

Administrator's Guide for
SpeechExec Enterprise
Speech Recognition Service

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Change history

Application version	Document version	Description
SEE 9.0	2024.04.12	SEE 9.0 release
SEE 8.8	8.8	SEE 8.8 release
SEE 8.7	8.7	SEE 8.7 release
SEE 8.5	8.5	<ul style="list-style-type: none"> • Dragon Naturally Speaking 15.7 Group supported • Dragon Naturally Speaking 16 Professional and Legal supported • Templates supported for Dragon Server speech recognition
SEE 8.1	8.1	Explain new 'Add dictations from sub-folders' combo-box
SEE 8.0	8.0	Explaining indirect SpeechKit user profile selection method Dragon Naturally Speaking 15.6 Group not supported
SEE 7.1	7.1	Updated Microsoft .NET Framework requirements Speech recognition of encrypted dictations support added New automatic restart of Dragon engine feature added
SEE 7.0	7.0	Updated OS requirements, Added Dragon Server-based recognition support
SEE 6.1	1.2	New custom Dragon profile folder feature and Dragon Medical Practice Edition 4.0 & 4.1 compatibility
SEE 6.0	1.1	Updated software requirements
SEE 5.0	1.0	Initial document

1 Overview

The Speech Recognition Service is compatible with the following recognition engines for transcribing dictations automatically:

- Dragon NaturallySpeaking engine
- Dragon Server

1.1 Dragon NaturallySpeaking engine

When the Speech Recognition Service is configured to automatically transcribe dictations using the Dragon NaturallySpeaking engine, the transcription process is as follows:

1. When the Speech Recognition Service starts, it reads its configuration from the Central Enterprise Repository (SEERoot).
2. The service initiates Dragon NaturallySpeaking.
3. Speech Recognition Service takes a dictation from its input folder and hands it over to Dragon NaturallySpeaking for recognition.
4. The service waits for Dragon NaturallySpeaking to complete the transcription job. Depending on whether the transcription was successful or not, the service does the following:
 - If the dictation is successfully transcribed, the Speech Recognition Service attaches the recognized text in RTF format (Rich Text Format) to the original dictation and sets the state of the dictation to *Correction Pending*.
 - If the transcription process fails, the service removes the dictation from its queue and sets the state of the dictation to *Transcription Suspended*.
5. The service takes the next dictation from the input folder.

1.2 Dragon Server

When the Speech Recognition Service is configured to automatically transcribe dictations using the Dragon Server, the transcription process is as follows:

1. When the Speech Recognition Service starts, it reads its configuration from the Central Enterprise Repository (SEERoot).
2. The service validates the configuration.
3. The Speech Recognition Service takes a configurable number of dictations in parallel from its input folder and creates a job executor process for each dictation.
4. The job executor processes connect to the configured Dragon Server and initiate the recognition process.
5. The Speech Recognition Service monitors the running job executor processes, and handles the results:
 - If the dictation is successfully transcribed, the Speech Recognition Service attaches the recognized text in RTF format (Rich Text Format) to the original dictation and sets the state of the dictation to *Correction Pending*.
 - If the transcription process fails or the job executor process times out or crashes, the service either retries the transcription process or removes the dictation from its queue and sets the state of the dictation to *Transcription Suspended*.
6. The service takes the next dictation from the input folder after a job slot is available.

2 System requirements

2.1 Hardware requirements

Speech Recognition Service has the following hardware requirements:

- **Processor:** Intel® Core™ i5 or equivalent AMD processor
- **RAM:** 4 GB
- **Free hard disk space:**
 - o 4 GB hard disk space (8 GB recommended)
 - o Microsoft .NET 4.8 Framework requires an additional 4.5 GB of free disk space.

Additional requirements when using Speech Recognition Server with Dragon NaturallySpeaking speech recognition:

- **Processor:** Intel® Core™ i5 or i7 / equivalent AMD processor
- **RAM:** 8 GB
- **Free hard disk space:** 8 GB recommended

Note: For more information on Dragon NaturallySpeaking system requirements please visit the [Nuance website](#).

2.2 Software requirements

For the supported operating system, we recommend that you apply the latest Service Pack available before installing Speech Recognition Service.

- Microsoft Windows Server 2016
- Microsoft Windows Server 2019
- Microsoft Windows Server 2022

- Microsoft .NET Framework 4.8

Important:

It is not supported to use a Samba share as incoming dictations' input folder for the Speech Recognition Service.

2.3 Prerequisites of using the Speech Recognition Service

The following preconditions must be met before you start using the Speech Recognition service:

- The central Enterprise Repository (SEERoot) used by the Speech Recognition service must be configured using Enterprise Manager.
- A user with typist-role must be created and properly configured in Enterprise Manager with the same name as the login user specified for the service. Proper configuration includes setting up the license server, configuring an email, setting up templates and fine-tuning speech recognition.
- The used speech recognition engine can be selected for this typist user in SpeechExec Enterprise Manager > **User Configuration** on the **Speech Recognition > General configuration** node:

Speech recognition engine settings
Here you can select your speech recognition engine to use in SpeechExec.

☐ Do not use speech recognition

☒ Allow using Dragon Naturally Speaking speech recognition
Please note that Dragon Naturally Speaking must be installed on client computers.

☐ Allow using SpeechKit speech recognition
Please note that you also need to purchase SpeechExec Enterprise SpeechKit Client Licenses to make SpeechKit functionality available on client computers.

- When using Dragon NaturallySpeaking speech recognition engine, Dragon NaturallySpeaking profiles must be created and trained.

3 How to set up the Speech Recognition Service

3.1 Set up the user account of the service

Windows services can be configured to run under the Local System, Local Service, or Network Service accounts, which have a built-in right to log on as a service. Any service that runs under a separate user account must be assigned the right.

