

Configuration speech analysis



Administration manual for system providers and tenants

4/7/2021

Product line neo, version 6.x

The described functions can be used with the following ASC products:

INSPIRATIONneo

Please note that you can always find the most up-to-date technical documentation and product updates in the partner area on our website at <http://www.asctechnologies.com>.

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1 General information

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2 Introduction

This manual describes the configuration of applications for audio analysis.

Beside ASC solutions, third-party software (from EML European Media Laboratory GmbH or Microsoft Cognitive Services) can be configured to be used with the neo recording system. That way, recorded conversations can be analyzed by means of different types of audio analysis (keyword spotting, real-time keyword spotting, transcription, and emotion detection).

Keyword spotting

By means of keyword spotting, you can filter for certain topics or categorize the sessions. To this end, you compile all expressions and phrases (keywords) which describe a topic in an analysis list. The defined keywords will then be searched automatically in the sessions.

Since this approach is limited to detecting individual words and phrases, sessions can be searched quickly. Since you have to define the expressions which are supposed to be searched for in advance, this approach especially serves to identify already known topics which frequently come up again.

Transcription

The transcription converts audio recordings into text which is then available for analysis.

To be able to recognize all words, dictionaries are uploaded to look up the audio data in. As each separate word must be recognized and converted into text, this approach initially requires more time than keyword analysis. But on the other hand, transcription makes the entire audio recording available as text so that any word can be found via full-text search without having to define it explicitly again.

A major advantage of full-text searches is that the search terms can be displayed in context which avoids misunderstandings, e. g. in case of ambiguities.

The texts are available for additional analyses and can be transferred to other systems to do so (e. g. to a data warehouse system). Using text analysis methods facilitates identifying previously unknown trends and incidents easily and quickly.

Emotion detection

Emotion detection serves to search for indicators of emotions in a call such as cross talk, silence or increased volume.

There are two types of emotion detection:

- *Linguistic emotion detection*

Emotions are detected on basis of the speaker's choice of words. To be able to do so, keywords are saved in the system which characterize certain emotions. If swearwords are used, for instance, it can be assumed that the emotion *anger* dominates the call.

- *Acoustic emotion detection*

Emotions are detected on basis of certain characteristics in the speaker's voice, e. g. the volume.

Both approaches have their advantages and disadvantages. There are people who continue to choose neutral words but express their emotions with their voice while there are others who react the other way around.

Audio analysis jobs with the method emotion detection are based on acoustic emotion detection.

The functionality emotion detection must be activated by the system provider in the Servers module of the application System Configuration.

Audio analysis jobs are configured and administrated in the Audio Analysis module of the application INSPIRATIONneo.



Additional information about creating audio analysis jobs and about how to use them can be found in the user manual *Usage Audio Analysis module*.

Emotion detection may be executed on a separate server. The audio data must be streamed from a dedicated **API server** in the network, though.

I. e.: An **API server** has access to the recordings on the server where the **API server** is executed as well as to the storage expansions connected with this server. On top of that, the **API server** can stream audio data from other servers if transmission for replay has been configured.

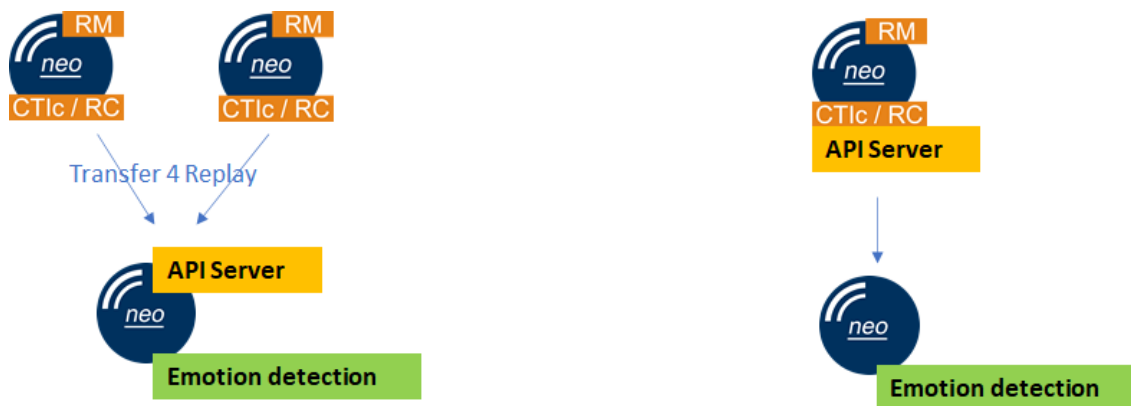


Fig. 1: Examples for emotion detection server



An emotion detection server may only be fed by one individual **API server**.

ASC licenses for transcription

License name	Number
INSPIRATION ^{neo} Base license or INSPIRATION ^{neo} Base license - Advanced or INSPIRATION ^{neo} for Compliance Server Basic	1 per system
Transcription Analytics	1 per channel
Import & Export	1 per system

Tab. 1: Licenses of ASC

ASC licenses for keyword spotting

License name	Number
INSPIRATION ^{neo} Base license or INSPIRATION ^{neo} Base license - Advanced or INSPIRATION ^{neo} for Compliance Server Basic	1 per system
Keyword Spotting Analytics	1 per channel
Import & Export	1 per system

Tab. 2: Licenses of ASC

ASC licenses for emotion detection

License name	Number
INSPIRATION ^{neo} Base license or INSPIRATION ^{neo} Base license - Advanced or INSPIRATION ^{neo} for Compliance server Basic	1 per system
Emotion Detection Analytics	1 per agent

Tab. 3: Licenses of ASC



When calculation the number of channels, keep in mind the following processing times:

Transcription is carried out in real time.

Example: 24 hours of audio recording are transcribed within 24 hours.

Keyword spotting is carried out in 1.66-fold real time.

Example: 40 hours of audio are processed in 24 hours.

4 Configuration

For the configuration, this manual uses the following IP addresses by way of example:

1. 192.168.171.1 - EML Transcription Server
2. 192.168.169.4 - *neo* server



In a distributed system, we recommend to use the server for speech analysis which already has access to all recordings.

Preconditions to configure keyword spotting and transcription

- The required licenses are available, see [chapter "Licenses", p. 8](#).
- Operative EML Transcription Server with a minimum of one connected EML decoder.



For information about how to install EML Transcription Server refer to the installation manual for system providers *Installation speech analysis software of EML Windows version* or *Installation speech analysis software of EML Linux version*.

Preconditions to configure emotion detection

- Required licenses are available (see [chapter "Licenses", p. 8](#)).

4.1 Information

4.1.1 Configuration emotion detection ASC

Before starting the configuration make sure that the following information is available:

- Server name of the *neo* server where emotion detection has been configured

4.1.2 Configuration keyword spotting and transcription EML

Before you start the configuration, make sure that the following information is available:

- IP address of the EML Transcription Server
- Server name of the *neo* server from which audio data is supposed to be streamed

Installation values of the following parameters from the installation of the EML Transcription Server

- engineID
- projectName
- queueName
- channels
- supportedLanguages

4.1.3 Configuration transcription Microsoft Cognitive Services

Before starting the configuration make sure that the following information is available:

- IP address of the *neo* server
- Valid Azure account
- Azure Cognitive Services subscription
- Authentication key for Cognitive Services (to be requested from Microsoft by means of your Azure account)

4.2 Configure neo server

4.2.1 Configure NAS drive



A **NAS** drive is required if you would like to use transcription and keyword spotting without real-time analysis.



The EML decoder service must use a user account with access to the network *Share*.

1. Create a share on the EML Transcription Server.
2. Use the Windows Explorer to create a target directory on the **NAS** drive, e. g. ...NAS\TranscriptionAnalysis.
3. Set up a **NAS** drive for audio analysis in the *neo* system.
Make sure that the respective tenant has been assigned in the tab *Tenant*.



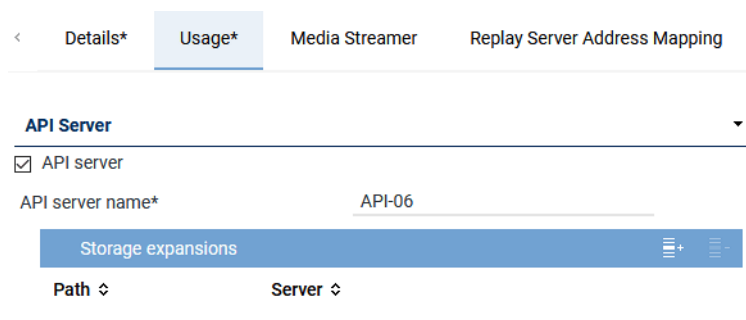
For information about the configuration of drives refer to the administration manual *ASC System Configuration - Configuration drives*.

4.2.2 Activate API server



The API server must be activated if keyword spotting and transcription is supposed to be carried out.

1. Start the application System Configuration.
2. Log in as system administrator.
3. Select the menu item *Setup > Servers*.
4. In the detail view of the server, e. g. *192.168.169.4*, click on the tab *Usage*.



< Details* Usage* Media Streamer Replay Server Address Mapping

API Server

☒ API server

API server name* API-06

Storage expansions

Path	Server

Fig. 2: Group field API Server

Group field API Server

<i>API server</i>	<p>Activate the check box <i>API server</i>.</p> <p><input checked="" type="checkbox"/> = Function has been activated. The entry field <i>API server name</i> becomes active.</p> <p><input type="checkbox"/> = Function has not been activated.</p>
<i>API server name</i>	In the entry field <i>API server name</i> , enter the name with which the API server is supposed to be displayed in the system.

Tab. 4: Configure API server

1. Click on the button *Save* to apply the settings.

4.2.3

Activate replay



Replay must be activated if keyword spotting and transcription is supposed to be carried out.

1. Start the application System Configuration.
2. Log in as system administrator.
3. Select the menu item *Setup > Servers*.
4. In the detail view of the server, e. g. *192.168.169.4*, click on the tab *Usage*.

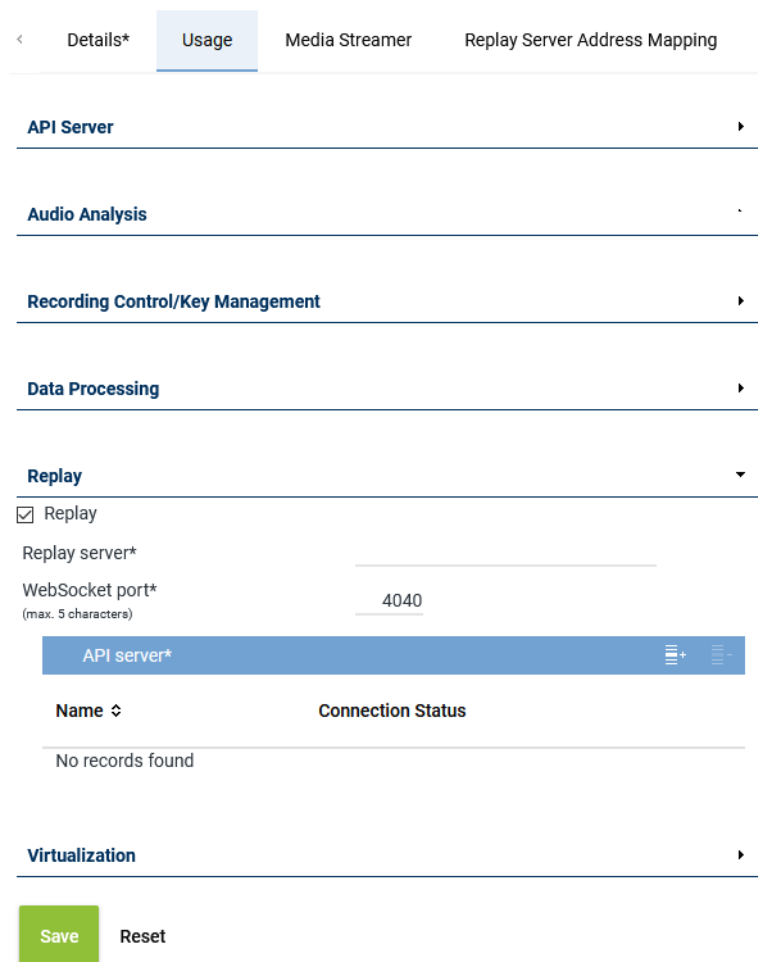


Fig. 3: Group field Replay

Group field Replay

<i>Replay</i>	<p>Activate the check box <i>Replay</i> to be able to use the replay function of the players.</p> <p><input checked="" type="checkbox"/> = Function has been activated. The entry field <i>Replay server</i> becomes active.</p> <p><input type="checkbox"/> = Function has not been activated.</p>
<i>Replay server</i>	In the entry field <i>Replay server</i> , enter the name which is supposed to denote the server as the replay server in the system.

Tab. 5: Configure replay

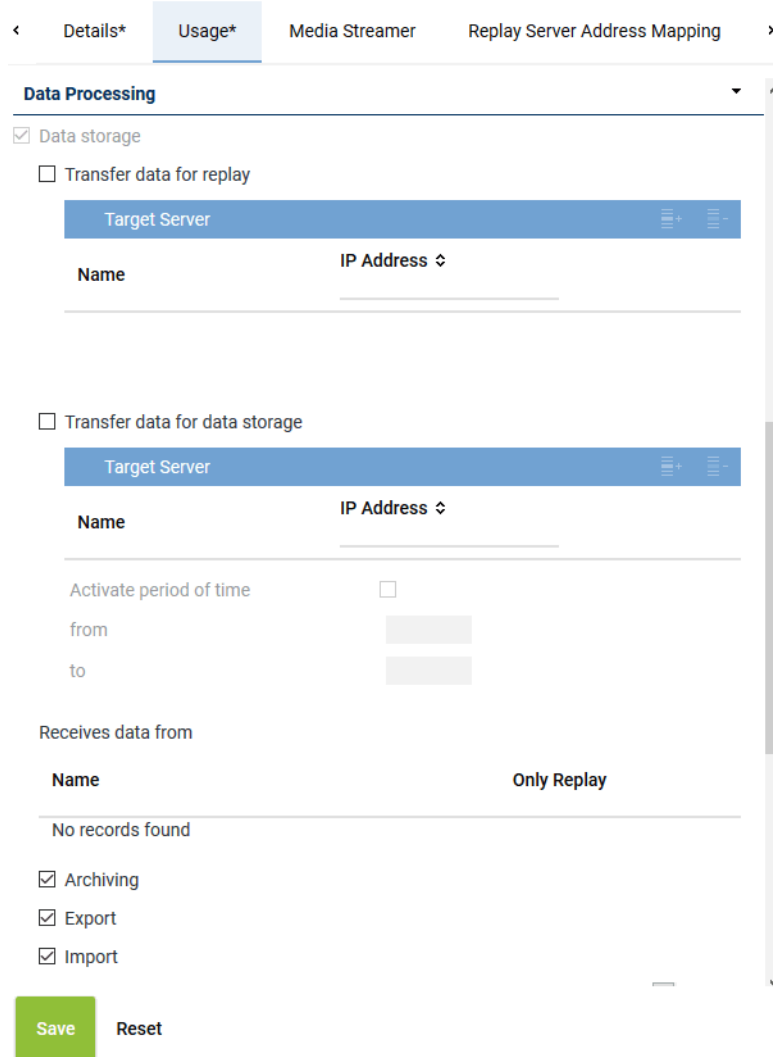
1. Click on the button *Save* to apply the entries.

