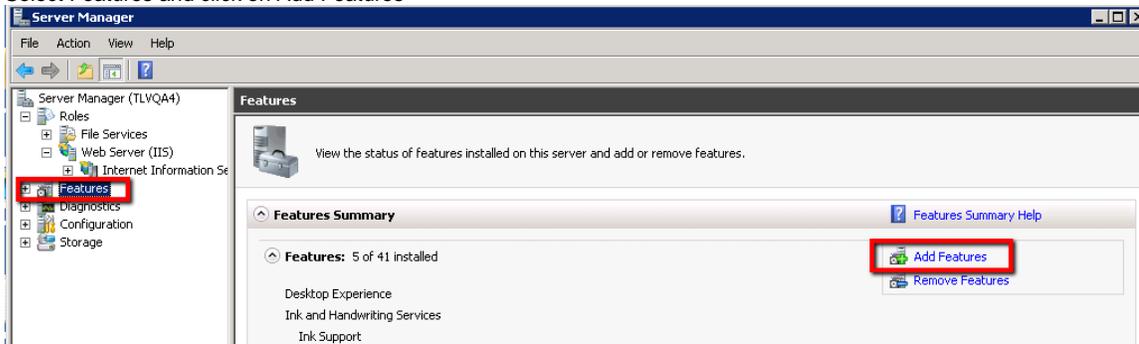
c. In the wizard select Web Server (IIS), in the popup dialog click Add Required Role Services



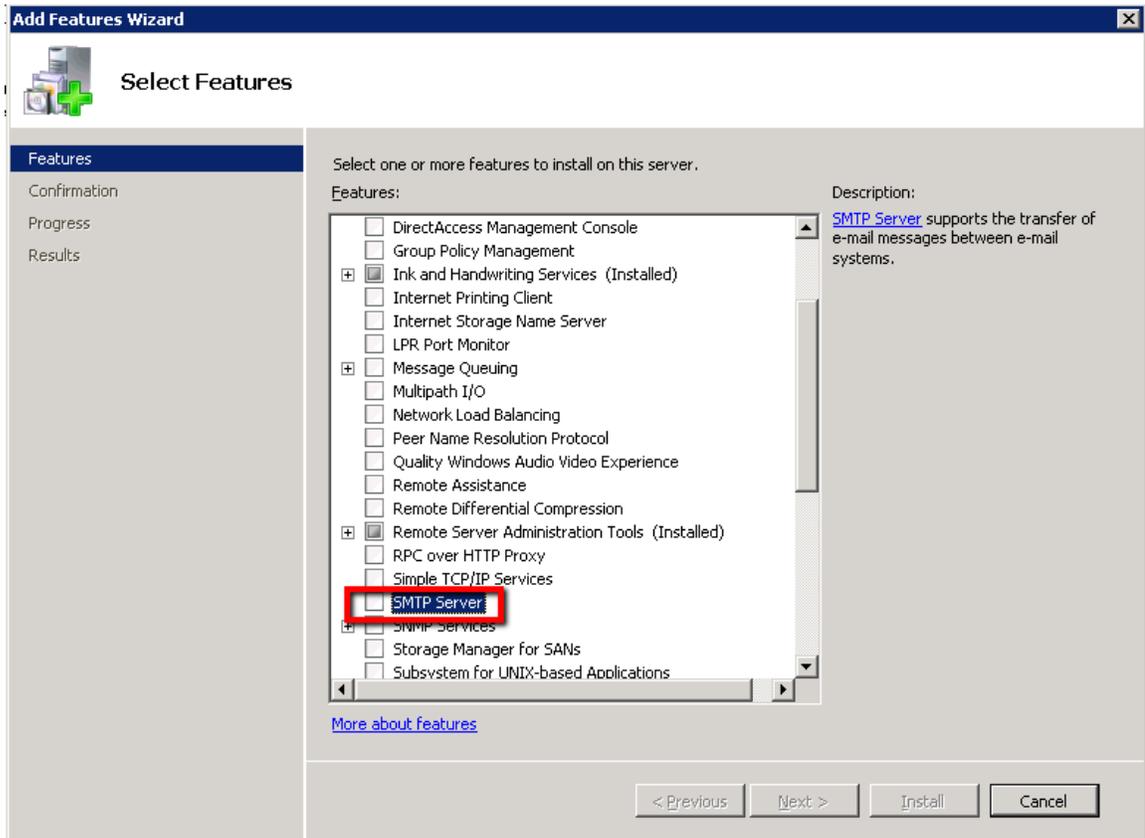
d. Click Role Services or in Server Manager -> Roles : right click on Web Server (IIS) and select Add Role Services



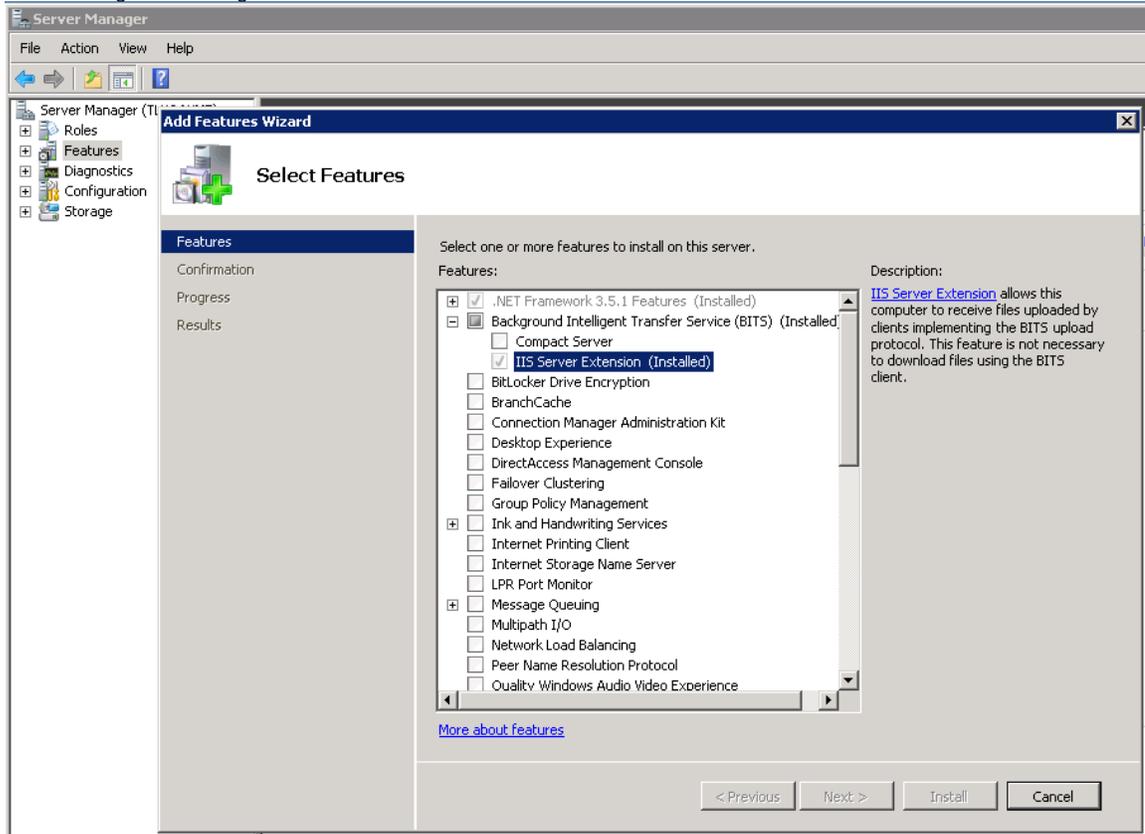
- e. Make sure that the following items are selected:
  - i. Under Common HTTP Features:
    - Static Content
    - Default Document
    - Directory Browsing
    - HTTP Errors
    - HTTP Redirection
  - ii. Under Application Development:
    - ASP.NET
    - ISAPI Extensions
    - ISAPI Filters
  - iii. Under IIS 6 management computability :
    - IIS 6 WMI Compatibility
    - IIS 6 Metabase compatibility
  - iv. Under Security:
    - Windows Authentication
- f. Click Next and Install. When the installation is completed close the wizard
- g. Select Features and click on Add Features