As the Speech Recognition Service is recommended to run under a separate user account, please follow the steps below *before* installation to make sure the user account for the service is configured properly:

- From the Start Menu, start **Local Security Policy** tool (`secpol.msc`).
- In **Security Settings**, locate **Local Policies | User Rights Assignment**.
- Select the **Log on as a service** policy and double-click to open its properties.
- Add the user account you want to use for the Speech Recognition Server.
- Add the user account to the local **Administrators** group, too.

3.2 Installation

You must properly configure the Speech Recognition Service during installation as follows:

1. On the **Service configuration** page, specify the full path of the Central Enterprise Repository (SEERoot).
Alternatively, click **Browse** and navigate to a folder.

Note: The selected folder must be writable.

The screenshot shows the 'Service configuration' window of the 'SpeechExec Enterprise Speech Recognition Service - InstallShield Wizard'. The window has a title bar with the application name and a close button. Below the title bar is a header area with the text 'Service configuration' and a blue circular arrow icon. The main content area contains two sections. The first section is titled 'Please specify the full path of the central Enterprise repository:' and includes a 'Folder:' label, a text input field, and a 'Browse...' button. Below the input field is a note: 'Make sure that this folder is accessible for the Speech Recognition Service logon user.' The second section is titled 'Please specify the logon user account for the Speech Recognition Service:' and includes an 'Account name (DOMAIN\USERNAME):' label, a text input field, a 'Password:' label, a text input field, and a 'Password confirmation:' label with a text input field. Below these fields is a note: 'Make sure that this user account has access to the Enterprise repository specified above.' At the bottom of the window, there is a status bar with the text 'InstallShield' and three buttons: '< Back', 'Next >', and 'Cancel'. The 'Next >' button is highlighted with a blue border.

2. Enter the account name and password of the Windows user who will run the service. If you run Speech Recognition Service in a Domain environment, you must enter the account name in DOMAIN\USERNAME format.

Important:

- The built-in Administrator user account **must not** be used to run Speech Recognition Service because Dragon NaturallySpeaking does not support it.
 - The user account must be granted the “Logon as a service” role, using the “Local Security Policy” tool – `secpol.msc` – of Windows (see 3.1).
3. Click **Next**.
 4. On the **Communication options** page, enter the e-mail address of the administrator who will receive e-mails about the status of transcription jobs (this feature is only

supported when using Dragon NaturallySpeaking speech recognition engine).

The screenshot shows a window titled "SpeechExec Enterprise Speech Recognition Service - InstallShield Wizard". The window has a close button (X) in the top right corner. Below the title bar, there is a header area with the text "Communication options" and a blue icon of a speech bubble. The main content area contains two optional settings. The first is "Please specify an administrator email that will receive status emails from the speech recognition service (optional)", followed by a text input field. The second is "Please specify the language of emails and other texts created by the speech recognition service (optional)", followed by a dropdown menu currently set to "English". At the bottom left, the text "InstallShield" is visible. At the bottom right, there are three buttons: "< Back", "Next >" (which is highlighted with a blue border), and "Cancel".

5. From the language selector drop-down box, select the language of:
 - the status e-mails
 - some error messages related to dictation processing written to the log file
6. Click **Next**.

3.3 How to set up access to the License Server

Speech Recognition Service requires a separate license depending on the used speech recognition engine to work properly:

- For Dragon NaturallySpeaking, a '*Speech recognition service for Dragon*' license is required
- For Dragon Server, a '*Speech recognition service for SpeechKit*' license is required

To set the correct address to your License Server, do the following:

1. In the Enterprise Manager > System Configuration Center, select a transcriptionist user who will act as the "virtual" typist and whose account you want to configure to send status e-mails.
2. Click **Edit user**.
3. Select **Transcriptionist** as a user role and click **Next**.

4. On the **Enterprise > Licensing** page, enter the host name and port number of the Enterprise License server that provides the *Speech recognition service for Dragon* license for your administrator.
5. Restart the Speech Recognition Service.

4 Using Dragon NaturallySpeaking as a speech recognition engine

4.1 Additional software requirements when using Dragon NaturallySpeaking speech recognition engine

Speech recognition is supported with Dragon NaturallySpeaking, using the following Dragon editions:

- Dragon 16 Professional or Legal
- Dragon Professional 15, 15.5, 15.7
- Dragon Professional 14 Group

Note: Upgrade from Dragon Professional 14 Group to Dragon Professional 15 Group is not supported!

Note: Due to technical and reliability issues experienced when using Dragon Professional 15.6 Group with the Enterprise Speech Recognition Service, this Dragon NaturallySpeaking version is not supported!

Important: Dragon NaturallySpeaking must be installed and configured on the computer that runs the Speech Recognition Service. It is the administrator's responsibility to configure roaming settings if used, as well as to configure and train Dragon profiles.

It is not recommended to install Microsoft Office applications on the computer that runs Speech Recognition Service, especially not those applications that use Dragon NaturallySpeaking plugins. These applications are the following: Microsoft Word, Microsoft Excel, and Microsoft PowerPoint.

Note: Dragon Home, Dragon Premium and their predecessor products are not supported with Speech Recognition Service.

Important: The built-in Administrator user account **must not** be used to run Speech Recognition Service because Dragon NaturallySpeaking does not support this scenario.

4.2 How to set up e-mailing for the Speech Recognition Service

You must configure an SMTP profile in SpeechExec Enterprise Manager so that the Speech Recognition Service can send status e-mails to the administrator. Do the following:

1. In the System Configuration Center, select the "virtual" typist.
2. Click **Edit user**.
3. Select **Transcriptionist** as a user role and click **Next**.