4.2.4 Activate export



Export must be activated if keyword spotting and transcription is supposed to be carried out.

1. Start the application System Configuration.
2. Log in as system administrator.
3. Select the menu item *Setup > Servers*.
4. In the detail view of the server, e. g. *192.168.169.4*, click on the tab *Usage*.



Details* Usage* Media Streamer Replay Server Address Mapping

Data Processing

☒ Data storage

☐ Transfer data for replay

Target Server

Name IP Address ↕

☐ Transfer data for data storage

Target Server

Name IP Address ↕

Activate period of time ☐

from

to

Receives data from

Name Only Replay

No records found

☒ Archiving

☒ Export

☒ Import

Save Reset

Fig. 4: Activate export function

5. In the group field *Data Processing*, activate the check box *Export*.
6. Click on the button *Save* to apply the entries.



For information about the configuration of the server refer to the installation manual *Configuration of servers and recording architectures*.

4.3 Configure audio analysis application



The configuration must be carried out for each tenant that would like to use speech analysis.

1. Start the application System Configuration.
2. Log in as 1st tenant-admin.

3. Select the menu item *Applications*.
4. Click on *Audio Analysis* in the main view.
 - ⇒ The following window appears:



Fig. 5: Detail view EML settings (example)

Add	Adds a new analysis engine or a new project. Options: <ul style="list-style-type: none"> • <i>Keyword spotting</i> • <i>Real-time keyword spotting</i> • <i>Transcription</i> • <i>Emotion detection</i>
Edit	Opens a window which allows editing the selected analysis engine or the selected project.
Delete	Deletes the selected analysis engine or the selected project.

5. Click on the button *Add*.
6. Select an option. The following options are available:
 - *Keyword Spotting*, see [chapter "Configure keyword spotting EML"](#), p. 14
 - *Real-Time Keyword Spotting*, see [chapter "Configure real-time keyword spotting EML"](#), p. 14
 - *Transcription*, see [chapter "Configure transcription EML"](#), p. 19 or see [chapter "Configure transcription Microsoft Cognitive Services"](#), p. 20
 - *Emotion Detection*, see [chapter "Configure emotion detection ASC"](#), p. 18



For each language, its own analysis engine or its own project must be configured.



Whenever the number of available transcription analytics licenses or keyword spotting analytics licenses is adjusted, each previously created analysis engine or previously created project must be saved again so that the license number is updated in the background.

4.3.1 Configure keyword spotting EML

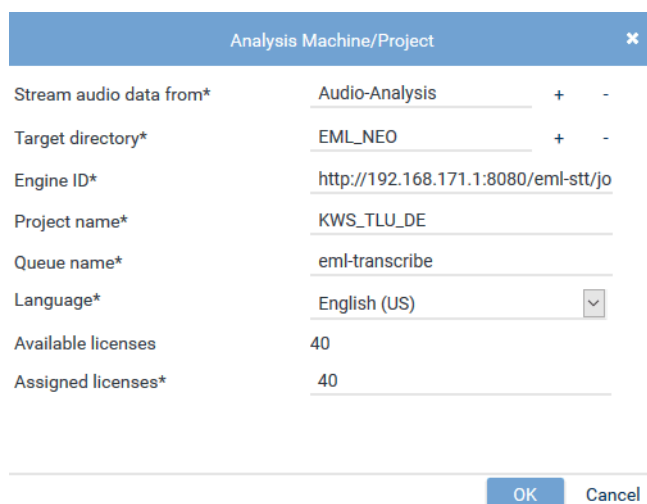


Fig. 6: Configure keyword spotting EML (example)

<i>Stream audio data from</i>	Click on the button + to select the server from the list which has direct access to the audio data.
<i>Target directory</i>	Click on the button + to select the server from the list on which the audio data is supposed to be exported for audio analysis.
<i>Engine ID</i>	In the entry field, enter the URL of the EML Transcription Server (e. g. http://192.168.171.1:8080/eml-stt/jobSubmit).
<i>Project name</i>	Enter the project name in the entry field which has been configured in the EML system.
<i>Queue name</i>	In the entry field, enter the value configured in the EML system (e. g. <i>eml-transcribe</i>). If a customer configures its own EML system, enter the queue name in the entry field which has been configured in the EML system.
<i>Language</i>	Select a language.
<i>Available licenses</i>	Shows the number of available licenses.
<i>Assigned licenses</i>	In the entry field, enter the number of licenses that you would like to assign.

1. Click on the button **OK**.
2. Click on the button **Save** to apply the settings.

4.3.2 Configure real-time keyword spotting EML

To be able to configure real-time keyword spotting, an authentication key must be created in the EML Streaming Service and the language must be configured. This data must then be saved in the application System Configuration in the Applications module.

Create key

1. Open the EML Streaming Service.
2. Click on the menu **Keys**.
3. Click on the button **Add Key**.
⇒ The window **Add Key** appears.

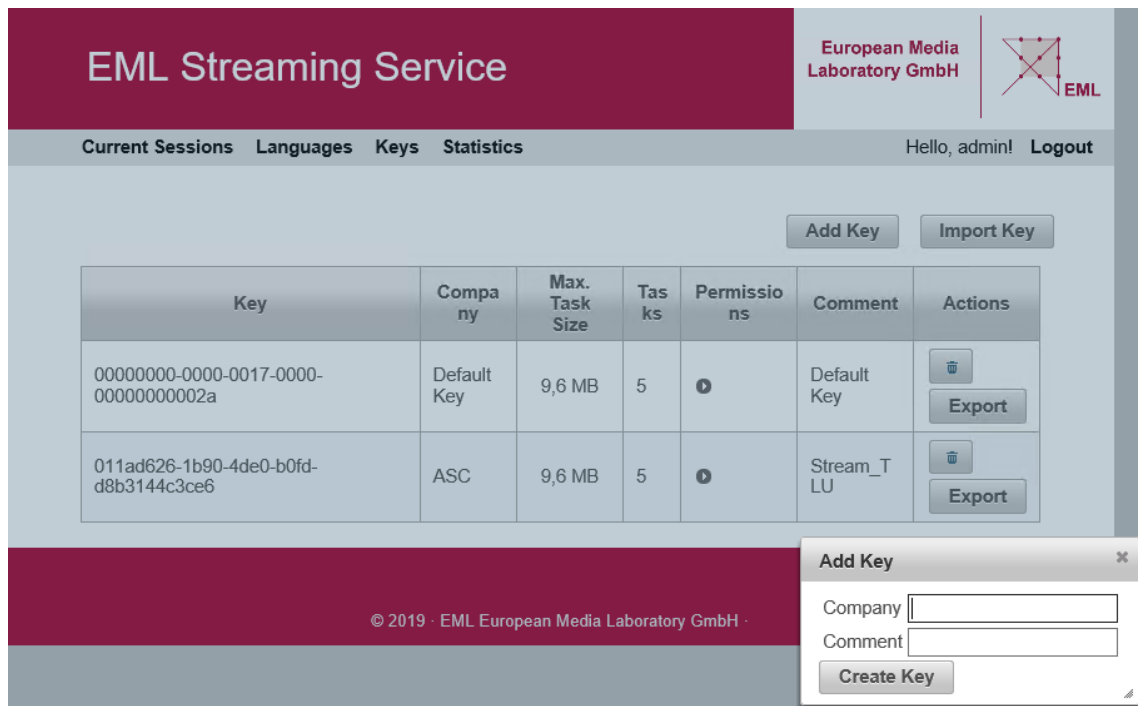


Fig. 7: Create key

4. Enter your company name and a comment.
5. Click on the button *Create Key* to create the key.

Configure language

1. Click on the menu *Languages* and subsequently on *Manage Projects*.
⇒ The window *Configure Projects* appears.

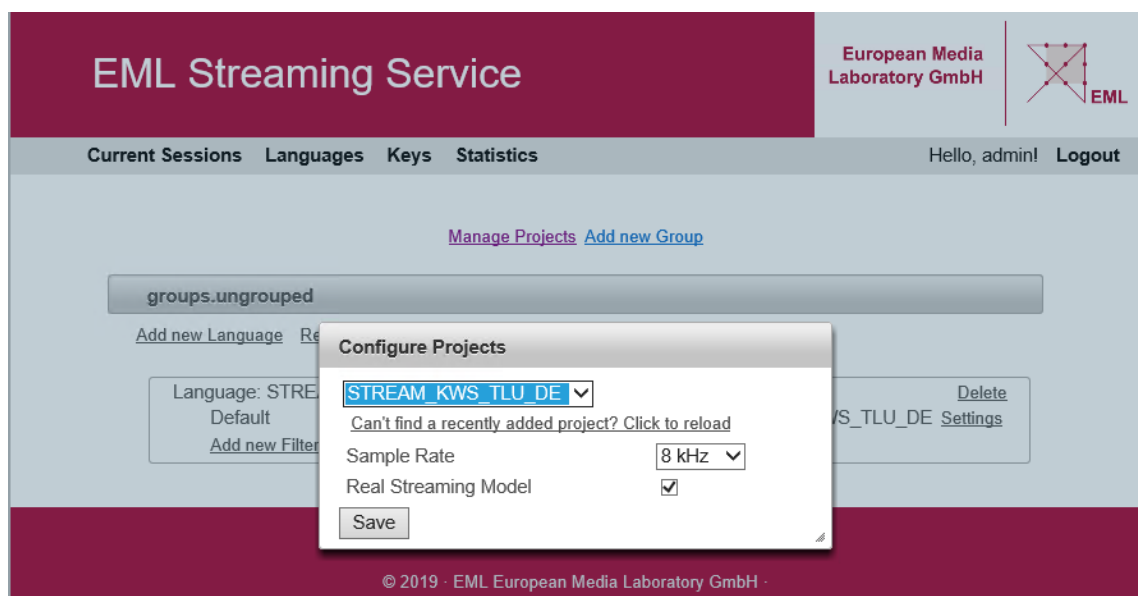


Fig. 8: Create key

2. Select the project created for real-time keyword spotting during the installation.
3. Activate the check box *Real Streaming Model*.
4. Click on the button *Save* to save the configuration.
5. Click on the menu item *Add new Language*.
⇒ The window *Settings* appears.

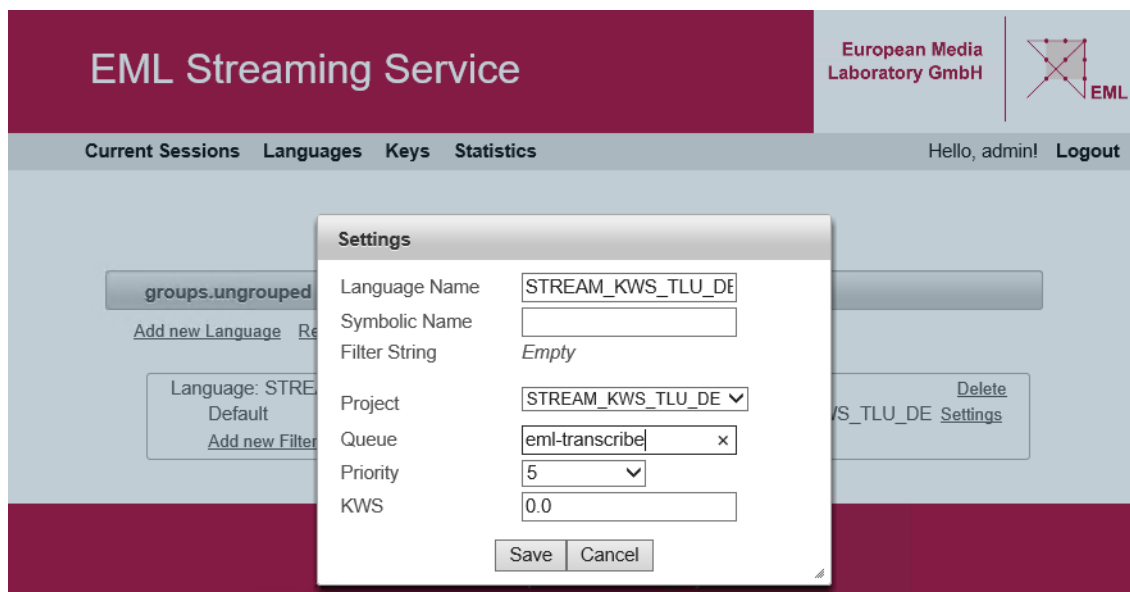


Fig. 9: Create key


6. Under *Language Name*, enter the same name that you have used as project name for real-time keyword spotting.
7. In the entry field *Queue*, enter the value configured in the EML system (e. g. *eml-transcribe*).
8. Select the priority. 0 = lowest priority and 9 = highest priority.
9. Click on the button **Save** to save the configuration.

Save data in the System Configuration

1. Start the application System Configuration.
2. Log in as 1st-tenant-admin.
3. Select the menu item *Applications*.
4. Click on *Audio Analysis* in the main view.
5. Click on the button **Add**.
6. Select the option *Real-time keyword spotting > EML*.
7. Configure the parameters for real-time keyword spotting:


Analysis Machine/Project	
Stream audio data from*	Rep_134 + -
Engine ID*	http://192.168.171.1:8080
Project name*	STREAM_KWS_TLU_DE
Queue name*	eml-transcribe
Authentication key*	011ad626-1b90-4de0-b0fd-d8b3144c
Language*	Englisch (US) ▾
Available licenses	40
Assigned licenses*	40

Fig. 10: Configure real-time keyword spotting EML (example)

<i>Stream audio data from</i>	Click on the button  to select the server from the list from which the audio data is supposed to be streamed.
<i>Engine ID</i>	In the entry field, enter the URL of the EML Transcription Server (e. g. http://192.168.171.1:8080).
<i>Project name</i>	Enter the project name in the entry field which has been configured in the EML system.
<i>Queue name</i>	In the entry field, enter the value configured in the EML system (e. g. <i>eml-transcribe</i>). If a customer configures its own EML system, enter the queue name in the entry field which has been configured in the EML system.
<i>Authentication key</i>	In the entry field enter the key configured in the EML system. See Configure real-time keyword spotting .
<i>Language</i>	Select a language.
<i>Available licenses</i>	Shows the number of available licenses.
<i>Assigned licenses</i>	In the entry field, enter the number of licenses that you would like to assign.



8. Click on the button *OK*.
9. Click on the button *Save* to apply the settings.

Data saved in **INSPIRATION_{neo}**

1. Start the application **INSPIRATION_{neo}**.
2. Log in as 1st-tenant-admin.
3. Open the Audio Analysis module.
4. Click on the icon  (*Create*) in the toolbar of the main view.
5. Select the option *Keyword Spotting Job > Real Time*.
6. Adjust all necessary settings in the tabs of the detail view.
NOTICE! Only those agents are analyzed who have been added in the tab *Filter*.



For information about the configuration of the detail view refer to the user manual *INSPIRATION_{neo} - Audio Analysis module*.