- h. Select SMTP Server



i. Under Background Intelligent Transfer Service Select IIS Server Extension



j. In the popup dialog click Add Required Role Services



k. Click Next, Next, Next and Install

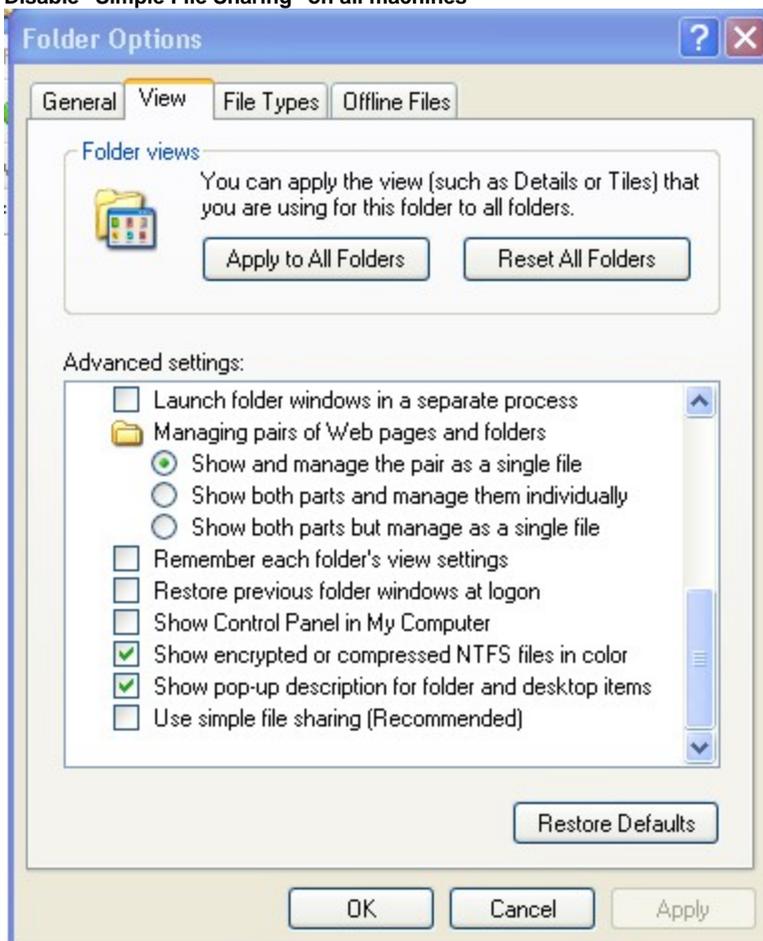
**General:**

- a. Give "Modify" permissions to the domain user that SpeechMiner will impersonate on this folder:  
C:\<Windows>\Microsoft.NET\Framework\v2.0.50727\Temporary ASP.NET Files
- b. Make sure the application pool uses v2.0 of the .Net framework, and not a later version.

**8. Report Viewer Installation**

If you are going to use the Report Caching feature, you need to install Report Viewer 2005 on your Web machine.

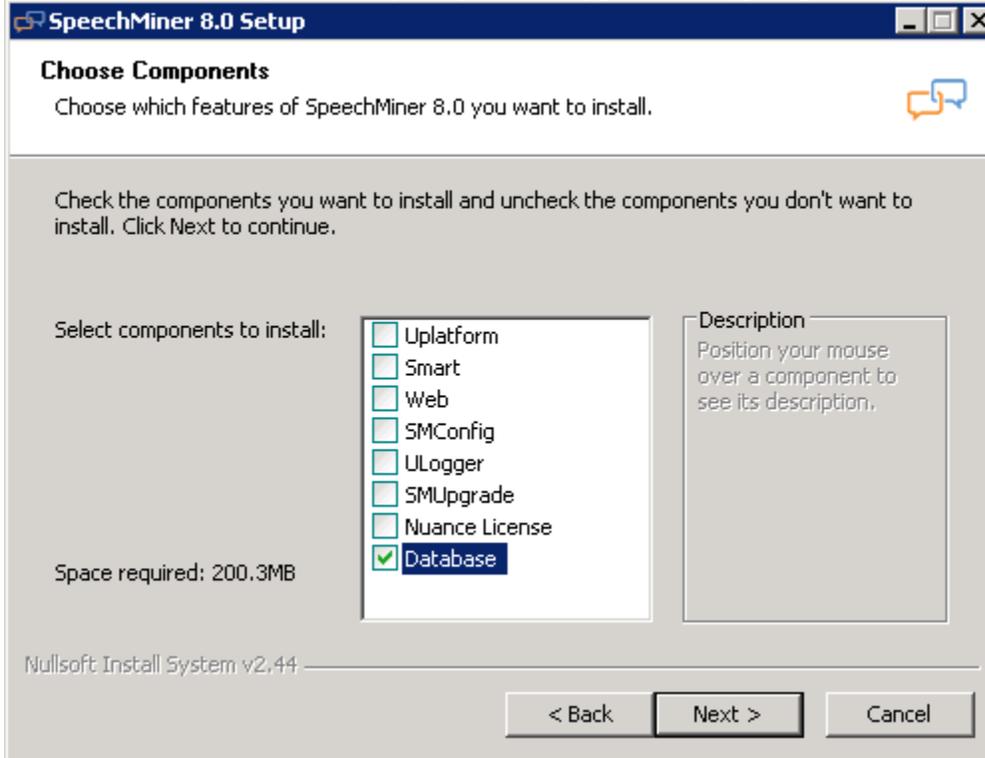
**9. Disable "Simple File Sharing" on all machines**