4. On the **Delivery > Email** page, click **Add** to create a new SMTP / POP3 delivery e-mail profile, called *SRServer_SMTP*
5. Click **OK** to continue.
6. On the **POP/SMTP Settings** page, configure the delivery e-mail profile and click **OK** to create the profile.
7. Click **Next** and then **Finish** to save your changes.

4.3 How to set up templates for Dragon Naturally Speaking based speech recognition

The administrator must configure file specifications for template files that are accessible for the Speech Recognition Service.

1. In the System Configuration Center, select the “virtual” typist.
2. Click **Edit user**.
3. Select **Transcriptionist** as a user role and click **Next**.
4. On the **Rules > Templates** page, make sure that you have at least one template for the transcriptions in the **Existing templates** list. For information on how to add templates to the list, see the *SpeechExec Enterprise Transcribe help*.
5. Click **Next** and then **Finish** to save your changes.

Note: Dragon Naturally Speaking based speech recognition only supports .RTF (Rich Text Format) templates, it cannot use other file formats (e.g., Word documents or plain text files)

4.4 How to configure the input folder in SpeechExec Enterprise Manager

Speech Recognition Service processes only those dictations that are stored in its input folder. You must configure this folder using Enterprise Manager following the steps below.

Configuration steps:

- Open Enterprise Manager, log in, and open the **System Configuration Center**.
- Select the **Groups and users** node.
- Select the transcriptionist user that is running the Speech Recognition Service.
- Press the **Edit user...** button and select the transcriptionist role, then **Next**.
- Navigate to the **Speech Recognition > Offline recognition** node.
- In the **Speech recognition queue configuration** group, enable the **Automatically add the newly incoming dictation files...** option
- Add the desired input folder path to the **Path** textbox by browsing with the ... button, or by manually typing / pasting it in.
- To process dictations located in subfolders of the input folder, chose an option from the **Add dictations from sub-folders** combo-box.
- Save the new settings.
- Restart the Speech Recognition Service (windows service).

Important:

It is not supported to use a Samba share as incoming dictations' input folder for the Speech Recognition Service. Speech Recognition Service listens to file creation and modification system events. These file system events are not reliably sent for Samba shares. Please use a Windows share instead.

4.5 Dragon NaturallySpeaking profile configuration

4.5.1 *How to configure Dragon profile folder when using supported Dragon versions in local/roaming mode*

4.5.1.1 *Local mode*

To use a supported Dragon product in local mode with Speech Recognition service, the Dragon product itself must be configured to run in local mode. This configuration must be done using the configuration UI of the Dragon product.

The Speech Recognition Service reads the configuration of the Dragon product during start-up and sets the "root" profile folder path to the value that the installed Dragon product returns as 'local profile folder path' (e.g.: C:\ProgramData\Nuance\NaturallySpeaking15\Users). Profiles in this folder are used for recognition, detailed in '[Processing dictations](#)'.

4.5.1.2 Optional: Local mode with custom Dragon profile folder

The built-in local profile folder path can be optionally overwritten using the custom Dragon profile folder feature described in '[How to configure custom Dragon profile folder when using DMPE 4.x EU versions in local mode](#)'.

4.5.1.3 Roaming mode

To use a supported Dragon product in roaming mode with the Speech Recognition Service, the Dragon product itself must be configured to run in roaming mode. This configuration must be done using the configuration UI of the Dragon product.

During the roaming configuration, the administrator must specify a roaming directory where the Dragon profiles are or will be stored. The Speech Recognition Service only supports the first configured roaming folder and will only use that folder to attempt to locate profiles during recognition.

The profile matching logic is detailed in the '[Other supported Dragon products](#)' section of '[Processing dictations](#)'.

4.5.2 **How to configure custom Dragon profile folder when using DMPE 4.x EU versions in local mode**