7. Click on the button *Save* to apply the settings.
8. Open the Quality Alarms module.
9. Click on the icon  (*Create*) in the toolbar of the main view.
10. Select the option *Quality Alarm for Real-Time Keyword Spotting*.
11. Adjust all necessary settings in the tabs of the detail view.
12. In the tab *Keywords*, click on the icon  (*Add*) to add keywords.
NOTICE! In real-time keyword spotting, only the keywords added here are searched for. The found keywords added here are displayed in the application **CLIENT_{command}**.



For information about the configuration of the detail view of the Quality Alarms module refer to the user manual *INSPIRATION_{neo} - Quality Management module*.

13. Click on the button *Save* to apply the entries.
14. If you would like to be notified whenever a real-time keyword is found, you can configure the INFO notification *QUALITY_ALARM_KEYWORD_REALTIME* in the application System Configuration in the Notifications module accordingly.

4.3.3 Configure emotion detection ASC

Before configuring emotion detection, the system administrator must activate emotion detection in the Servers module. The further configuration is carried out by the tenant in the System Configuration in the Applications module and in the application INSPIRATION_{neo} in the Audio Analysis module (detail view > tab *Emotions*).



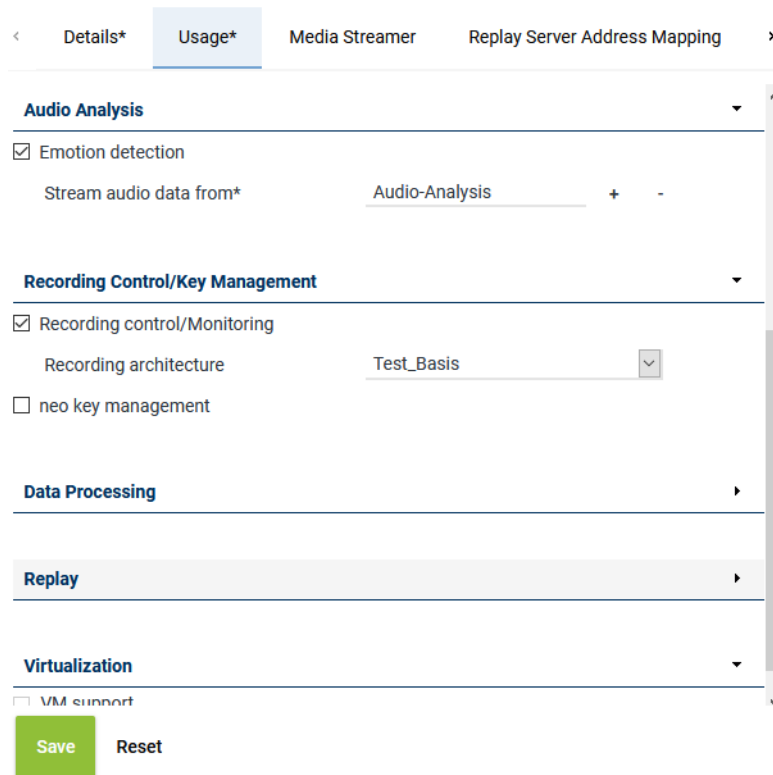
Additional information about creating audio analysis jobs and about how to use them can be found in the user manual *Usage Audio Analysis module*.

Activate emotion detection



Only one server can be activated for emotion detection.

1. Start the application System Configuration.
2. Log in as system administrator.
3. Select the menu item *Setup > Servers*.
4. In the detail view of the server, e. g. 192.168.169.4, click on the tab *Usage*.



The screenshot shows the 'Usage' tab of a server configuration page. It contains several expandable sections: 'Audio Analysis', 'Recording Control/Key Management', 'Data Processing', 'Replay', and 'Virtualization'. In the 'Audio Analysis' section, the 'Emotion detection' checkbox is checked, and the 'Stream audio data from' dropdown is set to 'Audio-Analysis'. In the 'Recording Control/Key Management' section, 'Recording control/Monitoring' is checked, 'Recording architecture' is set to 'Test_Basis', and 'neo key management' is unchecked. At the bottom, there are 'Save' and 'Reset' buttons.

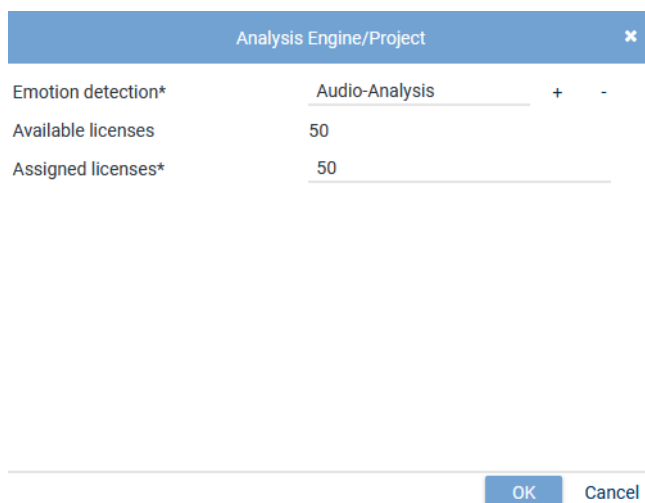
Fig. 11: Activate emotion detection

5. In the group field *Audio Analysis*, activate the check box *Emotion detection*.
6. Click on the button **+** to select the server from the list on which the [API server](#) has been configured.
7. Configure emotion detection:

Save data in the System Configuration

1. Start the application System Configuration.
2. Log in as 1st-tenant-admin.
3. Select the menu item *Applications*.
4. Click on *Audio Analysis* in the main view.

5. Click on the button *Add*.
6. Select the option *Emotion Detection > ASC*.
7. Configure the parameters for emotion detection:



The dialog box titled 'Analysis Engine/Project' contains the following fields:

Emotion detection*	Audio-Analysis	+	-
Available licenses	50		
Assigned licenses*	50		

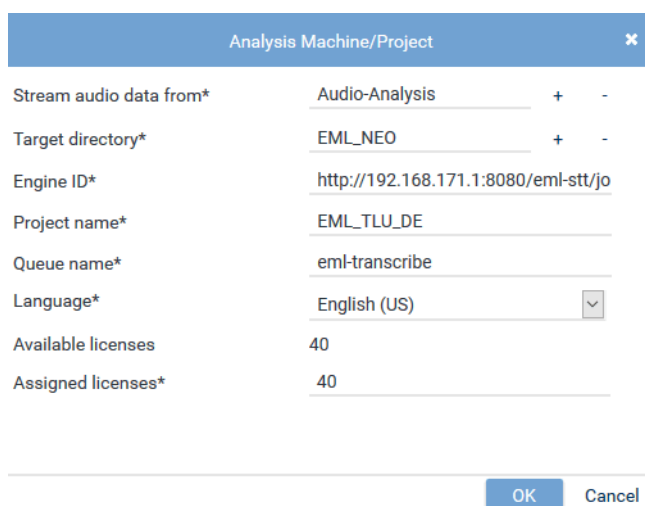
At the bottom right, there are 'OK' and 'Cancel' buttons.

Fig. 12: Configure emotion detection ASC (example)

<i>Emotion detection</i>	Click on the button + to select the server from the list on which the function <i>emotion detection</i> has been activated.
<i>Available licenses</i>	Shows the number of available licenses.
<i>Assigned licenses</i>	In the entry field, enter the number of licenses that you would like to assign.

8. Click on the button *OK*.
9. Click on the button *Save* to apply the settings.

4.3.4 Configure transcription EML



The dialog box titled 'Analysis Machine/Project' contains the following fields:

Stream audio data from*	Audio-Analysis	+	-
Target directory*	EML_NEO	+	-
Engine ID*	http://192.168.171.1:8080/eml-stt/jo		
Project name*	EML_TLU_DE		
Queue name*	eml-transcribe		
Language*	English (US)		▼
Available licenses	40		
Assigned licenses*	40		

At the bottom right, there are 'OK' and 'Cancel' buttons.

Fig. 13: Configure transcription EML (example)

<i>Stream audio data from</i>	Click on the button + to select the server from the list from which the audio data is supposed to be streamed.
<i>Target directory</i>	Click on the button + to select the server from the list on which the audio data is supposed to be exported for audio analysis.
<i>Engine ID</i>	In the entry field, enter the URL of the EML Transcription Server (e. g. http://192.168.171.1:8080/eml-stt/jobSubmit).

<i>Project name</i>	Enter the project name in the entry field which has been configured in the EML system.
<i>Queue name</i>	In the entry field, enter the value configured in the EML system (e. g. <i>eml-transcribe</i>). If a customer configures its own EML system, enter the queue name in the entry field which has been configured in the EML system.
<i>Language</i>	Select a language.
<i>Available licenses</i>	Shows the number of available licenses.
<i>Assigned licenses</i>	In the entry field, enter the number of licenses that you would like to assign.

1. Click on the button OK.
2. Click on the button Save to apply the entries.

4.3.5 Configure transcription Microsoft Cognitive Services

To be able to use Microsoft Cognitive Services, you need an Azure account and a subscription for Azure Cognitive Services. You have to get those at Microsoft's directly.



For more information about an Azure account and authentication see <https://docs.microsoft.com/en-US/azure/cognitive-services/cognitive-services-apis-create-account?tabs=multiservice%2Cwindows> and <https://docs.microsoft.com/en-US/azure/cognitive-services/authentication?tabs=powershell>

Save data in the System Configuration

1. Start the application System Configuration.
2. Log in as 1st tenant-admin.
3. Select the menu item *Applications*.
4. Click on *Audio Analysis* in the main view.
5. Click on the button *Add*.
6. Select the option *Transcription > Microsoft Cognitive Services*.
7. Configure the parameters for transcription with Microsoft Cognitive Services:

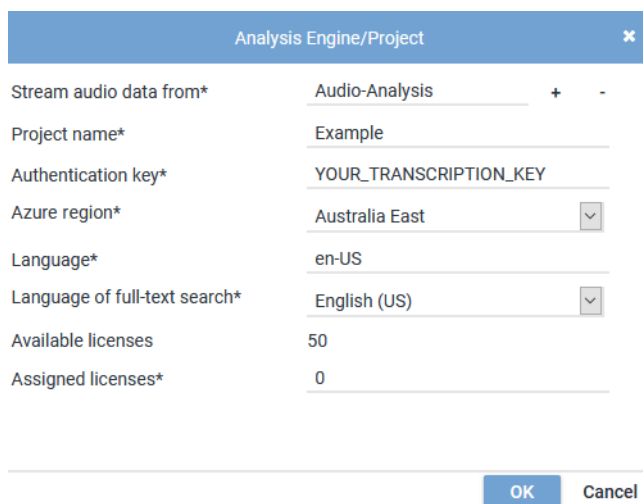


Fig. 14: Configure transcription Microsoft Cognitive Services (example)

<i>Stream audio data from</i>	Click on the button + to select the server from the list from which the audio data is supposed to be streamed.
-------------------------------	---

<i>Project name</i>	In the entry field, enter the project name configured in Microsoft Cognitive Services.
<i>Authentication key</i>	In the entry field, enter the authentication key for Microsoft Cognitive Services. You will get it from Microsoft by means of your Azure account.
<i>Azure region</i>	Select the Azure region from the drop-down list. NOTICE! Make sure the region is matching the region of your subscription.
<i>Language</i>	Select a language to be transcribed into.
<i>Language of full-text search</i>	Select the language for full-text search from the drop-down list.
<i>Available licenses</i>	Shows the number of available licenses.
<i>Assigned licenses</i>	In the entry field, enter the number of licenses that you would like to assign.

8. Click on the button *OK*.
9. Click on the button *Save* to apply the entries.

4.4

Export transcribed recording



These parameters must be considered if you would like to use transcription and export the transcribed recordings.

Configure NAS drive

1. Configure a [NAS](#) drive for the export of the transcription.
Make sure that the respective tenant has been assigned in the tab *Tenant*.
2. By means of the Windows Explorer, create a target directory for the export of the transcription on the [NAS](#) drive, e. g. ...NAS\TranscriptionExport.



For information about the configuration of drives refer to the administration manual *ASC System Configuration - Configuration drives*.

Create transcription job (audio analysis job)



For information about the Audio Analysis module refer to the user manual *INSPIRATIONneo - Audio Analysis module*.

1. Create a transcription job (audio analysis job) in the Audio Analysis module.
2. Select the tab *Transcription*.
3. Activate the option *Export transcription*.
4. In the drop-down list *Format*, select one of the following options:
 - TXT
 - XML
5. Select the [NAS](#) drive as target drive that you want to export the transcribed recording to.
6. In the entry field *Target directory*, enter the directory into which the transcribed recording is supposed to be exported, e. g. TranscriptionExport.
7. If required, activate the option *Remove NOISE elements*.

5

Quickguide

5.1

Download speech analysis files for transcription

1. Log in to ASC XCHANGE on our website <https://www.asc.de/partner>.
2. In the area *Software Download*, open the corresponding directory with the language package for speech analytics, e. g. *neo Suite > Speech Analytics > Language Packages > dede > de_S2T*.
3. Download the ZIP file for transcription, e. g. *dede_transcription.zip*.
4. Unpack the ZIP file for transcription, e. g. *dede_transcription.zip* into the directory *\applications\EML\2019_09_24_Transcribe*.

NOTICE! The ZIP file is protected by a password. The password to unpack the ZIP file can be found on our website <https://wiki.asc.de/display/WIKI/EML+Language+Packages+Password+Protection>.

⇒ 3 speech analytics files are unpacked:

- *AM*.zip
- *LM*.zip
- *IMAGES*.zip

5.2

Configure transcription in the EML Transcription Server Monitor

1. Open the EML Transcription Server Monitor.
2. Click on the tab *Files*.
3. Upload the speech analytics files for transcription.
From the drop-down list *Upload*, select the entry *AM* (acoustic model).
4. Click on the button *Choose*.
5. In the Explorer, select the ZIP file with *AM* in its name, e. g. *\applications\EML\2019_09_24_Transcribe*AM*.zip* and click on the button *Open* to upload the file.