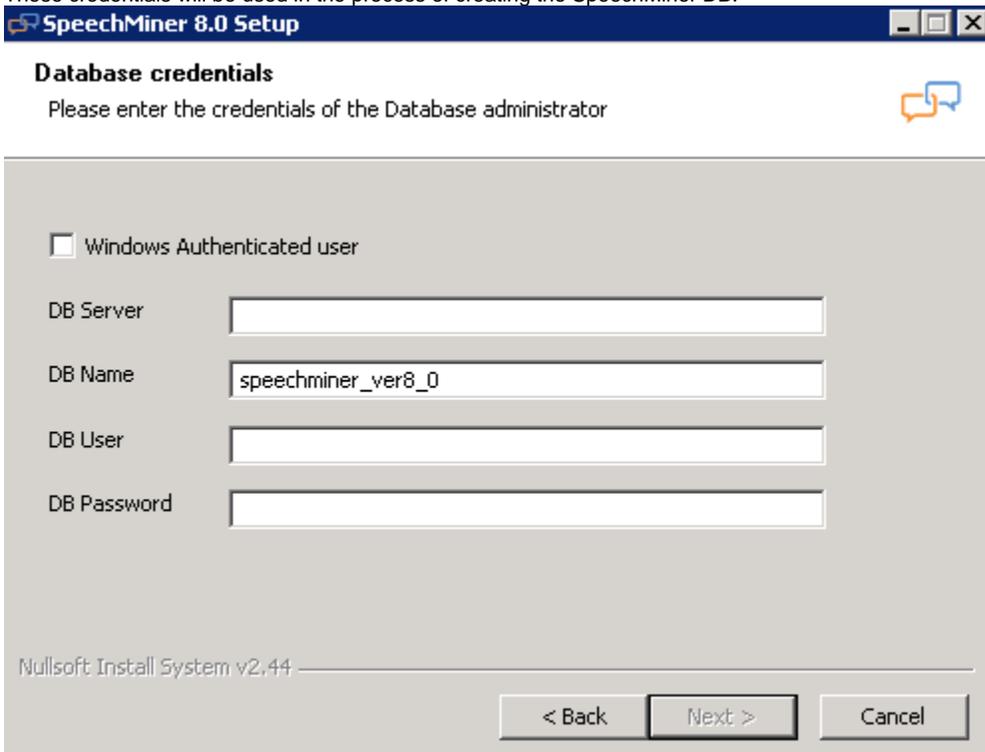
10. **Audio capabilities** - Users of the SpeechMiner web application must have a functioning audio device on their desktop and Windows Media Player version 10 or 11 installed.

## DB Server Installation

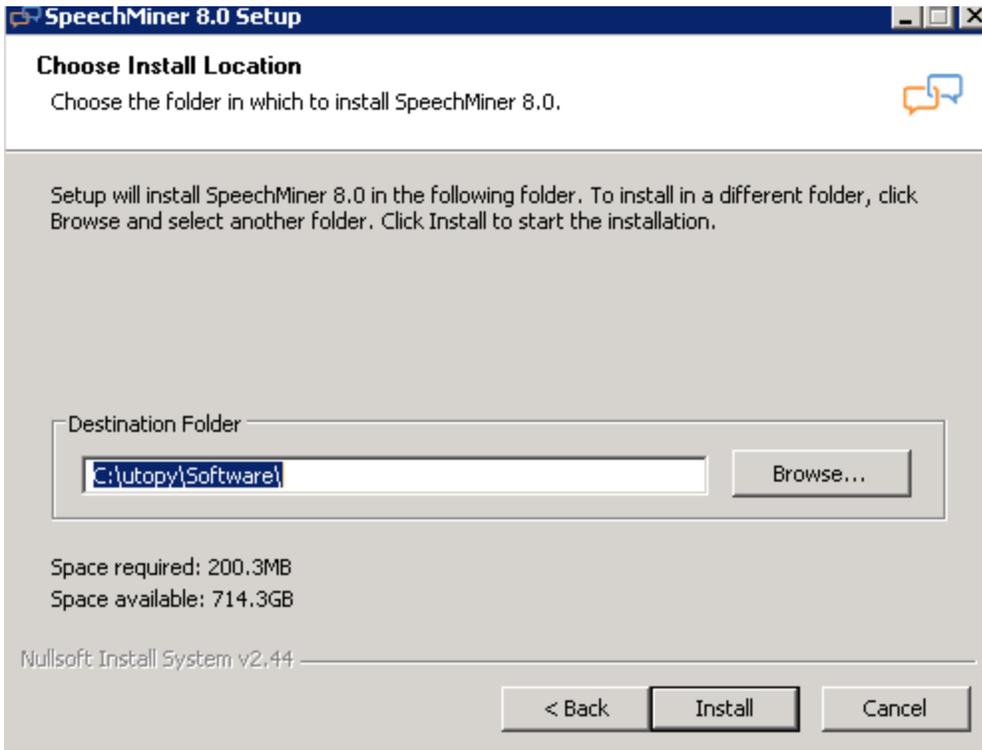
1. Run **SpeechMiner setup on DB Server machine**
2. Select **Database** in the component list. Optionally select **SMUpgrade** when upgrading from a SpeechMiner 6.0 version.



3. Use **SA** credentials in the **Database credentials** dialog. Database name should be `speechminer_verX_Y` (i.e. `speechMiner_ver7_3`). These credentials will be used in the process of creating the SpeechMiner DB.



4. In **Choose Install Location** dialog, it is recommended to select `<DRIVE>:\Utopy\software` (default value)



 After the DB Server installation check that `speechminer_verX_Y` database is present. This can be done by opening SQL Server Management Studio and reviewing the list of databases on the server

 An alternative way to perform DB installation is to use `data_ver8_0_sql2005.bak` (a SQL backup file) deployed in `C:\utopy\Software\Support` during any regular server install. You should restore this backup on the SQL server and choose settings based on the setting in the steps above.  
In addition you should 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'`