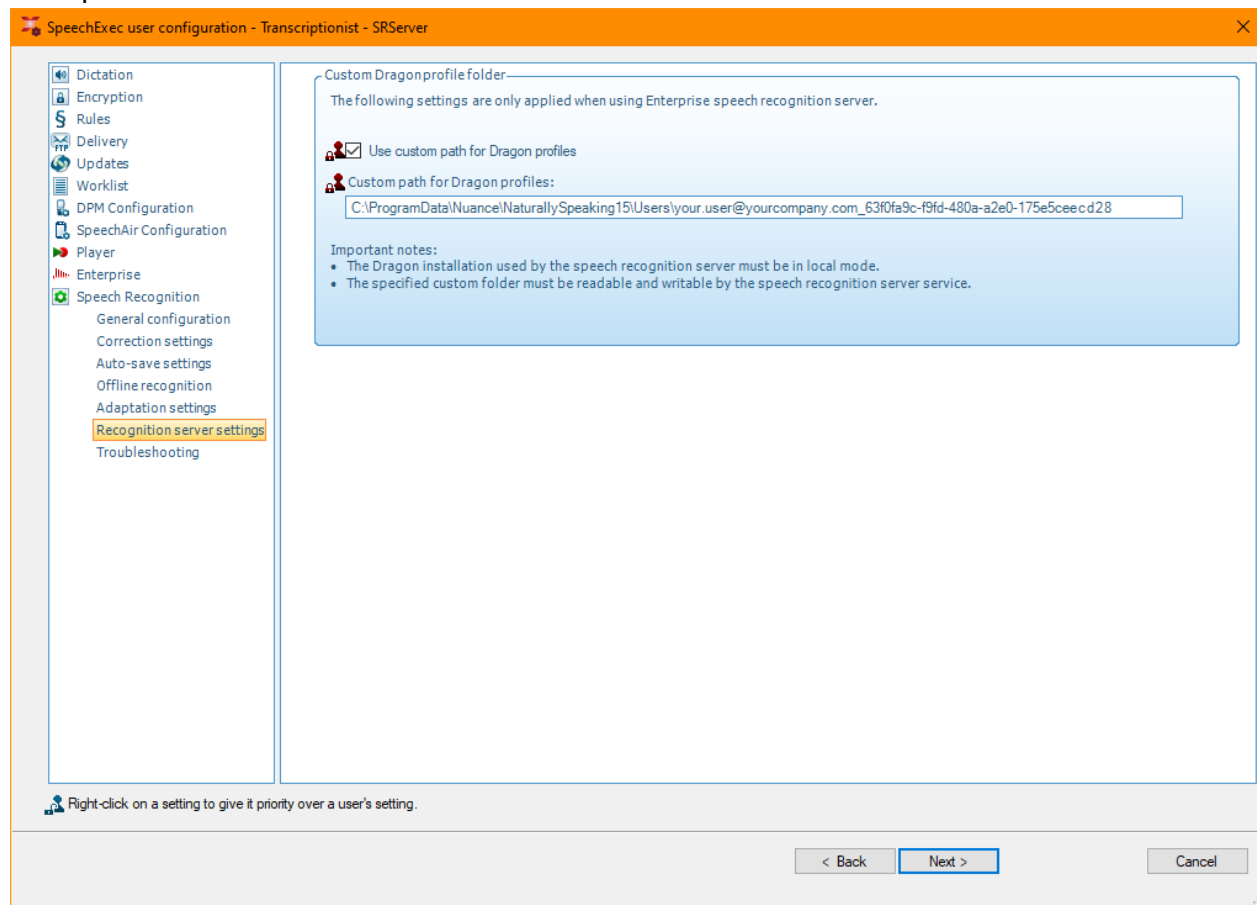
This feature allows using a custom Dragon profile folder for the Enterprise Speech Recognition Service when looking for Dragon profiles during speech recognition.

Important: This setting is mandatory when using Dragon Medical Practice Edition 4 (non-US versions) and above for speech recognition if local profiles are used (not roaming). If this setting is not configured when using these Dragon products, the Enterprise Speech Recognition Service will not start. Please read the '[Processing dictations](#)' section, which contains a detailed explanation on how Dragon profile selection works for each dictation when using Dragon Medical Practice Edition 4 (non-US versions).

To configure this custom path:

1. In the Enterprise Manager > System Configuration Center, select the transcriptionist user whose account you want to configure to use your personalized Dragon profiles.
Note: The selected user must run the Enterprise Speech Recognition Service.
2. Click **Edit user...**
3. Select **Transcriptionist** as a user role and click **Next**.
4. On the **Speech Recognition > General configuration** page, make sure that Dragon NaturallySpeaking is enabled.
5. On the **Speech Recognition > Recognition server settings** page, enable **Use custom Dragon profile folder** and set a valid path that contains your desired Dragon profiles. Make sure that this path is accessible for the Enterprise Speech Recognition Service.

Example:



4.5.3 *How to configure Dragon profile folder when using DMPE 4.x EU versions in roaming mode*

Due to the changes introduced in Dragon Medical Practice Edition 4 (non-US version) and above, Dragon roaming must be configured in a specific way to allow the Speech Recognition Service to find the appropriate Dragon profiles for recognition.

The changes in profile naming and profile storage created the following compatibility issues:

- The Dragon roaming folder no longer directly contains Dragon profiles; it now contains what we call “profile container folders”. These folders are created using the login email address of the owner of the profiles, and a unique identifier.

For example:

- Roaming folder: \\server\DragonRoaming
- Login email: john.doe@company.com
- Container folder path: \\server\DragonRoaming\john.doe@company.com_daca104c-a7d8-4751-95b3-897ee3909357

- The actual profiles are stored in these individual “container folders” and named using the login email and the language/region selected at profile creation (ex: [john.doe@company.com DEU DEU](#))

For the Speech Recognition Service to be able to find these profiles, the administrator must set up Dragon roaming inside Dragon Medical Practice Edition 4.x (non-US version) and configure a **single** network roaming directory pointing to the root of the Dragon roaming profiles (using the examples above this is: [\\server\DragonRoaming](#)).

The Speech Recognition Service attempts to locate the appropriate Dragon profile in the “Container folders” located in this root path. Inside each container folder, a special profile-matching algorithm is used, which is detailed in the ‘*Dragon Medical Practice Edition (non-US)*’ section of [‘Processing dictations’](#).

Important note: *The **Custom Dragon profile folder** feature is not compatible with roaming mode. The Dragon roaming folder is read from Dragon. Only the Roaming network directory found first is used by the Speech Recognition Service.*

4.6 How to send a test email

When using Dragon Naturally Speaking as recognition engine, the Speech Recognition Service can send a test e-mail to confirm that all settings are properly configured. To do so, follow the instructions below:

1. Record a dictation in DSS, DS2, WAV or MP3 format
2. Save the dictation as `SRSTestEmail_[CUSTOM_POSTFIX].[file_extension]`.

Notes:

- [file_extension] must be DSS, DS2, WAV or MP3
- an underscore (_) character must separate the fixed SRSTestEmail and [CUSTOM_POSTFIX] file name parts
- [CUSTOM_POSTFIX] can be any character or string that you would normally use in a file name

When the Speech Recognition Service receives the dictation, it checks whether the dictation has the proper extension and creates an entry in the log if it is not. Otherwise, it verifies that the SMTP profile is properly configured and if so, it sends a test e-mail to the administrator.