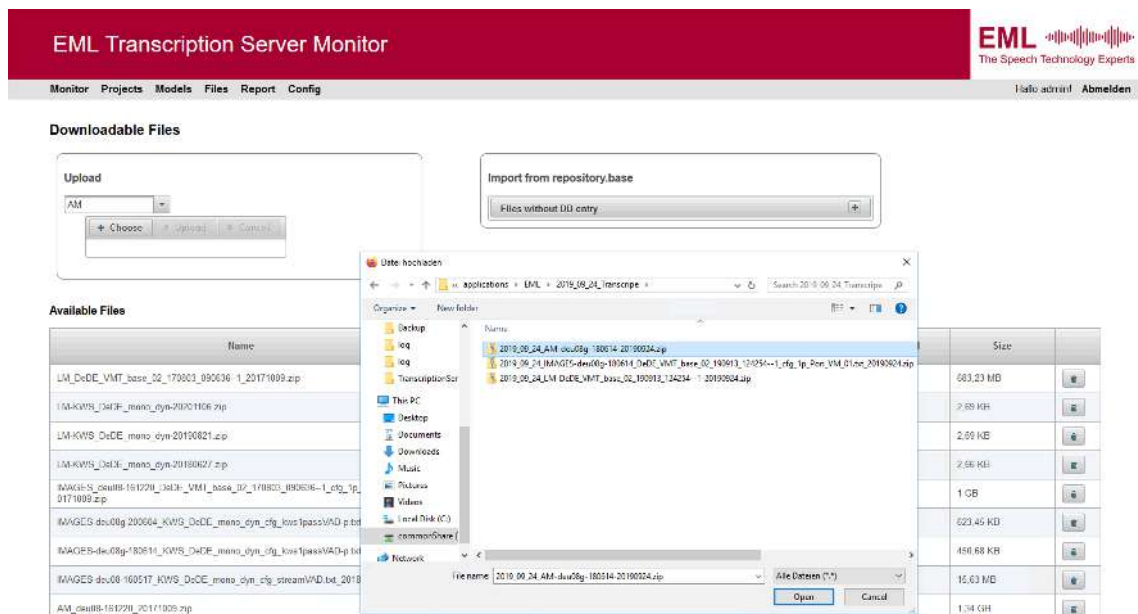


Fig. 15: Upload file for transcription

6. From the drop-down list *Upload*, select the entry *LM* (language model).
7. Click on the button *Choose*.
8. In the Explorer, select the ZIP file with *LM* in its name, e. g. *\applications\EML\2019_09_24_Transcribe*LM*.zip* and click on the button *Open* to upload the file.

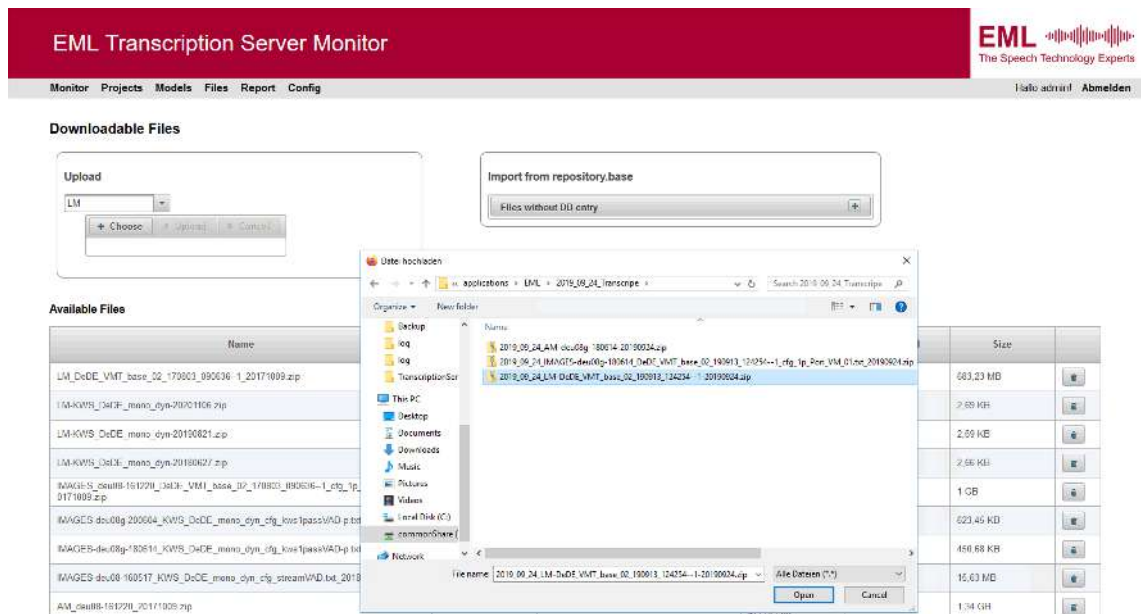


Fig. 16: Upload file for transcription

9. From the drop-down list *Upload*, select the entry *IMAGES*.
10. Click on the button *Choose*.
11. In the Explorer, select the ZIP file with *IMAGES* in its name, e. g. *applications\EML\2019_09_24_Transcribe*IMAGES*.zip* and click on the button *Open* to upload the file.

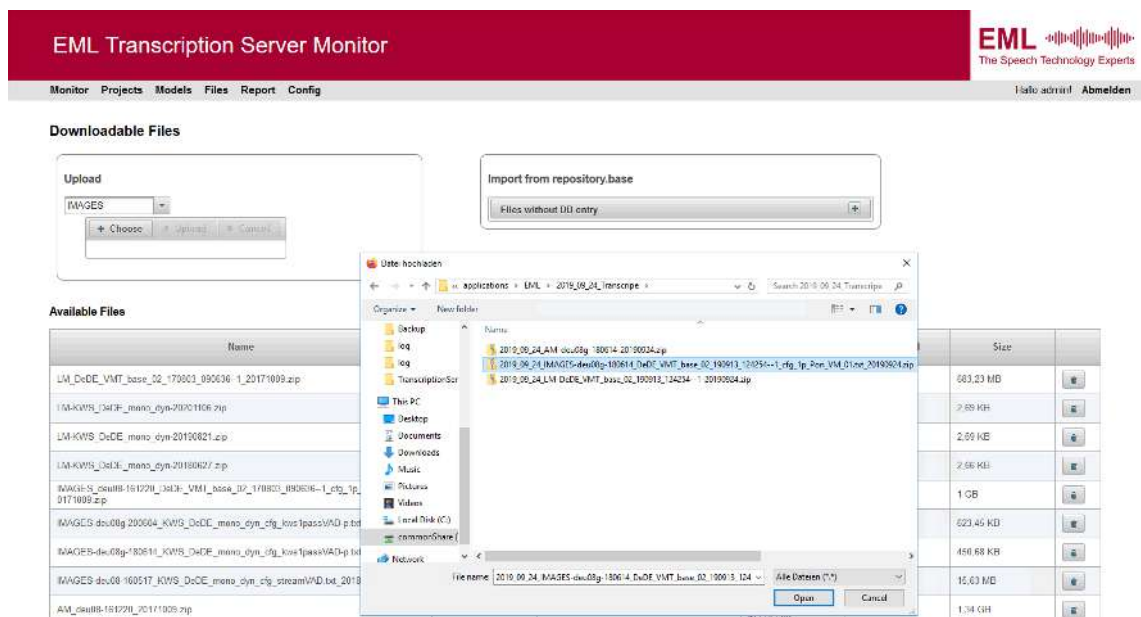


Fig. 17: Upload file for transcription

12. Add the acoustic model in the tab *Models*.

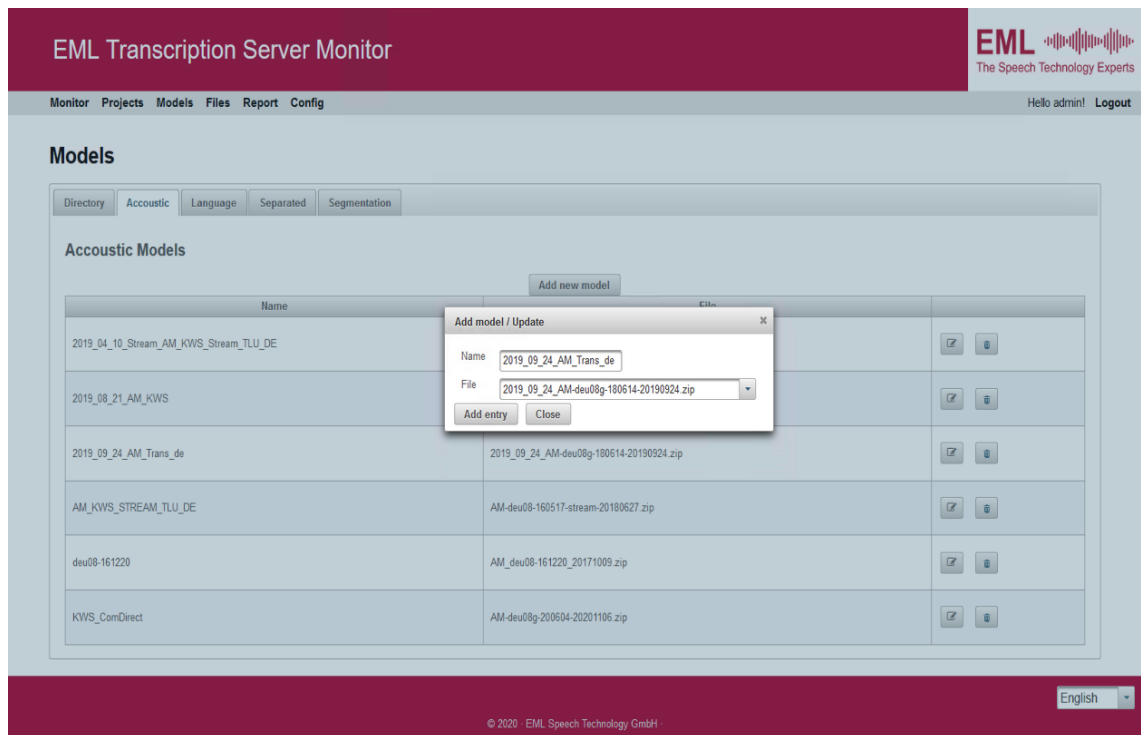


Fig. 18: Add model

13. Select the language in the tabs *Models > Language*.

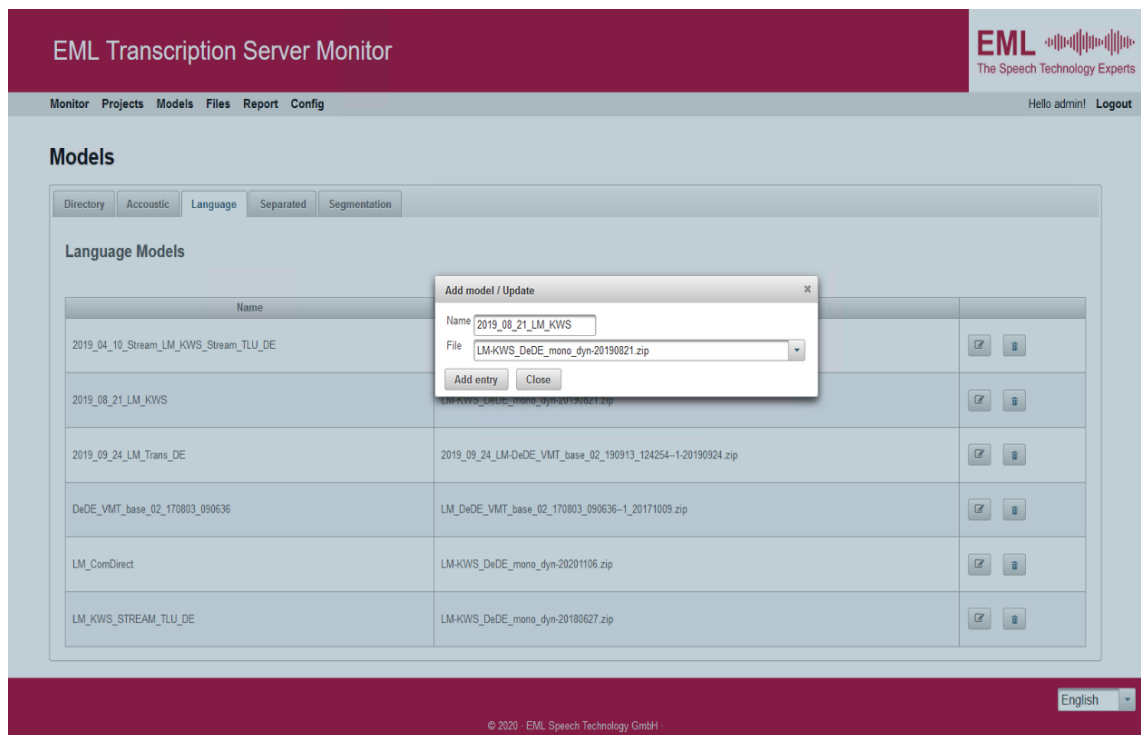


Fig. 19: Select language

14. Configure your transcription project in the tab *Projects*.

NOTICE! The name for the entry field *AM Config* must be read out of the name of the ZIP file in the drop-down list *Images*.

Example:

Images: 2019_09_24_IMAGES-deu08g-180614_DeDE_VMT_base_02_190913_124254—1_cfg_1p_Pon_VM_01.txt_20190924.zip

AM Config: cfg_1p_Pon_VM_01.txt

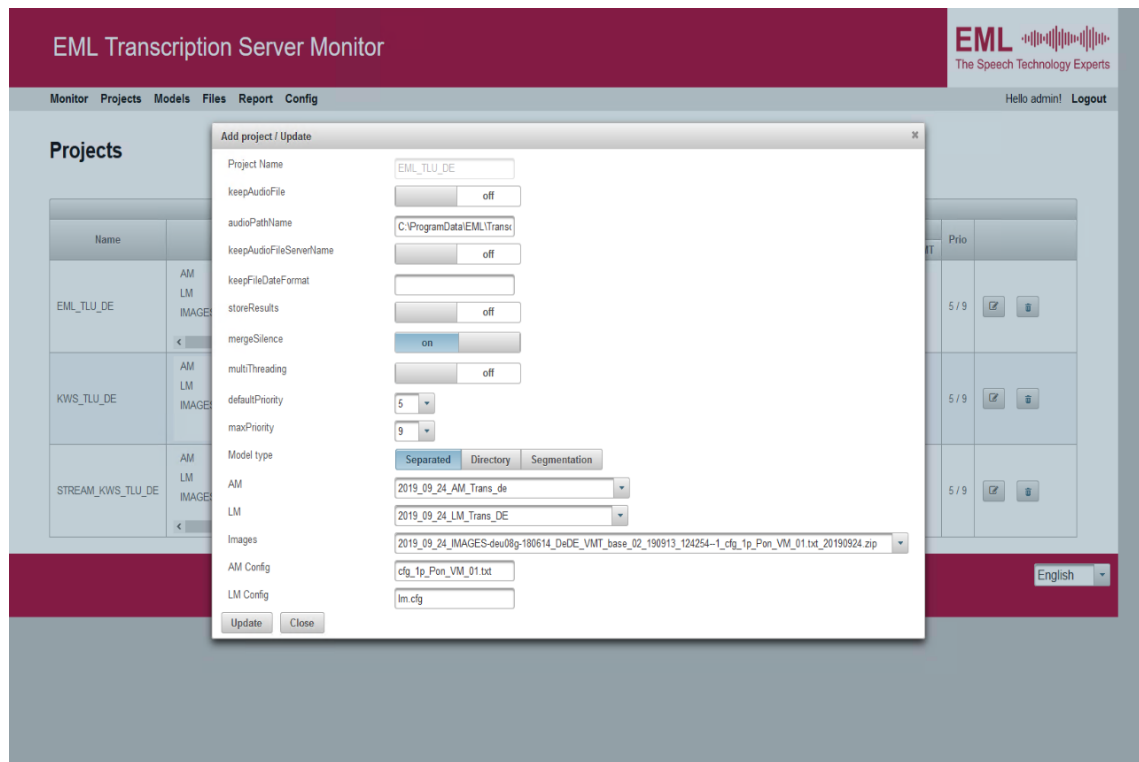


Fig. 20: Configure project

5.3 Download speech analysis files for keyword spotting

1. Log in to ASC XCHANGE on our website <https://www.asc.de/partner>.
2. In the area *Software Download*, open the corresponding directory with the language packages for speech analytics, e. g. *neo Suite > Speech Analytics > Language Packages > dede > de_KWS*.
3. Download the ZIP file for keyword spotting, e. g. *dede_kws.zip*.
4. Unpack the ZIP file for keyword spotting, e. g. *dede_kws.zip* into the directory *\applications\EML\KWS*.