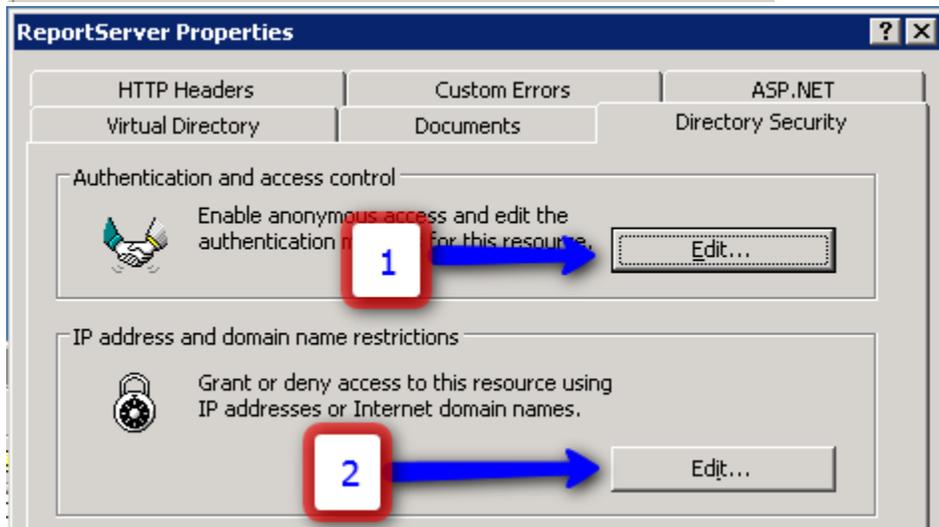
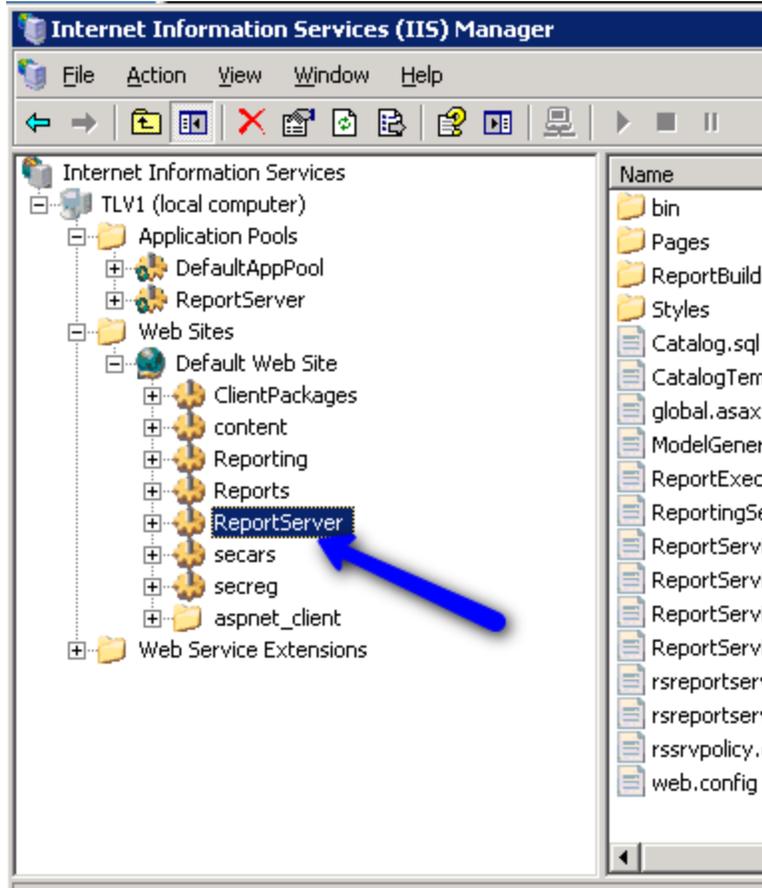
#### 5. Manual steps:

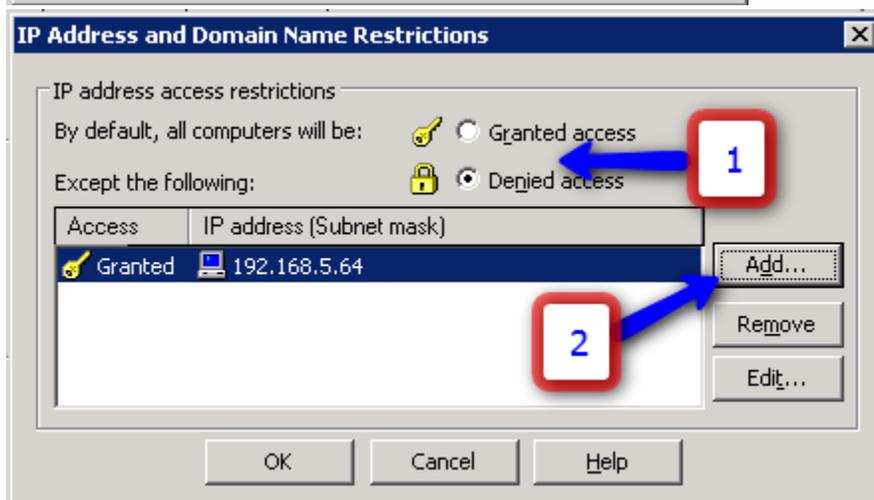
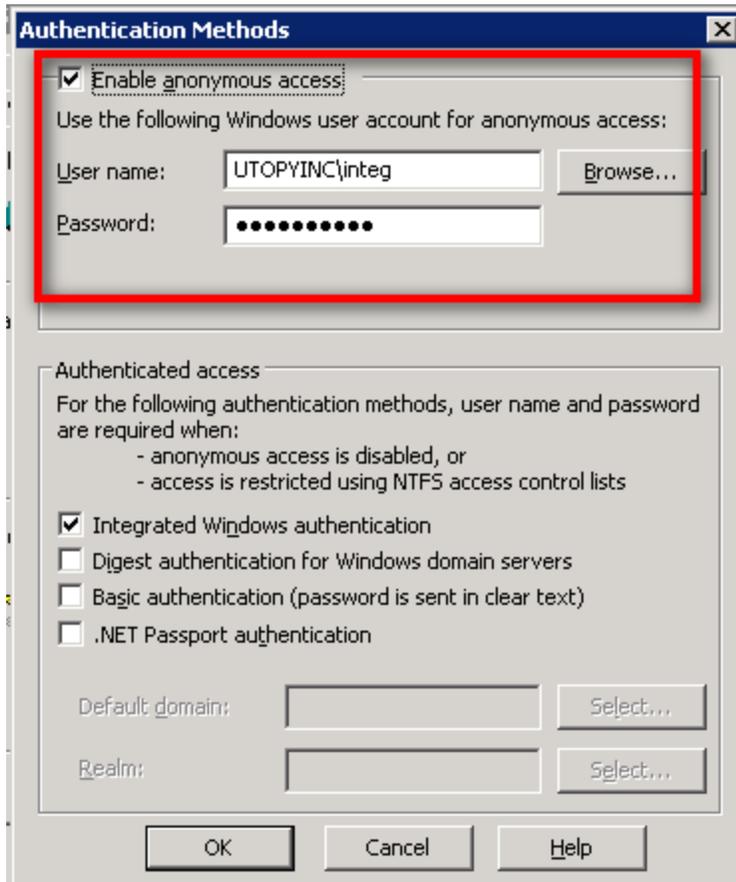
- a. Run `SMConfig` and deploy the `MRSLibrary` and the reports (see `SpeechMiner Configuration V8.0`)
- b. If you need alternative call queue management, replace `sp_GetNextCallFromQ` with `sp_GetNextCallFromQ_alternative`. (This is an advanced setting. If you don't know that you need this, just ignore this step).
- c. If the DB server is an Enterprise Edition, run `"EXEC sp_create_DB_storage_partitions"`.
- d. Review and modify the DB job for maintenance, and schedule it to run on a regular basis. The job is created by the installer when a database is created. The job's name is `SpeechMiner_Maintenance_job - <database>`. The job may include (optional) the **`updateUntilYesterdayMaxChannels`** and **`sp_agentFilterCleanByDays`**. In addition, any procedure to rebuild indexes and purge old calls should be added as a step to this job. This job should run daily or weekly at a predefined time window when call volume is as low as possible. If information about the agents and their hierarchy is not available through the `UConnector`, you may include in this job **`sp_createAgentsFromPartitions`**.