To configure an e-mail account in Enterprise Manager, see [How to set up e-mailing for the Speech Recognition Service](#).

4.7 How the service starts

When the Speech Recognition Service starts, SpeechExec performs the following checks:

1. Checks the presence and value of SEERoot key in the Registry that you have defined during setup. For more information, see 3.2.
2. Checks the integrity of SEERoot contents.
3. Locates and opens the XML profile with the proper filename.
4. Verifies that the Speech Recognition Service input folder is specified in the XML profile and is writable.
5. Reads typist-role license server settings from the XML profile.
6. Requests a *Speech recognition service for Dragon* type license from the specified license server.
7. Verifies that Dragon NaturallySpeaking is available.
8. Checks that in case the **custom Dragon profile folder** feature is used, it is configured correctly.
9. Checks the compatibility with Dragon Medical Practice Edition 4 (non-US) and above to make sure that in case of local mode, the **custom Dragon profile folder** feature is enabled.

If any of the above fails, the Speech Recognition Service will not start and an entry indicating the blocking issue will be written to the log file of the service.

The Speech Recognition Service checks other requirements as well, which will *not* block the service from starting:

1. Checks if an SMTP email delivery profile is specified in user settings with the name: *SRServer_SMTP*.
If it is, the service tries to log on to the specified SMTP e-mail server.
2. Checks if the Speech Recognition Service-specific dictation property definitions (*SRServerRecognitionResultCode* and *SRServerRecognitionResultText*) exist in the *PSP.SpeechExec.DictationPropConfiguration.xml* file stored in the Central Enterprise Repository (SEERoot) used by the service.

The Speech Recognition Service will start even if these checks fail, but an entry will be written to the log file describing the reason for the error.

4.8 Processing dictations

The service collects all dictation files that are eligible for speech recognition. These files are put into the local speech recognition queue of the service.

A dictation must meet all the following requirements so that the service can handle it:

- must be accessible
- must be in *Transcription Pending* state
- cannot be a Dragon NaturallySpeaking .DRA file
- cannot have zero length

- cannot be a SpeechLive speech recognition dictation

If any of the above conditions are not met, the Speech Recognition Service will skip that file. Otherwise, the service starts processing the dictation and changes the state of the dictation to *Transcription in Progress*.

4.8.1 **Encrypted dictations**

In case of encrypted files, the following conditions must be met for successful speech recognition:

- server version must be SpeechExec Enterprise 7.1 or higher
- a valid encryption password must be obtained

Important:

- since the Speech Recognition Service acts as a typist, the service always uses the settings defined for the **Transcriptionist** role
- properties of an author profile can be set in the System Configuration Center in Enterprise Manager by selecting the desired user:
Edit user > Transcriptionist role > Rules / Author profiles

The decryption password is obtained from the author profiles defined in service settings. The profile look-up algorithm:

- first tries to locate an author profile whose name matches the 'Author' dictation property value of the dictation about to be decrypted
- If no author profile is found OR the password in the author profile is empty, the master password is used
- If neither a valid password from an author profile nor a master password is found, the speech recognition job is rejected

4.8.2 **Dragon profile lookup**

Before processing a dictation file, the service attempts to load a Dragon profile for speech recognition. To find the relevant Dragon profile, the Speech Recognition Service always uses the value of the 'Author' property, usually stored in the XML metadata file of the dictation or in the proprietary DSS header of the audio file (if the header exists).

Using the 'Author' property, the following logic is executed to find the matching profile:

When using Dragon Medical Practice Edition 4 (non-US version):

This version of Dragon introduced a new Dragon profile-naming scheme. Profile names are now essentially email addresses with languages attached to them, for example:

- john.doe@techcompany.com_English_United Kingdom
or
- john.doe@techcompany.com_ENG_GBR

depending on the version of Dragon Medical Practice Edition and whether it is used in **local** or **roaming** mode.

In attempt to select the matching profile for the dictation that is being recognized, the Speech Recognition Service does the following:

- Takes the value of the 'Author' property of the dictation.
- Creates 'tokens' of the property by splitting it at ' ' (single space) characters.
- Uses these 'tokens' to search the list of Dragon profiles for a matching profile.
 - A matching profile is where all the 'tokens' are found in the profile name using a case-insensitive matching.
 - Multiple matches can occur; in this case the 'Author' name must be extended with additional information to narrow down this search (for example, by adding the language of the profile).
- If a single match is found: that one profile will be used for the recognition.
- If multiple matches are found: the profile selection will fail with an error (logged).
- If no profiles are found: the profile selection will fail with an error (logged).

Examples of profile names and matching results by this logic:

Profile names:

- 1.) john.doe@techcompany.com_Francais_France
- 2.) john.doe@techcompany.com_English_United Kingdom
- 3.) sarah.smith@techcompany.com_Francais_France
- 4.) sarah.smith@techcompany.com_English_United Kingdom

Results:

Author property value	Result
John	Error: multiple matches
John Francais	Success: profile #1
Sarah Smith Fra	Success: profile #3
sArAH S	Error: multiple matches
Sarah_smith	Error: no profile found

When using other supported Dragon products:

A Dragon profile with a name that exactly matches the 'Author' property set for the dictation will be used during the recognition process.

If an error occurs during speech recognition, the state of the dictation is changed to *Transcription Pending* and the description of the error is written to the log file of the Speech

Recognition Service. The administrator also receives an e-mail about the error provided that the e-mail address is configured properly. For information on setting up an e-mail account, see [How to set up e-mailing for the Speech Recognition Service](#).

5 Using Dragon Server as a speech recognition engine (SpeechKit)

5.1 Additional software requirements

The Speech Recognition service requires an installed and configured Dragon Server suite. The Dragon Server **must** be installed on a separate server.