NOTICE! The ZIP file is protected by a password. The password to unpack the ZIP file can be found on our website <https://wiki.asc.de/display/WIKI/EML+Language+Packages+Password+Protection>.

⇒ 3 speech analytics files are unpacked:

- *AM*.zip
- *LM*.zip
- *IMAGES*.zip

5.4 Configure keyword spotting in the EML Transcription Server Monitor

1. Open the EML Transcription Server Monitor.
2. Click on the tab *Files*.
3. Upload the speech analytics files for keyword spotting.
From the drop-down list *Upload*, select the entry *AM* (acoustic model).
4. Click on the button *Choose*.
5. In the Explorer, select the ZIP file with *AM* in its name, e. g. *\applications\EML\KWS*AM*.zip* and click on the button *Open* to upload the file.

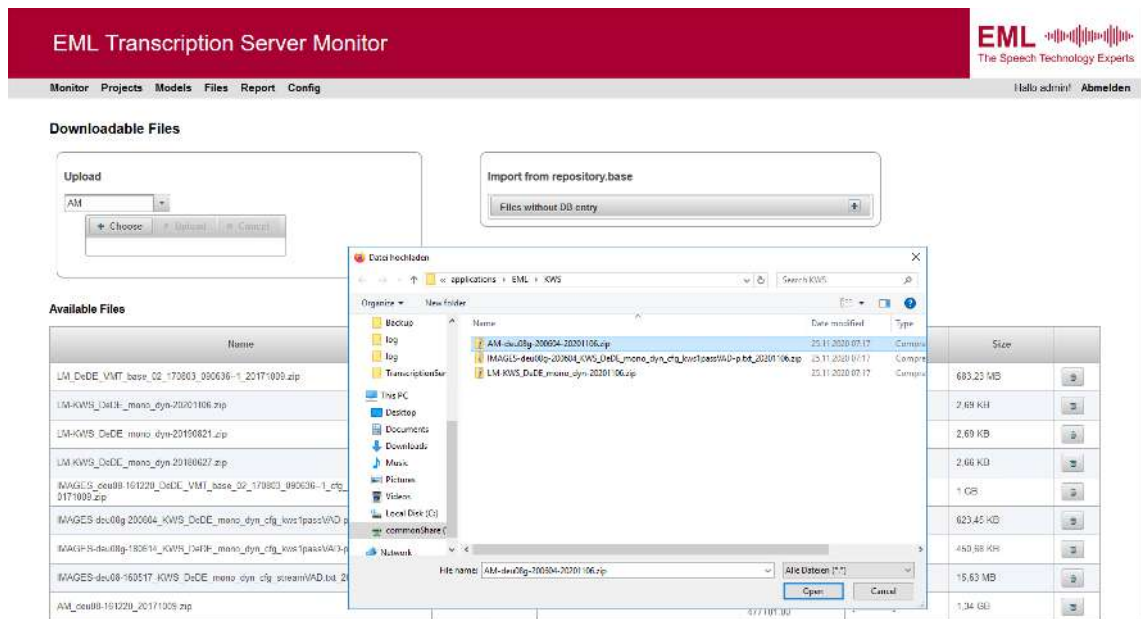


Fig. 21: Upload file for keyword spotting

- From the drop-down list *Upload*, select the entry *LM* (language model).
- Click on the button *Choose*.
- In the Explorer, select the ZIP file with *LM* in its name, e. g. *applications\EML\KWS\LM*.zip* and click on the button *Open* to upload the file.

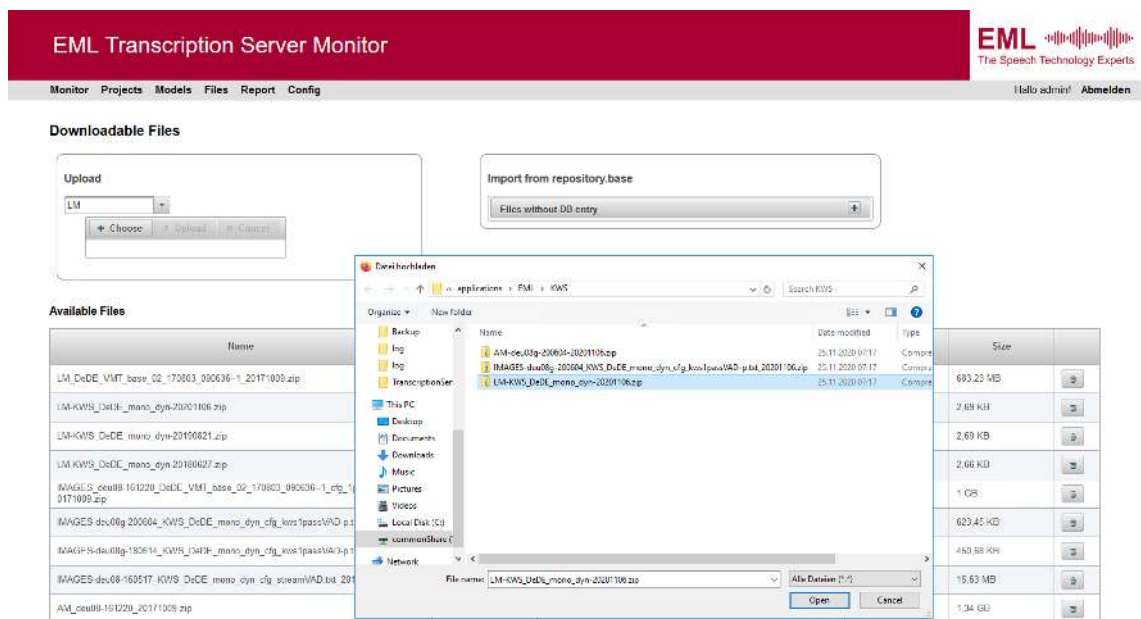


Fig. 22: Upload file for keyword spotting

- From the drop-down list *Upload*, select the entry *IMAGES*.
- Click on the button *Choose*.
- In the Explorer, select the ZIP file with *IMAGES* in its name, e. g. *applications\EML\KWS\IMAGES*.zip* and click on the button *Open* to upload the file.

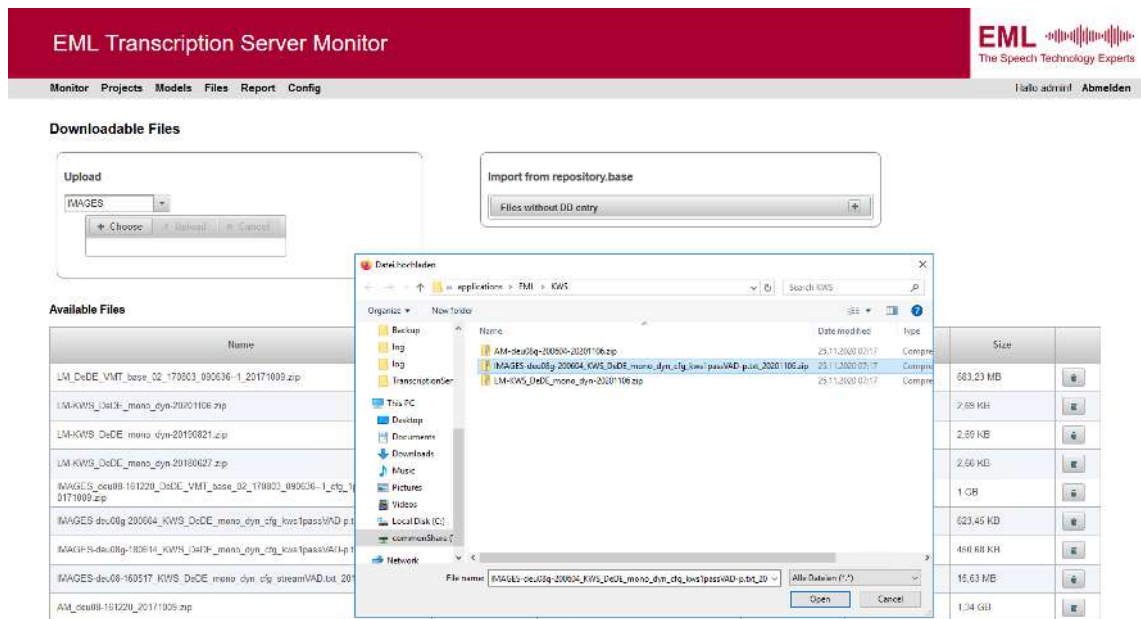


Fig. 23: Upload file for keyword spotting

12. Add the acoustic model in the tab *Models*.

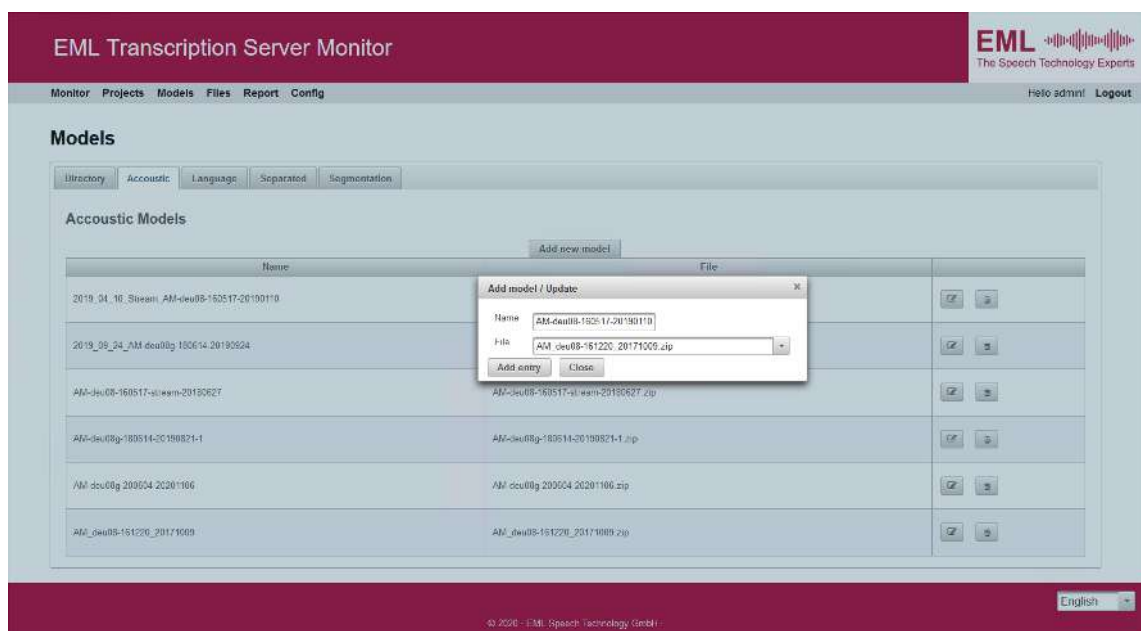


Fig. 24: Add model

13. Select the language in the tabs *Models* > *Language*.

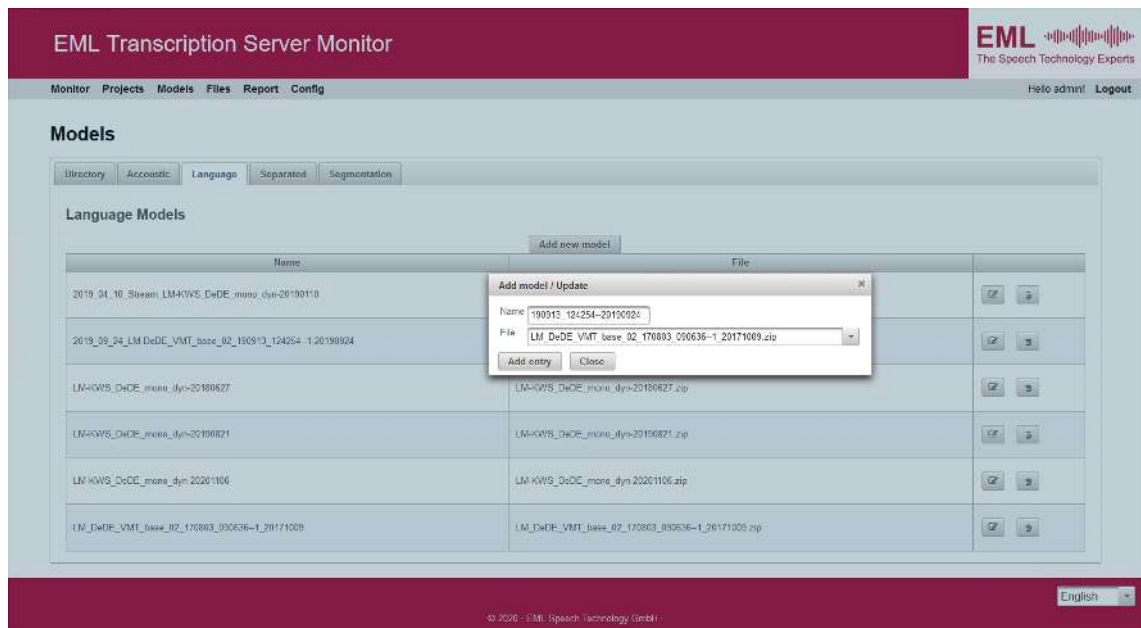


Fig. 25: Select language

14. Configure your speech project in the tab *Projects*.

NOTICE! The name for the entry field *AM Config* must be read out of the name of the ZIP file in the drop-down list *Images*.