 In order to allow the `'updateUntilYesterdayMaxChannels'` job to run, you need to insert `sa` credentials into the Owner field. Click on SQL Server Agent -> Jobs. Double click on `'updateUntilYesterdayMaxChannels'` job. The Properties window will pop up. Under the General section there is an Owner field. If the entry is `'dbuser'` change it to be `'sa'`. Click OK to submit the change.

 The database contains a stored procedure that creates such a maintenance job. You can review it and use it as a base for your job.

- e. To boost the performance of the reports rendering in the web server, allow anonymous access to the `ReportServer` virtual directory. For security reasons grant access only from the web server(s) IP address(es). See below for specific configuration.
  - i. Right click the `"ReportServer"` virtual directory, and select `"Properties"`





- f. In order to deploy the SQLCLR please set the permissions of the XmlSerializers.dll. Under Master DB run the following commands ( after copying sqlclr.XmlSerializers.dll from the InstallFolder\support files to a new folder - sqlclrDeploy and changing DB\_SERVER in the first command to be the name of the dvserver)

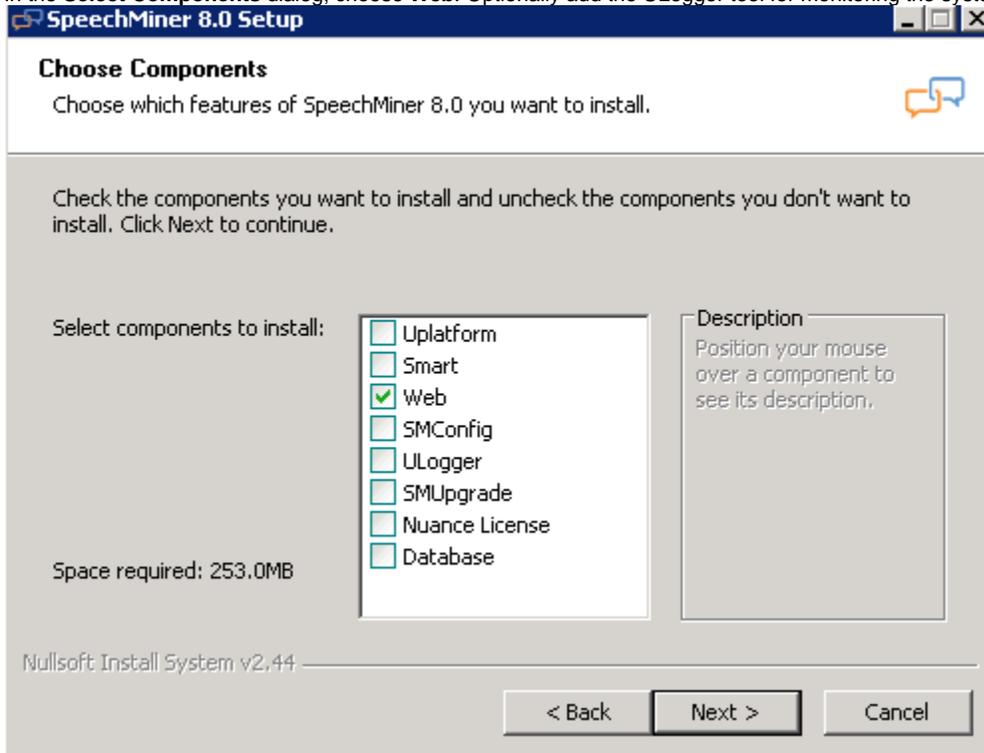
```

use [master]
CREATE ASYMMETRIC KEY SQLCLRTestKey FROM EXECUTABLE FILE =
'\\DB_SERVER\C$\sqlclrDeploy\sqlclr.XmlSerializers.dll'
go
use [master]
CREATE LOGIN SQLCLRTestLogin FROM ASYMMETRIC KEY SQLCLRTestKey
go
use [master]
GRANT EXTERNAL ACCESS ASSEMBLY TO SQLCLRTestLogin
    
```

## Web Server Installation

**SQL Requirement for Web Server** - Make sure the system on which you plan to install the Web Server has either SQL Server Client or SQL Server Database Server installed (not required if DB Server and Web Server are the same machine).

1. Run SpeechMiner setup
2. In the **Select Components** dialog, choose **Web**. Optionally add the ULogger tool for monitoring the system log.