Running the Enterprise Speech Recognition service and the Dragon Server on the same server is not supported.

The Speech Recognition service must not be installed on a terminal server or remote desktop where Philips server extension drivers are running.

The installation and configuration of the Dragon Server is not part of this guide.

Important!

Certain speech recognition features offered in SpeechKit speech recognition mode, like streamed audio playback during recognition and deferred correction, require that these features be supported and enabled on the Dragon Server. Please consult your system administrator about the availability of these features.

5.2 How to configure the Dragon Server connection settings in SpeechExec Enterprise Manager

The Speech Recognition Service processes require the configuration of the *server name* of the installed Dragon Server DMS component, the *port* used to allow the communication, and the *Organization token* for your Dragon Server access.

Configuration steps:

- Open Enterprise Manager, log in, and open the **System Configuration Center**.
- Select the **Groups and users** node.
- Select the transcriptionist user that is running the Speech Recognition Service.
- Press the **Edit user...** button and select the transcriptionist role, then **Next**.
- Navigate to the **Speech Recognition > Dragon Server address** node.
- Fill in the required server name, server port and organization token.
- You can test the connection with the provided values by pressing the **Test server connection** button.
- Save the new settings.
- Restart the Speech Recognition Service (windows service).

5.3 How to configure the input folder in SpeechExec Enterprise Manager

The Speech Recognition Service processes only those dictations that are stored in its input folder. You must configure this folder using Enterprise Manager following the steps below.

Configuration steps:

- Open Enterprise Manager, log in, and open the **System Configuration Center**.
- Select the **Groups and users** node.
- Select the transcriptionist user that is running the Speech Recognition Service.
- Press the **Edit user...** button and select the transcriptionist role, then **Next**.
- Navigate to the **Speech Recognition > Recognition server settings** node.
- Define the **Folder of incoming dictations**, by adding the desired input folder path to the **Path** textbox by browsing with the ...button, or by manually typing / pasting it in.
- To process dictations located in subfolders of the input folder, choose an option from the **Add dictations from sub-folders** combo-box.
- Save the new settings.
- Restart the Speech Recognition Service (windows service).

Important:

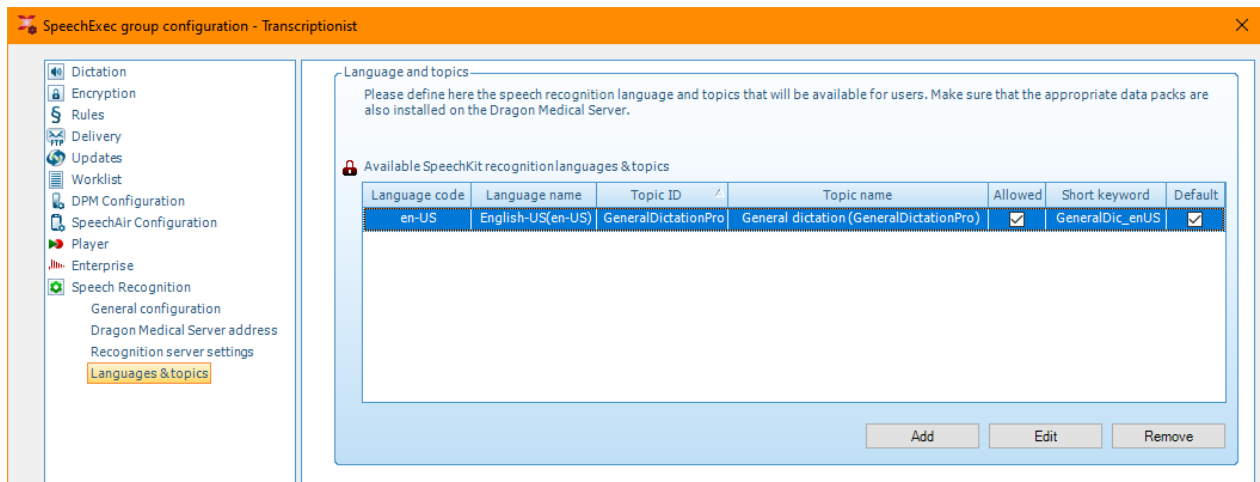
It is not supported to use a Samba share as incoming dictations' input folder for the Speech Recognition Service. Speech Recognition Service listens to file creation and modification system events. These file system events are not reliably sent for Samba shares. Please use a Windows share instead.

5.4 How to add and configure languages and topics for speech recognition in SpeechExec Enterprise Manager

The Dragon Server requires a pre-selected language and topic combination for each dictation for the speech recognition process. The administrators are responsible for creating these configurations prior to the users creating dictations for Dragon Server speech recognition. These language and topic configurations can be created on group level using SpeechExec Enterprise Manager.

Configuration steps:

- Open Enterprise Manager, log in, and open the **System Configuration Center**.
- Select the **Groups and users** node.
- Select the group which contains the transcriptionist user running the Speech Recognition Service.
- Press the **Group settings...** button and select the transcriptionist role, then **Next**.
- Navigate to the **Speech Recognition > Languages & topics** node.
-



- Use the **Add** button to specify a language & topic configuration.

Add/Edit recognition language and topic

Language code: en-US

Language name: English-US(en-US)

Topic ID: GeneralDictationPro

Topic name: General dictation (GeneralDictationPro)

☒ Use as default for dictations with unspecified recognition language & topic property

The short keyword can be used on recording devices (like a Pocket Memo or SpeechAir) to indicate that this recognition language and topic combination should be used for offline speech recognition. The recording devices must be configured properly to offer this value for recording users.