Example:

Images: 2019_09_24_IMAGES-deu08g-180614_DeDe_VMT_base_02_190913_124254—1_cfg_1p_Pon_VM_01.txt_20190924.zip

AM Config: cfg_1p_Pon_VM_01.txt

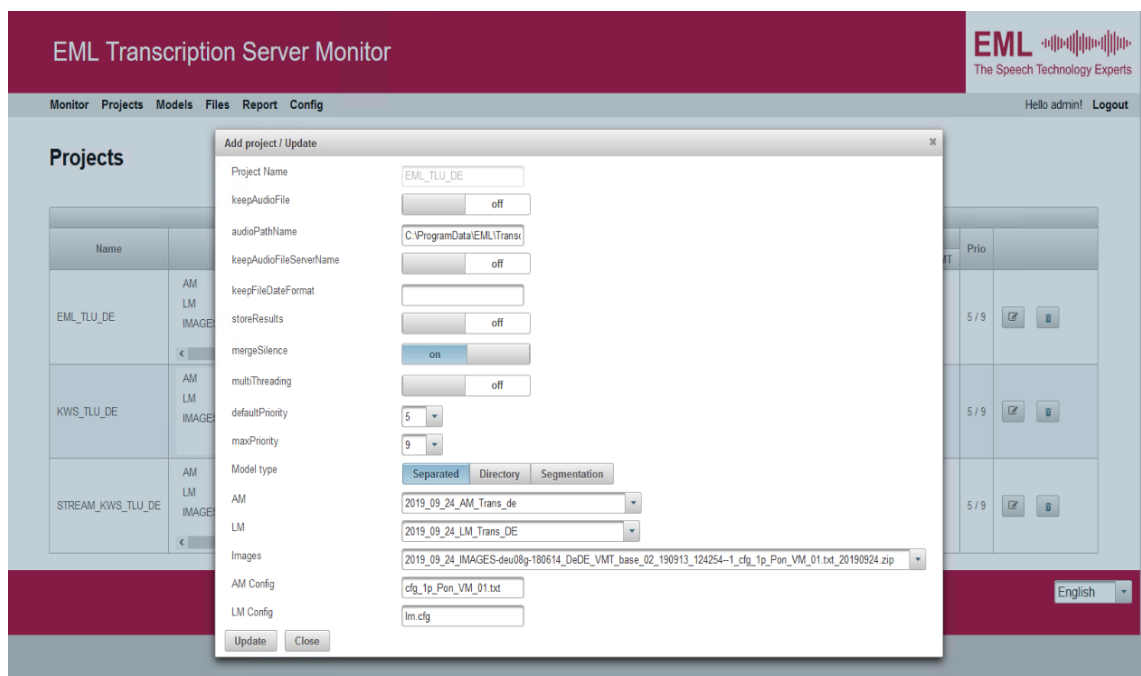


Fig. 26: Configure project

5.5 Configure real-time keyword spotting in EML Streaming Service

1. Open the EML Streaming Service.
2. Click on the menu *Keys*.
3. Click on the button *Add Key*.
⇒ The window *Add Key* appears.

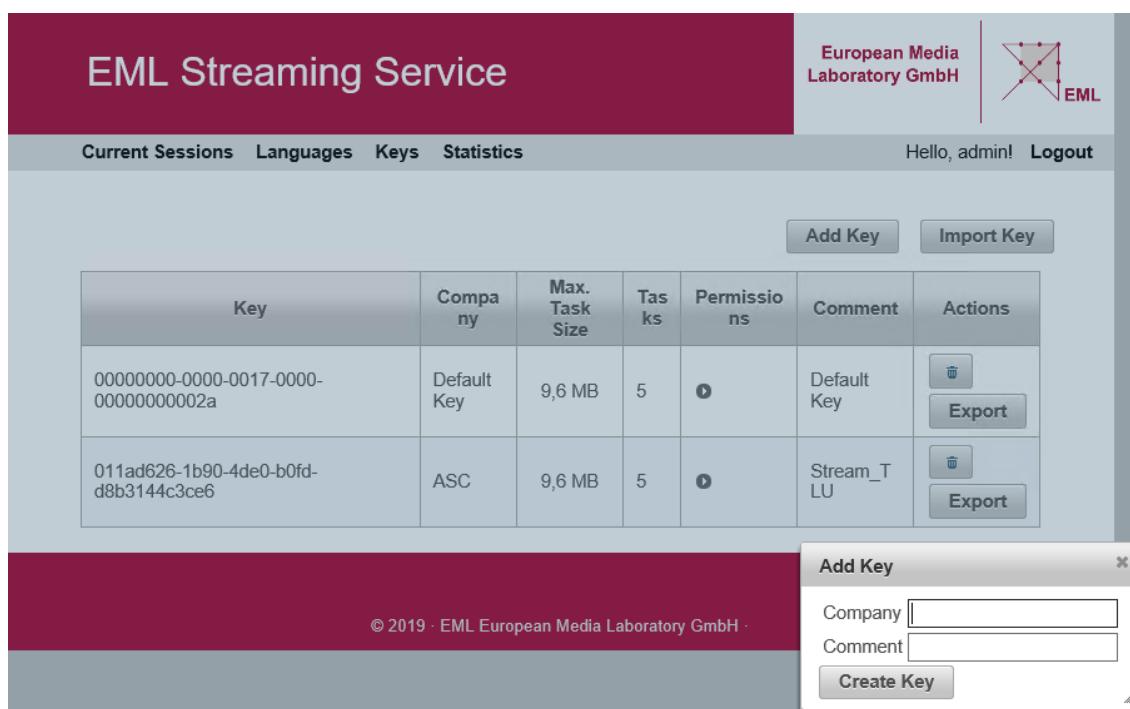


Fig. 27: Create key

4. Enter your company name and a comment.
5. Click on the button *Create Key* to create the key.
6. Click on the menu *Languages* and subsequently on *Manage Projects*.
⇒ The window *Configure Projects* appears.

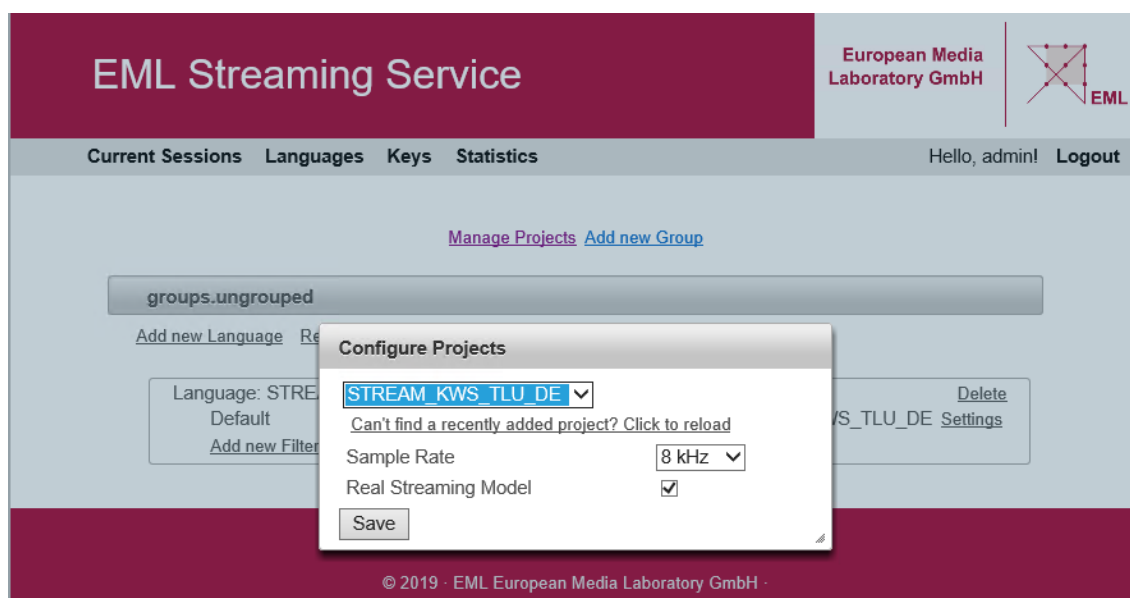


Fig. 28: Create key

7. Select the project created for real-time keyword spotting during the installation.
8. Activate the check box *Real Streaming Model*.
9. Click on the button *Save* to save the configuration.
10. Click on the menu item *Add new Language*.
⇒ The window *Settings* appears.

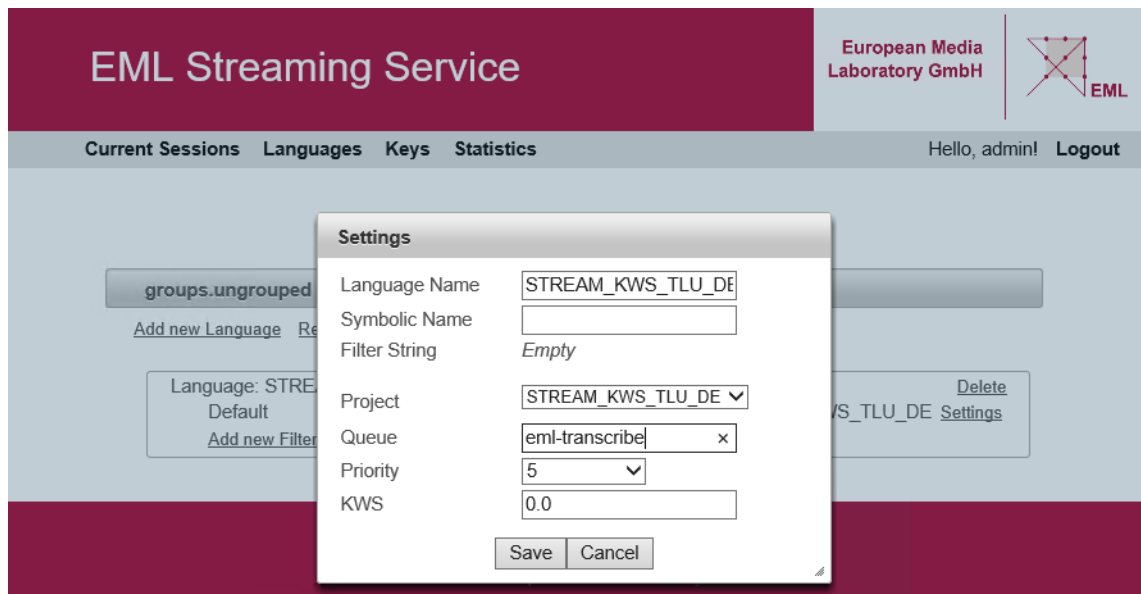


Fig. 29: Create key

11. Under *Language Name*, enter the same name that you have used as project name for real-time keyword spotting.
12. In the entry field *Queue*, enter the value configured in the EML system (e. g. *eml-transcribe*).
13. Select the priority. 0 = lowest priority and 9 = highest priority.
14. Click on the button *Save* to save the configuration.

5.6 Files saved successfully

1. The files have been successfully saved locally:

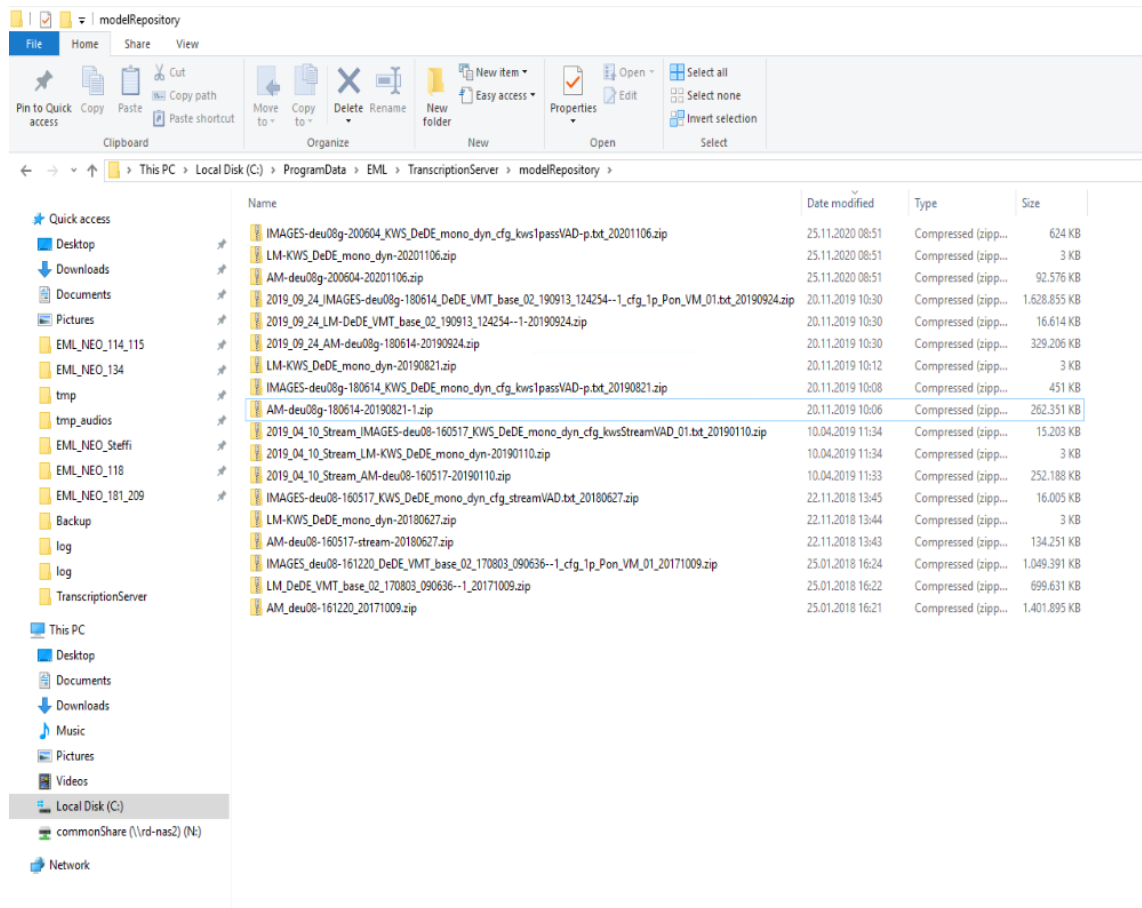


Fig. 30: Files saved successfully

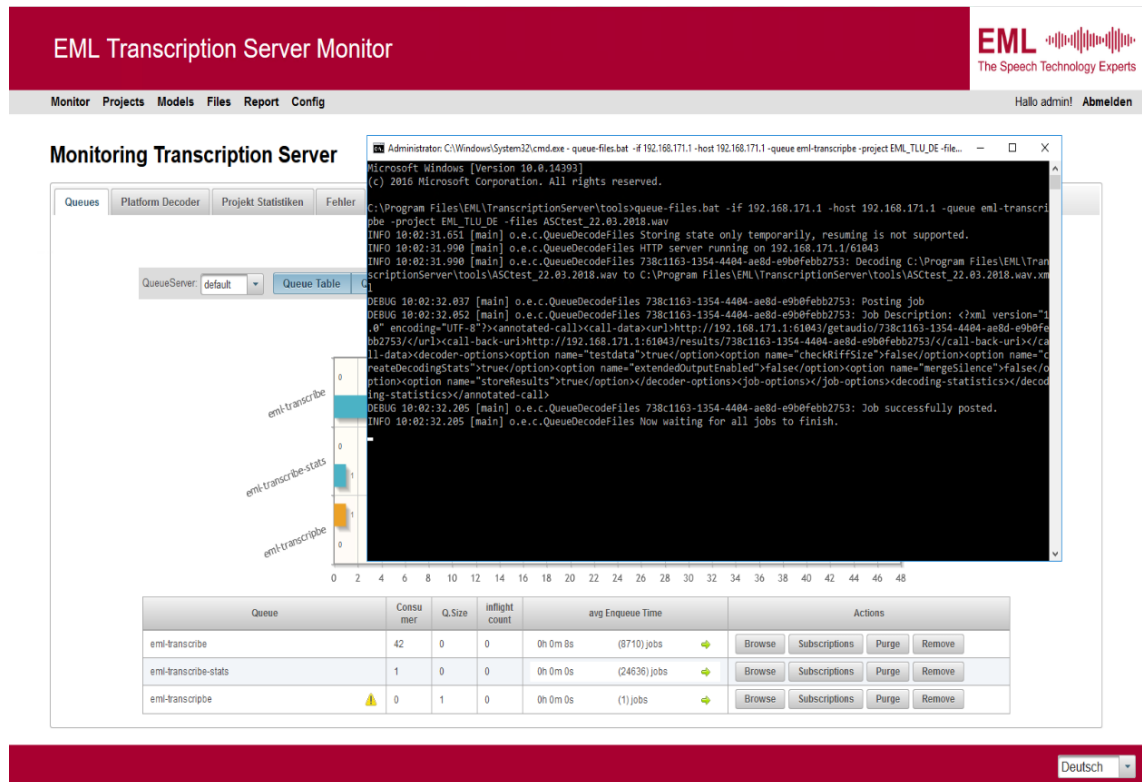


Fig. 31: Test EML: Job is running

5.7 Licenses

Licenses are required to be able to use the speech analysis functions, see [chapter "Licenses", p. 8](#).