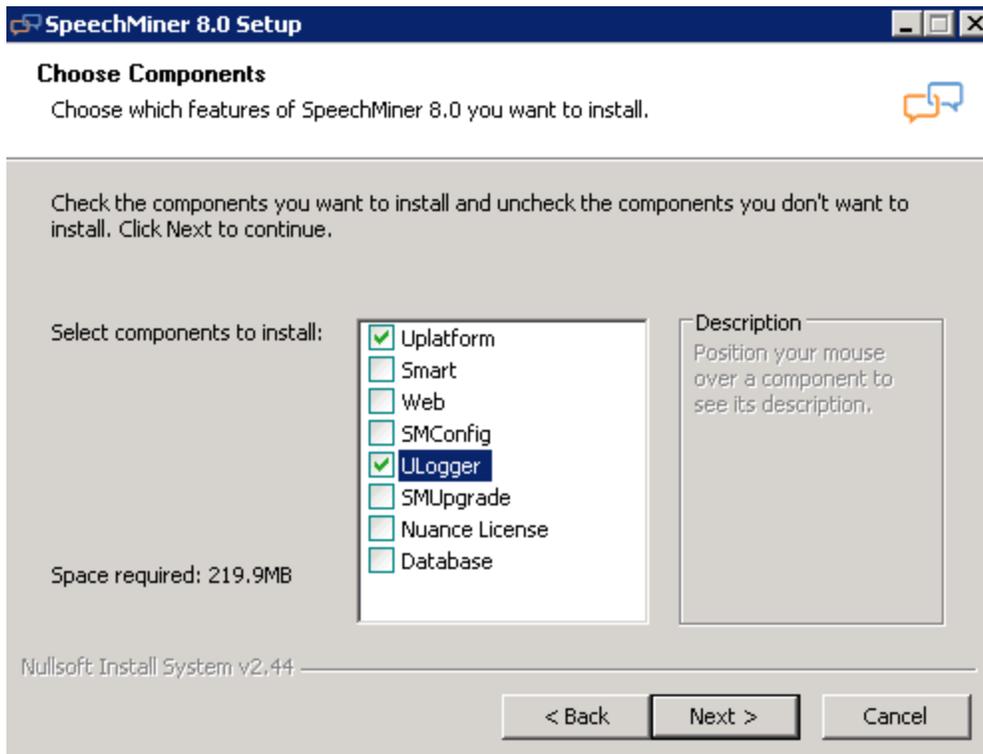


3. In "Choose Destination Location" it is recommended to select <DRIVE>:\Utopy\software (default value)
4. Select DB credentials for the configuration files.
5. After installation is done set the following permissions:
  - Set read/write/modify permissions to the IIS user/group (IUSR\_XXX in Windows XP or Network Service group in Windows Server 2003 and above) and the operational domain user (SMUSER) on the SpeechMiner installation folder.
  - Set read/write/modify permissions to the IIS user/group (IUSR\_XXX in Windows XP or Network Service group in Windows Server 2003 and above) on the windows temp folder.

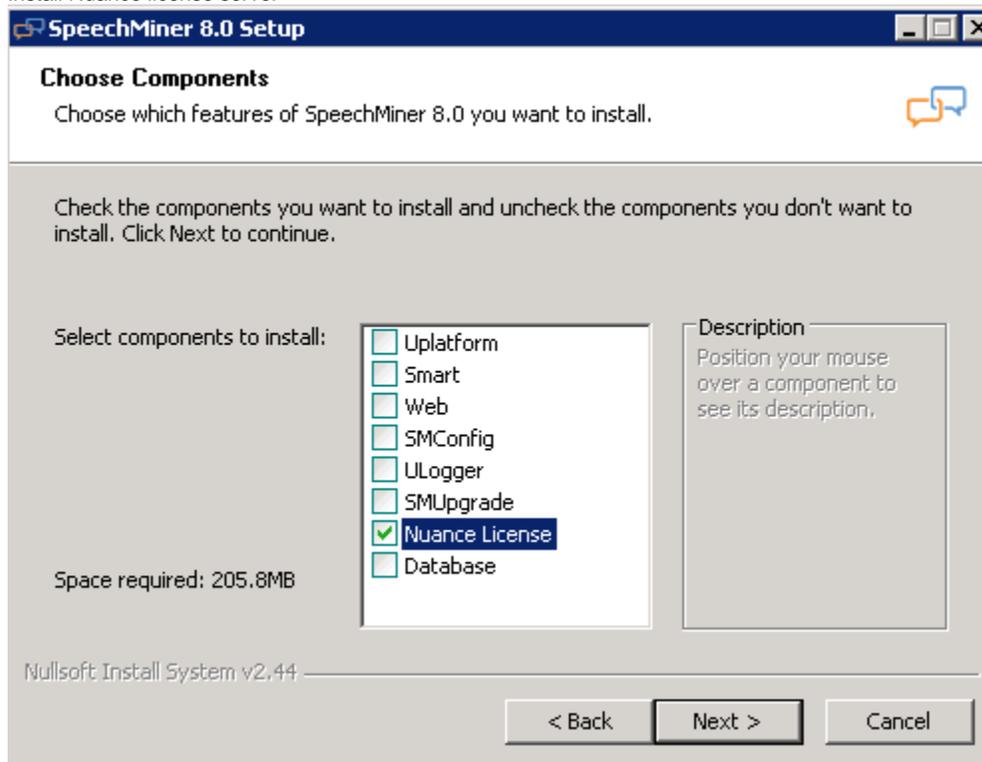
 Recommended: Enable [HTTP Compression](#) on the IIS server

## Platform Server Installation

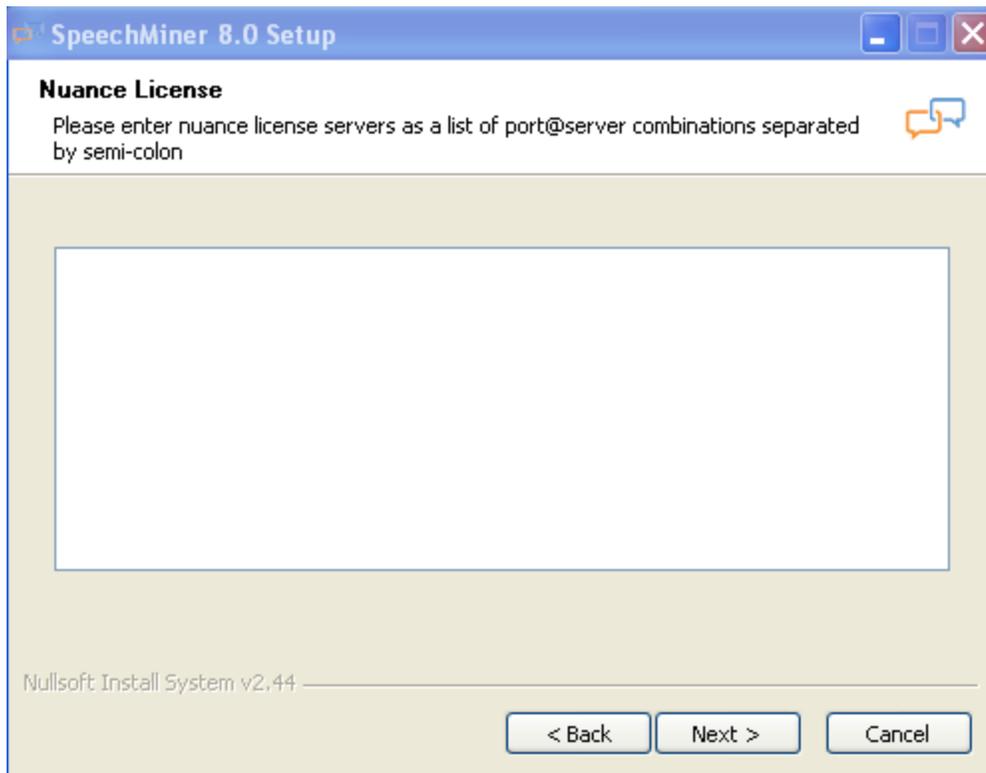
1. On the **Choose Components** dialog, choose **UPlatform** and **ULogger**.