Short keyword used by recording devices: GeneralDic_enUS

[Generate short keyword](#)

Save Cancel

- Make sure that the specified language and topic combination is available on your Dragon Server.
 - You can define a default (fallback) language & topic configuration for dictations without a specified language & topic combination.
- Save the new settings.
 - Restart the Speech Recognition Service (windows service).

Important note: Make sure that the configured language & topic combinations are also configured for the designated Author groups. The authors must be able to pick a combination like this for each dictation marked for speech recognition with Dragon Server.

5.5 How the service starts

When the Speech Recognition Service starts, SpeechExec performs the following checks:

1. Checks presence and value of SEERoot key in the Registry that you have defined during setup. For more information, see 3.2.
2. Checks the integrity of SEERoot contents.
3. Locates and opens the XML profile with the proper filename.
4. Verifies that the Speech Recognition Service input folder is specified in the XML profile and is writable.
5. Reads license server settings for typist role from the XML profile.
6. Verifies the Dragon Server connection settings.
7. Checks if the service can create and write to the Speech Recognition service-related temporary folder in the ProgramData system folder (default folder: "%ProgramData%\Philips Speech\SRServer\SRJobs").

8. Requests a *Speech recognition service for SpeechKit* type license from the specified license server.

If any of the above fails, the Speech Recognition Service will not start and an entry indicating the blocking issue will be written to the log file of the service.

The Speech Recognition Service checks other requirements as well, which will *not* block the service from starting. These are the following:

1. Checks if the Speech Recognition Service-specific dictation property definitions (*SRServerRecognitionResultCode* and *SRServerRecognitionResultText*) exist in the `PSP.SpeechExec.DictationPropConfiguration.xml` file stored in the Central Enterprise Repository (SEERoot) used by the service.
2. Checks if the configured Dragon Server can be reached.
3. Checks the availability and value of the speech recognition logic settings (max number of jobs, retries, timeouts, time factors) based on the Dragon Server.

The Speech Recognition Service will start even if these checks fail, but an entry will be written to the log file that describes the reason for the error.

5.6 How to configure automatic restart of the Dragon server in SpeechExec Enterprise Manager

If you experience issues when using Dragon NaturallySpeaking speech recognition, restarting the Dragon recognition engine usually solves the problems. In Enterprise Manager, you can configure the automatic restart of the Dragon server, following the steps below.

Configuration steps:

- Open Enterprise Manager, log in, and open the **System Configuration Center**.
- Select the **Groups and users** node.
- Select the transcriptionist user that is running the Speech Recognition Service.
- Press the **Edit user...** button and select the transcriptionist role, then **Next**.
- Navigate to the **Speech Recognition > Recognition server settings** node.
- Enable **Automatically restart the recognition server service after the time set below** and define the time interval of the automatic restart in hours and minutes.

Note:

- This feature is only available when using Dragon server as a speech recognition engine.
- The restart interval must not be too short when working in a production system, to avoid frequent service restarts and unprocessed recognition jobs.
- Speech recognition server version must be 7.1 or higher.

5.7 Processing dictations

The Speech Recognition Service is capable of parallel job processing when using Dragon Server as a speech recognition engine. The number of parallel jobs highly depends on the power (available CPU cores) of the server hosting the Dragon Server installation.

The Speech Recognition Service attempts to start from one to the configured maximum amount of parallel recognition jobs if enough dictations are available.

After starting, the service collects all available and eligible dictations from the configured watch folder.

A dictation must meet all the following requirements so that the service can handle it:

- must be accessible
- must be in *Transcription Pending* state
- cannot be a Dragon NaturallySpeaking .DRA file
- cannot have zero length
- cannot be a SpeechLive speech recognition dictation

If any of the above conditions are not met, the Speech Recognition Service will skip that file. Otherwise, the service starts queueing the dictations for processing.

5.7.1 *Encrypted dictations*

In case of encrypted files, the following conditions must be met for successful speech recognition:

- server version must be SpeechExec Enterprise 7.1 or higher
- a valid encryption password must be obtained

Important:

- since the Speech Recognition Service acts as a typist, the service always uses the settings defined for the **Transcriptionist** role
- properties of an author profile can be set in the System Configuration Center in Enterprise Manager by selecting the desired user:
Edit user > Transcriptionist role > Rules / Author profiles

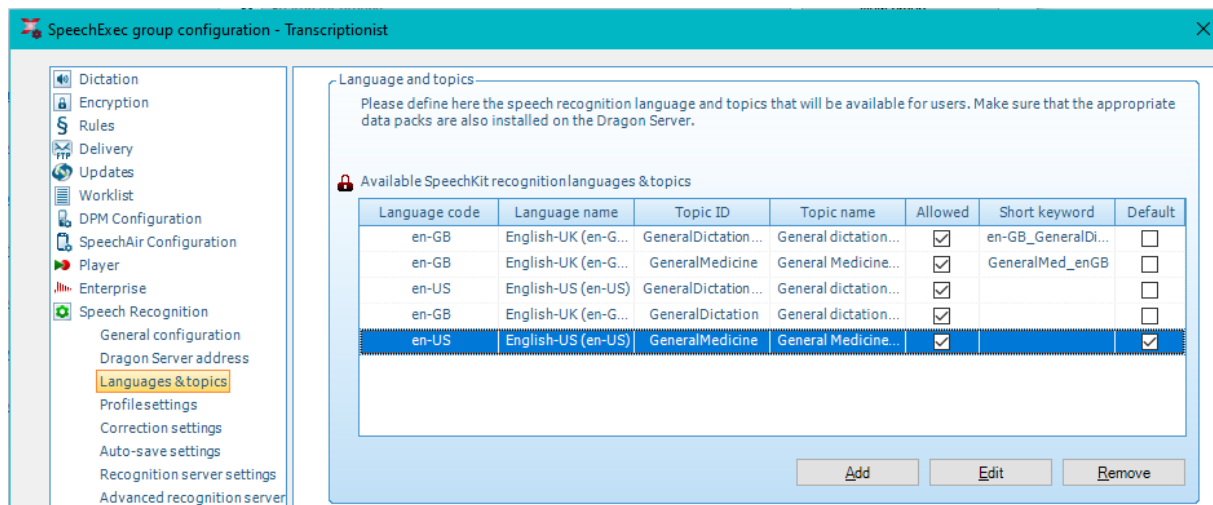
The decryption password is obtained from the author profiles defined in service settings. The profile look-up algorithm:

- first tries to locate an author profile whose name matches the 'Author' dictation property value of the dictation about to be decrypted
- If no author profile is found OR the password in the author profile is empty, the master password is used
- If neither a valid password from an author profile nor a master password is found, the speech recognition job is rejected

5.7.2 **Process steps**

Recognition job processing:

- The processing loop attempts to start the configured amount of parallel recognition jobs and sets the state of each processed dictation to *Transcription in Progress*.
- Each processed dictation is read, and the required recognition information is gathered from the dictation XML files:
 - Author
 - Language & Topic
 - Dictation length
- The Dragon server (SpeechKit) recognition profile used for recognition is determined as follows:
 - The author's predefined Dragon server profile name is used as the recognition profile if the following conditions are met:
 - the profile name lookup setting (**Edit group/user > Transcriptionist role > SR / Recognition server settings**) is set to **Use the SpeechKit profile settings predefined for the author (author.xml lookup)**
 - the author exists in the same Enterprise root configuration
 - Dragon server is allowed for the author
 - the author is set to use a predefined Dragon server profile
 - this predefined Dragon server profile is properly defined (non-empty)
 - Otherwise:
 - the value stored in the 'SpeechKit_CreationProfileName' property of the dictation is used as the recognition profile
 - if this value is empty, then the 'Author' property of the dictation is used as the recognition profile
- The language & topic used for recognition is determined as follows:
 - The value stored in the 'SpeechKit_CreationLanguageAndTopic' property of the dictation is used if **not empty**
 - If 'SpeechKit_CreationLanguageAndTopic' is empty, then the value stored in the 'Typist' (also known as 'Transcriptionist'/'DPMKeywordContent4') property of the dictation is used if **not empty**
 - If 'Typist' is empty, then the default language & topic is used



- The process then checks the determined language & topic against its own configuration (read from the Enterprise configuration root, from its own group XML).
- If the required language & topic is available, a recognition job is started in a separate process.
- The service attempts to start recognition jobs while there are available files in the input folder and the maximum number of configured parallel jobs are not reached.
- The service monitors the outcome of the recognition jobs.
 - If the recognition was successful, the service will attach the recognized text as an RTF file to the dictation and set the state to *Correction Pending*.
 - If the service can find an appropriate document template (see 5.8 *How to set up templates for Dragon Server based speech recognition*), the recognized text will be inserted into the template.
 - If the recognition job fails, the service can decide to retry the recognition if it was a transient error.
 - If the recognition job fails with a non-retriable error or the maximum number of retries have been reached, the state of the dictation is set to *Transcription Suspended*.

5.8 How to set up templates for Dragon Server based speech recognition

The administrator must configure file specifications for template files that are accessible for the Speech Recognition Service.

6. In the System Configuration Center, select the “virtual” typist.
7. Click **Edit user**.
8. Select **Transcriptionist** as a user role and click **Next**.
9. On the **Rules > Templates** page, make sure that you have at least one template for the transcriptions in the **Existing templates** list. For information on how to add templates to the list, see the *SpeechExec Enterprise Transcribe help*.

10. Click **Next** and then **Finish** to save your changes.

Note: *Dragon Server based speech recognition supports Rich Text Format (.RTF) and plain text (.TXT) template files, it cannot use other file formats (e.g., Word documents)*

6 Known issues and troubleshooting

6.1 Slow service startup, slow speech recognition when using Dragon Naturally Speaking as recognition engine

In certain environments, the Windows service called "Dragon Service" (DragonSvc, executable name: `dgnsvc.exe`) installed by Dragon Naturally Speaking can cause issues when using the SpeechExec Enterprise Speech Recognition Service. Known symptoms:

- Slow Speech Recognition Service startup:
a normal startup time from *Stopped* to *Running* status is usually below 10 seconds. A startup time above 20 seconds can be considered problematic
- Slow speech recognition speed:
the Dragon Naturally Speaking engine usually recognizes a sound file faster than real-time (for example, recognizing a 1:30 minute dictation should take about 20-30 seconds)
- Intermittent Dragon profile opening errors

This issue seems to be more prevalent with Dragon 16 compared to earlier Dragon versions.

A known workaround for such issues is:

- Stop the "Dragon Service" service before the Speech Recognition Service starts
- Make sure the "Dragon Service" is not running while the Speech Recognition Service is running

More information on "Dragon Service":

https://nuance.custhelp.com/app/answers/detail/a_id/5996/~/_what-does-the-dgnsvc.exe-process-do%3F

6.2 Error message displayed during speech recognition when using Dragon Server (SpeechKit) as recognition engine

When the Speech Recognition Server is performing speech recognition in Dragon Server (SpeechKit) mode, error messages referring to Microsoft Edge data directory might appear even though speech recognition is successful.

Error message example:

Microsoft Edge can't read and write to its data directory:
%directory_path%

If the problem remains permanent, try the following workaround:

- Make sure the Microsoft Edge browser is fully updated
- Try to manually create the temporary folder (%directory_path%) indicated by the error message