5.8 Configure System Configuration

1. Log in to the application System Configuration as system-admin.
2. Open the Servers module in the navigation bar.
3. In the tab *Usage* in the group field *API Server*, activate the check box *API server*.
4. In the tab *Usage* in the group field *Data Processing* under *Receives data from*, activate the check box *Export*.

<
Details*
Usage*
Media Streamer
Replay Server Address Mapping

API Server

☒ API server

API server name*
APISrv

Storage expansions

Path
Server

No records found

☐ Replay via phone

Audio Analysis

Recording Control/Key Management

Data Processing

☒ Data storage

☐ Transfer data for replay

Target Server

Name
IP Address

No records found

☐ Transfer data for data storage

Target Server

Name
IP Address

No records found

Activate period of time
☐

Start
1:00

End
1:00

Receives data from

Name
Only Replay

No records found

☐ Archiving

☒ Export

☐ Import

Recording architecture
Please choose...

Replay

Virtualization

Fig. 32: Configure server

- Create a share on the EML Transcription Server.
- C:\ > right-click on EML_NEO_134 > tab *Sharing* > click on button *Advanced Settings* > click on button *Permissions* > configure *Share Permissions*.



The EML decoder service must use a user account with access to the network *Share*.

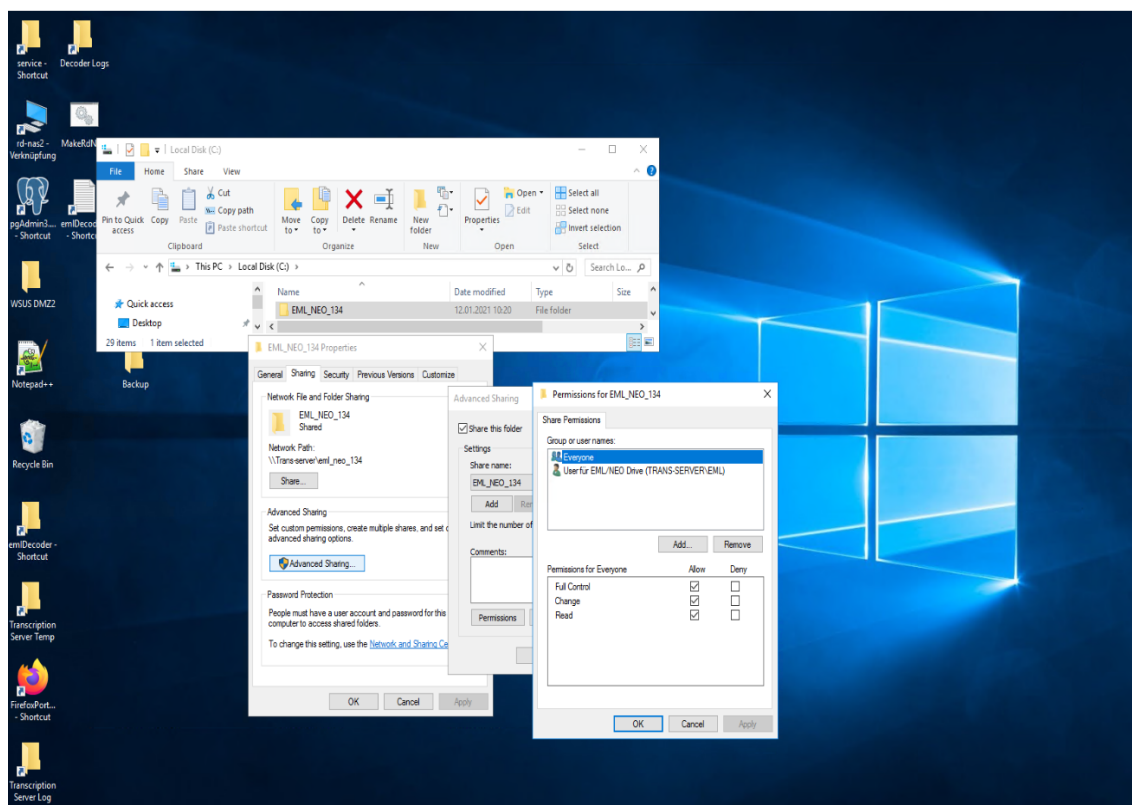


Fig. 33: Create share

7. Grant the respective rights in the tab *Security*.

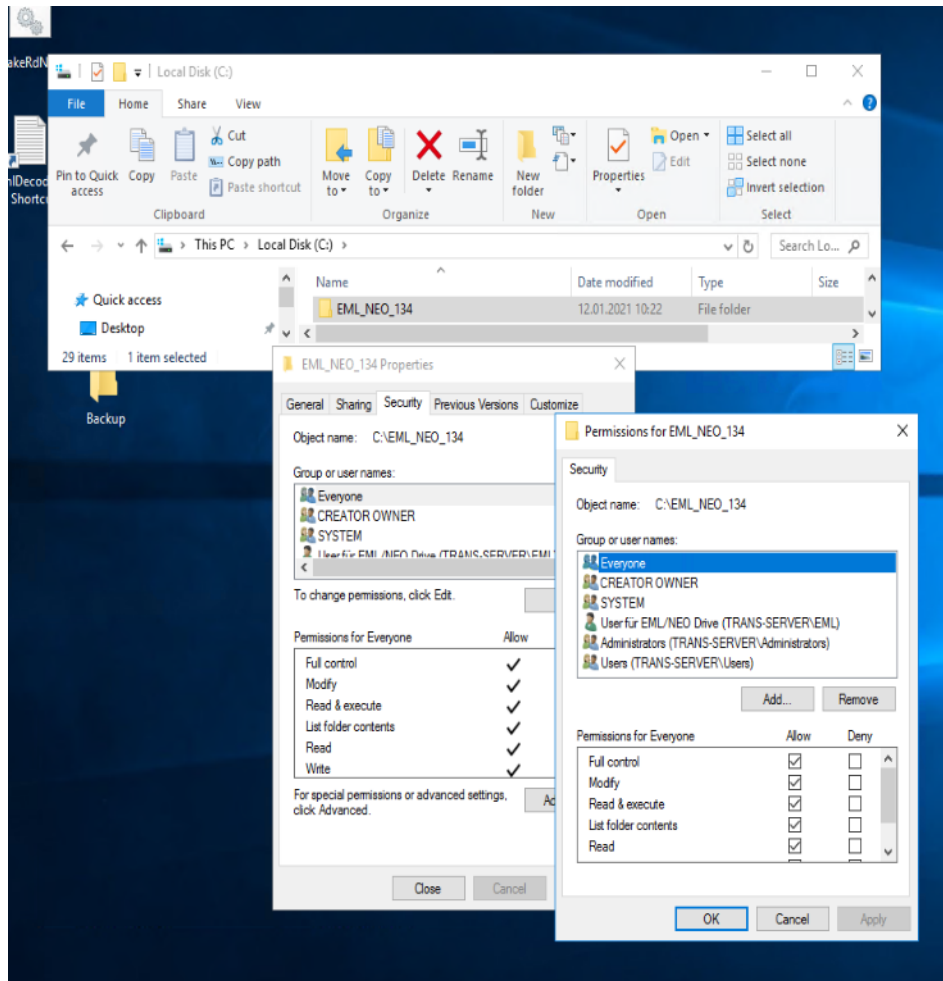


Fig. 34: Grant rights

5.9 Configure share in neo

1. Log in to the application System Configuration as system-admin.
2. Open the Drives module in the navigation bar.
3. Configure the drive where speech analysis is supposed to run.

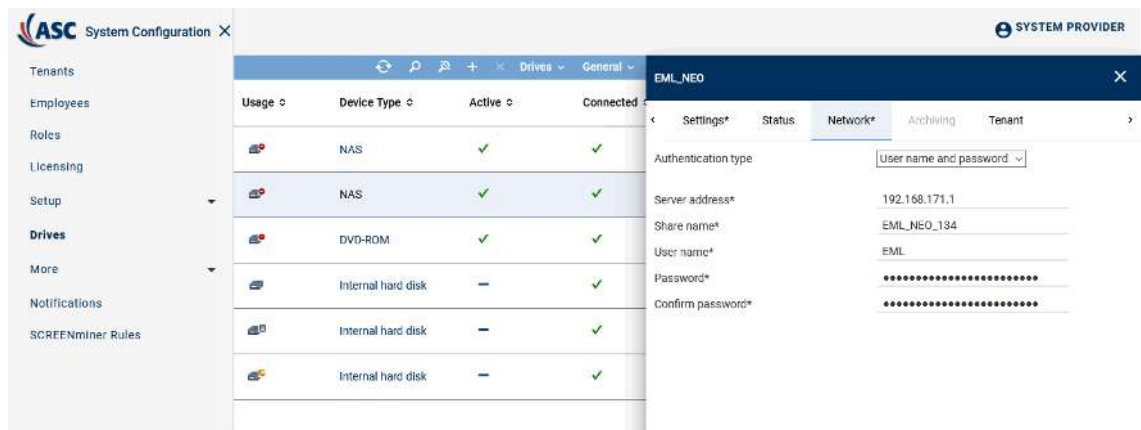


Fig. 35: Configure drive

4. In the tab *Network*, configure the network settings for the drive used for speech analysis.

< Settings* Status **Network*** Archiving Tenant >

Authentication type	User name and password ▾
Server address*	192.168.171.1
Share name*	EML_NEO_134
User name*	192.168.171.1\eml
Password*
Confirm password*

Fig. 36: Tab Network

5. Add a tenant in the tab *Tenant*.

< Settings* Status Network* Archiving **Tenant** >

Tenant	1st-Tenant	+	-
--------	------------	---	---

Fig. 37: Add tenant

5.10

Configure transcription and keyword spotting

1. Log in to the application System Configuration as 1st-tenant-admin.
2. Open the Recording Planner module in the navigation bar and create a quality management recording plan.



The quality management recording plan is intended to record agent sessions which are supposed to be evaluated with INSPIRATION_{neo}. Without a session, audio files cannot be analyzed.



For information about the configuration of recording plans refer to the administration manual for tenants *System Configuration - Recording Planner*.

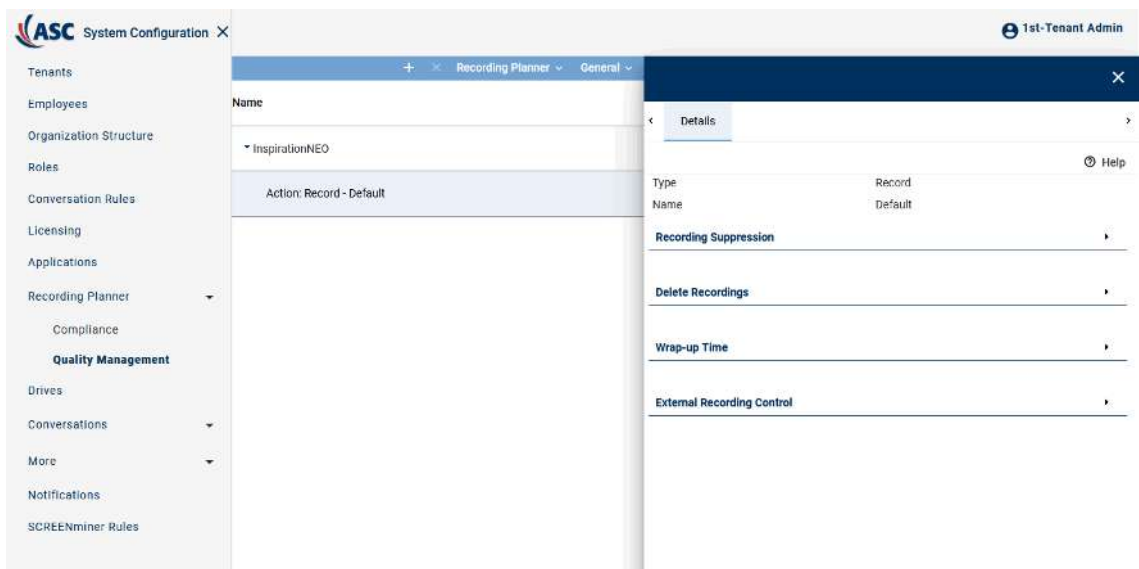


Fig. 38: Create quality management plan

5.11 Configure EML keyword spotting in neo

1. Change to the Applications module and select *Audio Analysis* in the main view.
2. In the detail view in the tab *General Settings* in the group field *Analysis Engines/Projects*, click on the button *Add*.
3. Select the menu item *Keyword spotting > EML* and configure your project in the window *Analysis Engine/Project*.

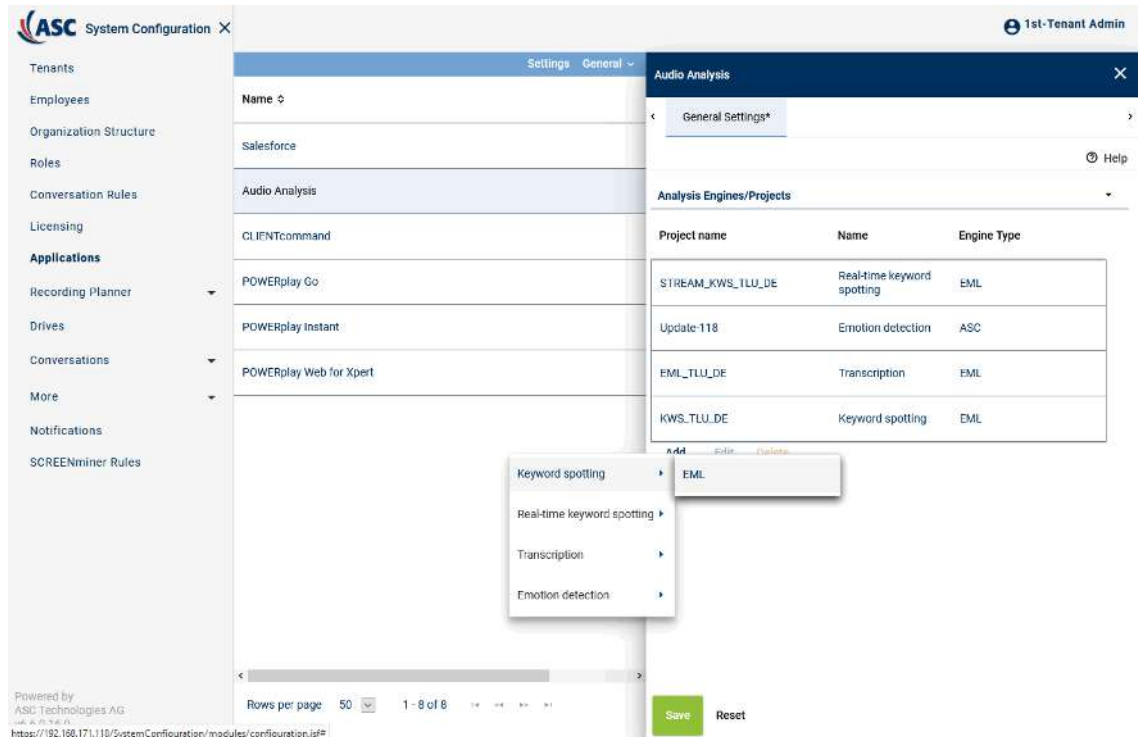


Fig. 39: Configure KWS project (example)

Analysis Engine/Project	
Stream audio data from*	Audio-Analyses + -
Target directory*	EML_NEO_134 + -
Engine ID*	http://192.168.171.1:8080/eml-stt/jo
Project name*	EML_TLU_DE
Queue name*	eml-transcribe
Language of full-text search*	German ▾
Available licenses	50
Assigned licenses*	50

OK Cancel

Fig. 40: Analysis Engine/Project

Engine ID	<i>http://<IP-of-the-EML-Transcription-Server>:8080/eml-stt/jobSubmit</i>
Project name	Is configured during the installation of the EML software and must be used here as well. Example: <i>KWS_TLU_DE</i>
Queue name	Is configured during the installation of the EML software and must be used here as well. Default: <i>eml-transcribe</i>
Language of full-text search	Language in which keywords are supposed to be searched.