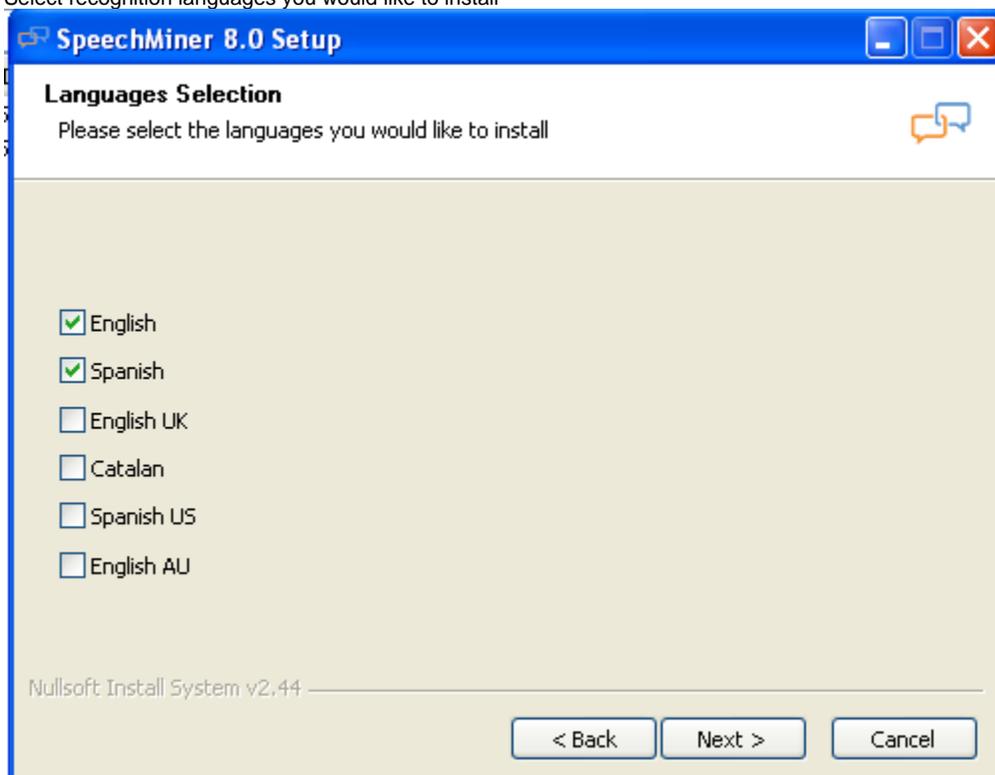
1. In "Choose Destination Location" it is recommended to select <DRIVE>:\Utopy\software (default value)
2. You should either install Nuance license server or enter the name of an existing server:
  - a. Install Nuance license server



- b. Enter the information of an existing Nuance license server



3. Select recognition languages you would like to install



1. Manual steps

- a. Create the input, store, filtered, and grammar shared folders. Note - all SpeechMiner machines should have access to these shared folders.
- b. Consult with <http://support.microsoft.com/kb/895980/> if you have AMD based servers, in case you need to install some updates.
- c. Optional: turn off error reporting (<http://support.microsoft.com/kb/310414>) :

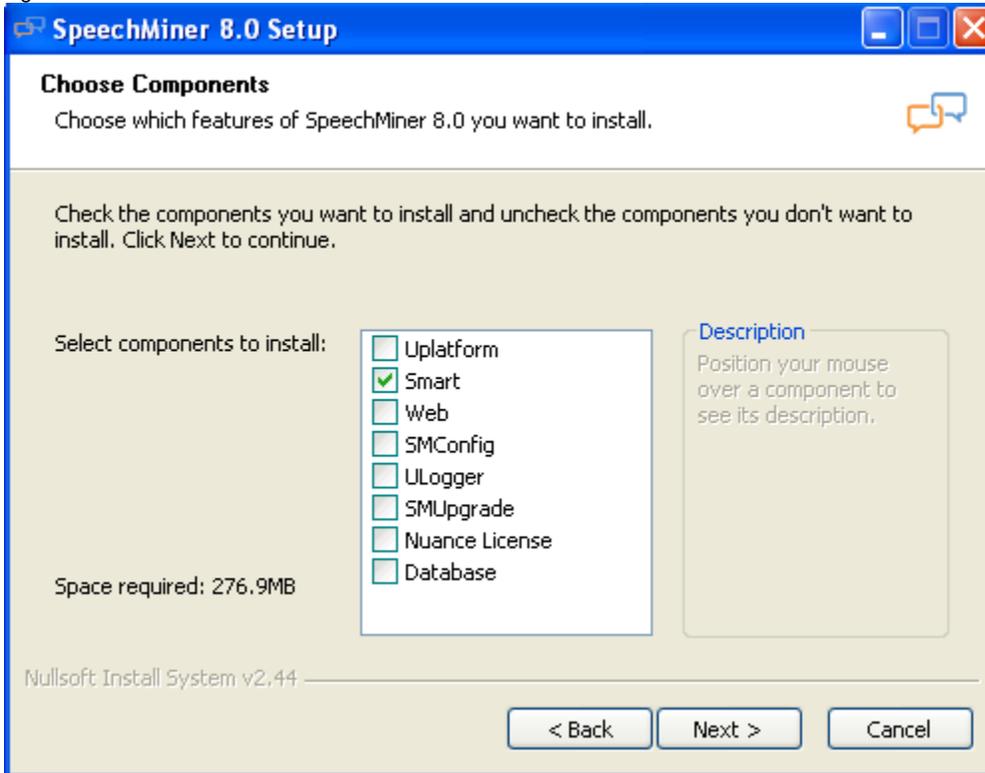
To access the settings for the reporting feature:

1. Click Start.

2. Right-click My Computer, then click Properties.
3. Click the Advanced tab.
4. Click Error Reporting.

## SMART Installation (user desktop)

1. Install the .NET 3.5 Framework (with SP1)
2. Run SpeechMiner setup. In the **Select Components** dialog, choose **Smart**. Optionally add the ULogger tool for monitoring the system log.



3. Select destination folder (Leave default if not sure)
4. Restart computer

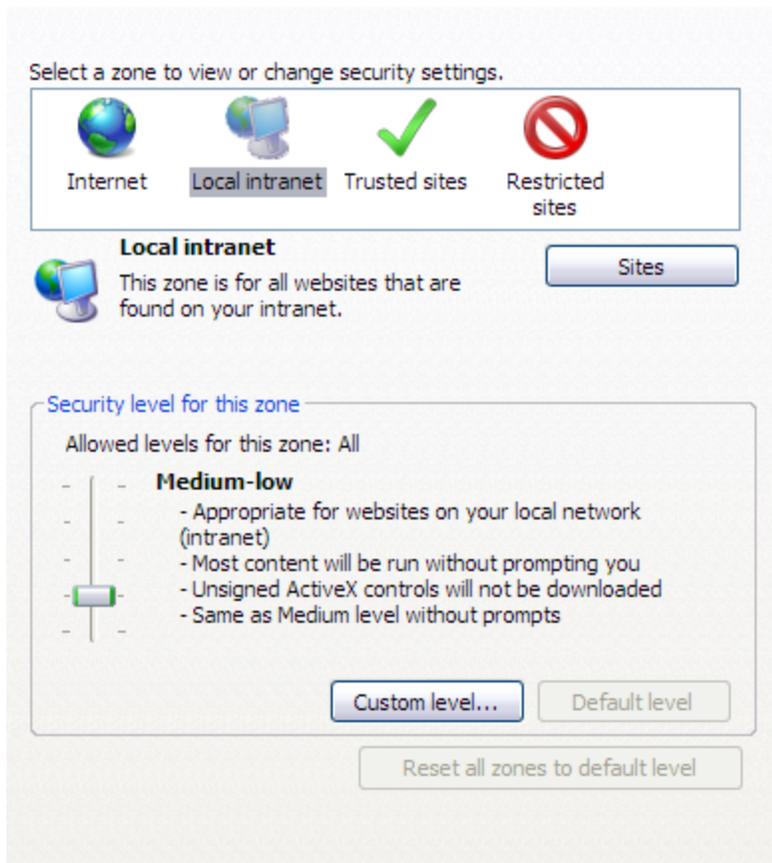
## User Desktop (IE Settings)



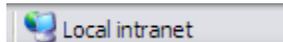
On the end user's desktop, the Internet Explorer has to be set with to following for the SpeechMiner domain:

- Allow popups
- Set as "Trusted Sites" zone or as "Local Intranet" as explained below

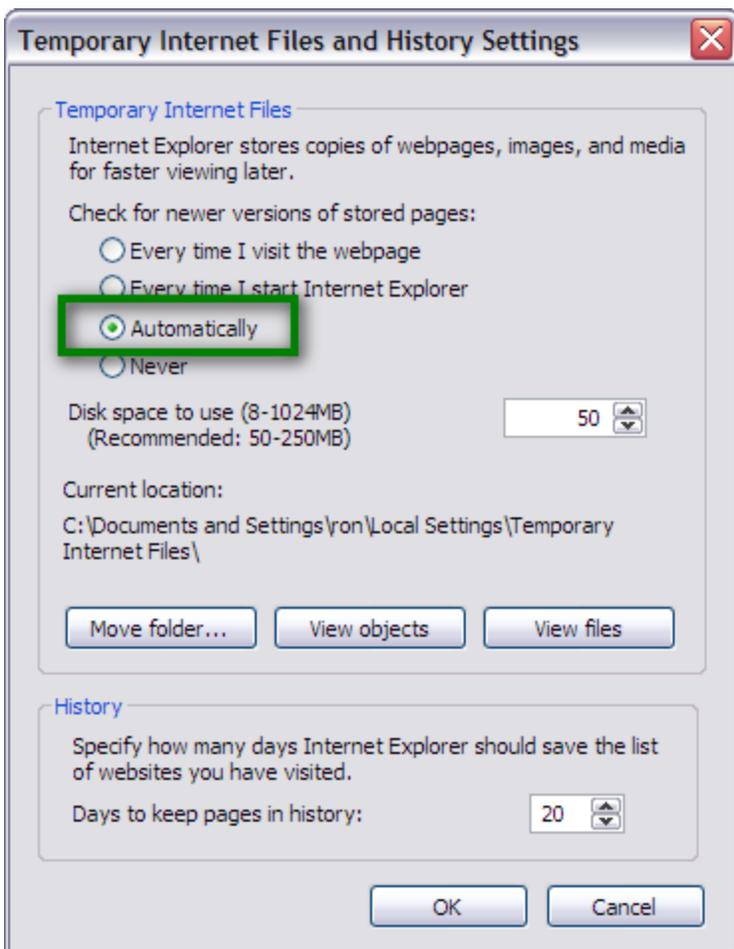
\* Set the SpeechMiner domain as a "Local Intranet" browser zone. This is done in the security panel of the IE settings dialog.



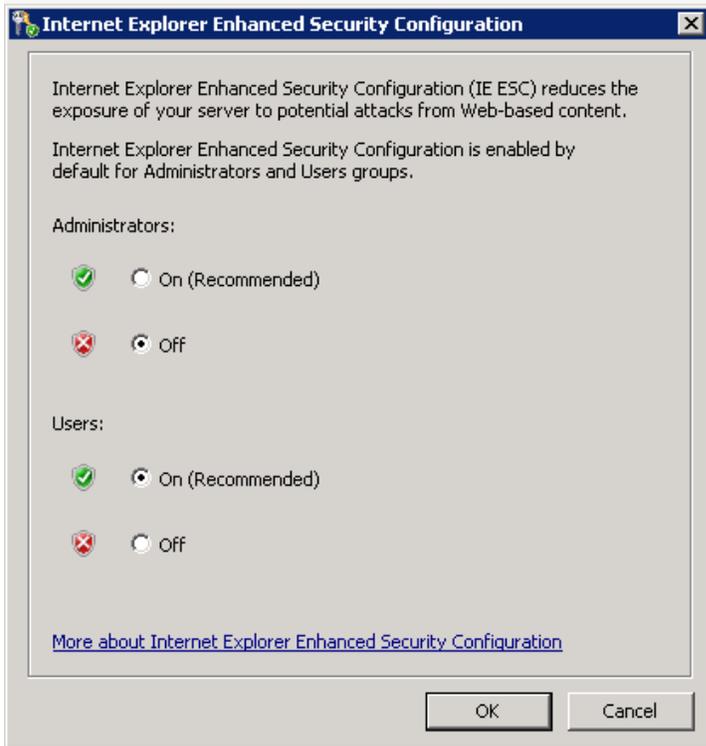
The bottom toolbar of IE should say "Local Intranet" when browsing the SpeechMiner application pages.



- Set the caching setting, under "check for newer versions of stored pages" to "Automatically".



- Disable Internet Explorer Enhanced Security Configuration.  
On 2008 servers: **Server Manager** main page , **Security Information, Configure IE ESC**, click to set the options to **Off**.



- Change System Properties
- View Network Connections
- Configure Remote Desktop
- Configure Server Manager Role Management

- Go to Windows Firewall
- Configure Updates
- Check for New Roles
- Run Security Configuration Wizard
- Configure IE ESC

Roles Summary Help

- Go to Roles
- Add Roles
- Remove Roles