5.12 Configure EML real-time keyword spotting in neo

1. Change to the Applications module and select *Audio Analysis* in the main view.
2. In the detail view in the tab *General Settings* in the group field *Analysis Engines/Projects*, click on the button *Add*.
3. Select the menu item *Real-Time Keyword Spotting > EML* and configure your project in the window *Analysis Engine/Project*.

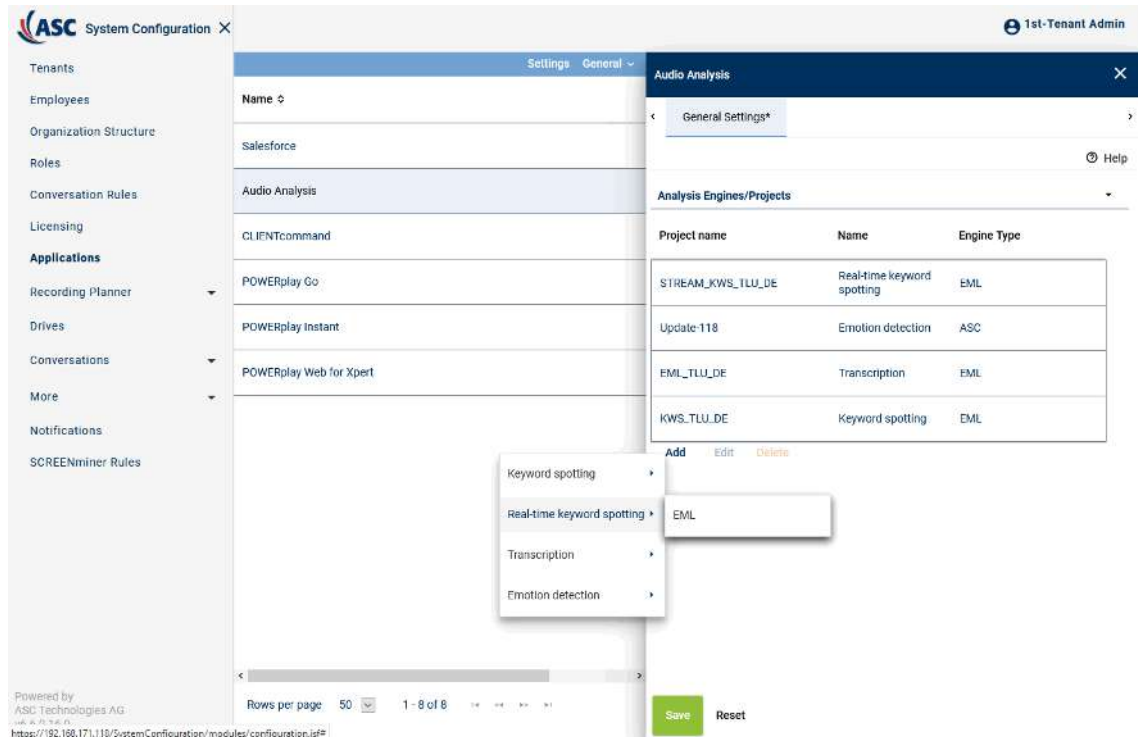
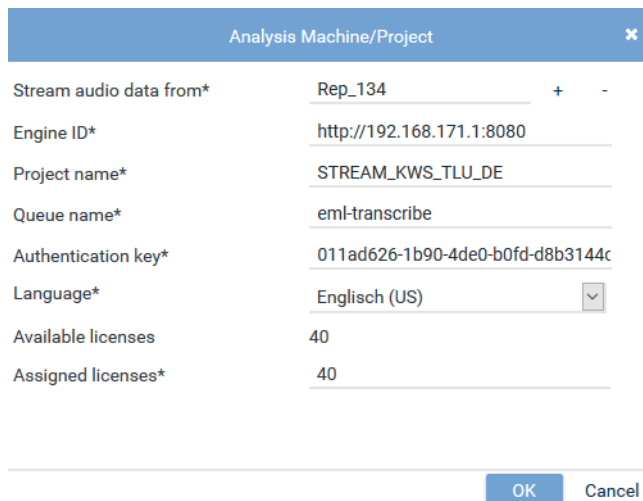


Fig. 41: Configure real-time keyword spotting project (example)



The 'Analysis Machine/Project' configuration window contains the following fields:

- Stream audio data from***: Rep_134
- Engine ID***: http://192.168.171.1:8080
- Project name***: STREAM_KWS_TLU_DE
- Queue name***: eml-transcribe
- Authentication key***: 011ad626-1b90-4de0-b0fd-d8b3144c
- Language***: Englisch (US)
- Available licenses**: 40
- Assigned licenses***: 40

Buttons: OK, Cancel

Fig. 42: Analysis engine/Project (example)

Stream audio data from	Click on the button + to select the server from the list from which the audio data is supposed to be streamed.
Engine ID	In the entry field, enter the URL of the EML Transcription Server (e. g. http://192.168.171.1:8080).
Project name	Enter the project name in the entry field which has been configured in the EML system.

Queue name	In the entry field, enter the value configured in the EML system (e. g. <i>eml-transcribe</i>). If a customer configures its own EML system, enter the queue name in the entry field which has been configured in the EML system.
Authentication key	In the entry field enter the key configured in the EML system. See Configure real-time keyword spotting.
Language	Select a language.

5.13

Configure EML transcription in neo

1. Change to the Applications module and select *Audio Analysis* in the main view.
2. In the detail view in the tab *General Settings* in the group field *Analysis Engines/Projects*, click on the button *Add*.
3. Select the menu item *Transcription > EML* or *Transcription > Microsoft Cognitive Services* and configure your project in the window *Analysis Engines/Projects*.

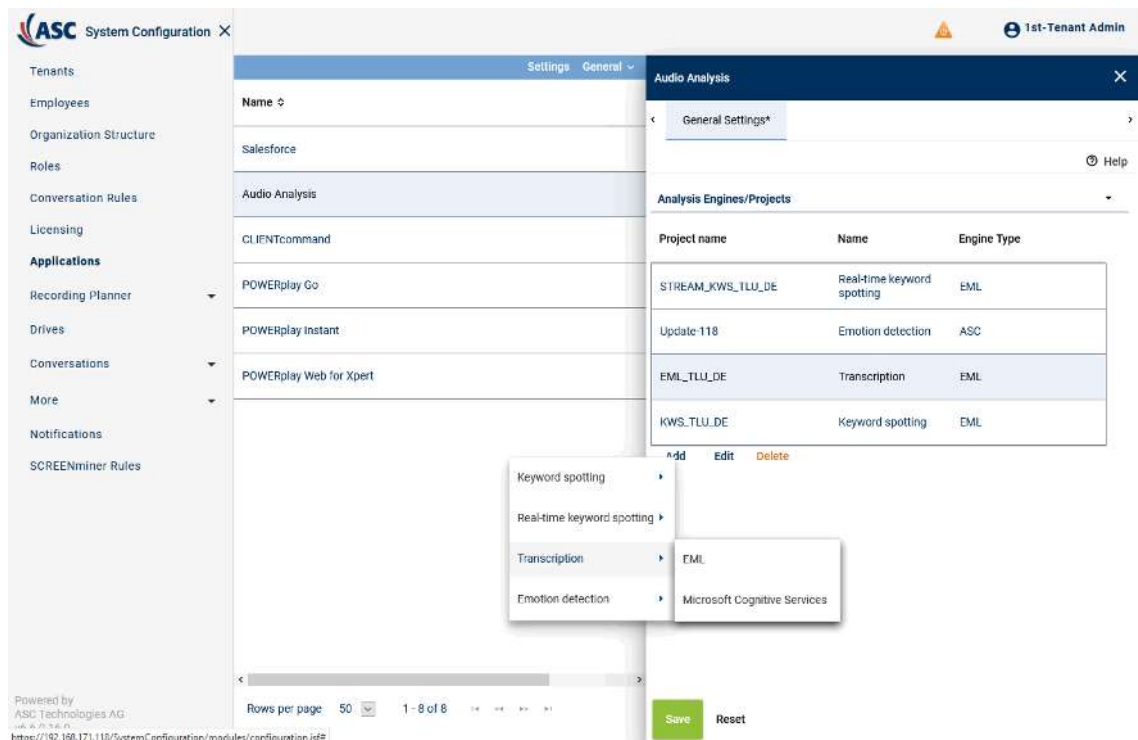


Fig. 43: Configure transcription project

Analysis Engine/Project	
Stream audio data from*	Audio-Analyses + -
Target directory*	EML_NEO + -
Engine ID*	http://192.168.171.1:8080/eml-stt/jo
Project name*	EML_TLU_DE
Queue name*	eml-transcribe
Language of full-text search*	German ▼
Available licenses	50
Assigned licenses*	50

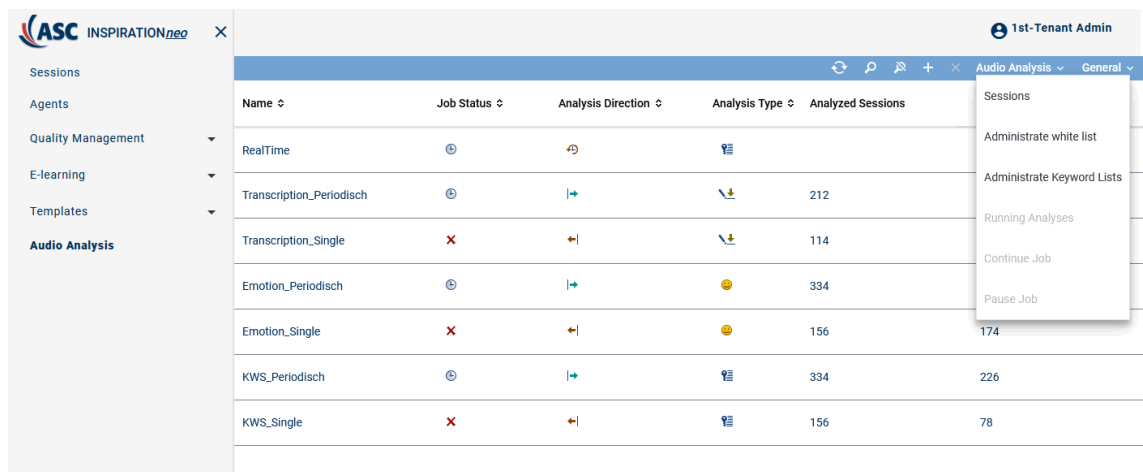
OK Cancel

Fig. 44: Analysis Engine/Project

Engine ID	<code>http:\\<IP-of-the-EML-Transcription-Server>:8080/eml-stt/jobSubmit</code>
Project name	Is configured during the installation of the EML software and must be used here as well. Example: <code>KWS_TLU_DE</code>
Queue name	Is configured during the installation of the EML software and must be used here as well. Default: <code>eml-transcribe</code>
Language of full-text search	Language for transcription

5.14 Create audio analysis configuration in INSPIRATIONneo

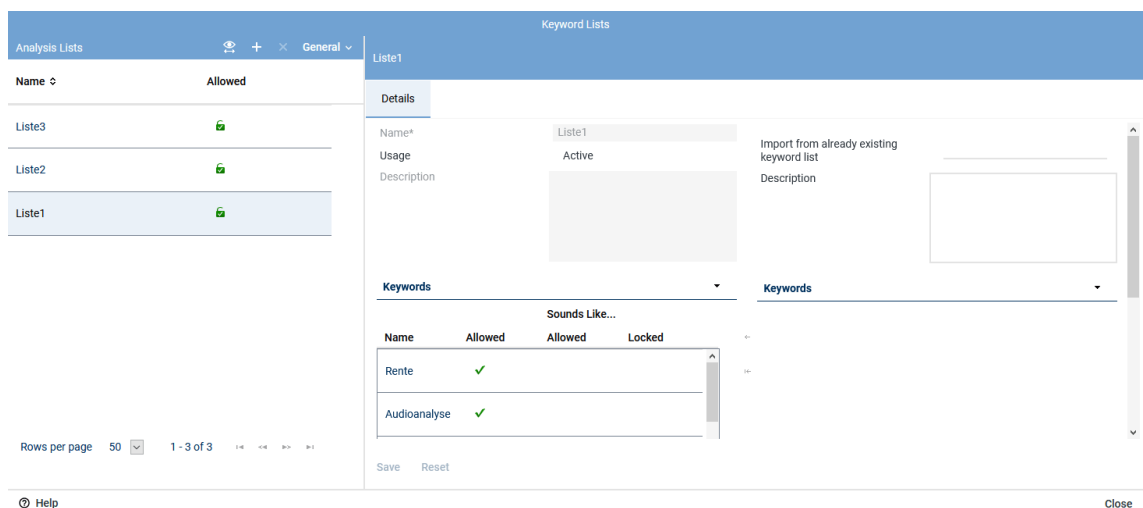
1. Log in to INSPIRATIONneo as user with access authorizations to all modules.
2. Open the Audio Analysis module in the navigation bar.
3. In the toolbar, click on *Audio Analysis* and subsequently on the menu item *Administrate Keyword Lists*.



Name	Job Status	Analysis Direction	Analysis Type	Analized Sessions
RealTime	⊕	↻	🔊	
Transcription_Periodisch	⊕	↔	📄	212
Transcription_Single	✗	↔	📄	114
Emotion_Periodisch	⊕	↔	😊	334
Emotion_Single	✗	↔	😊	156
KWS_Periodisch	⊕	↔	🔊	334
KWS_Single	✗	↔	🔊	156

Fig. 45: Create keyword list

4. In the window *Keyword Lists* click on the + icon in the toolbar of the window on the left.



Name	Allowed
Liste3	🔒
Liste2	🔒
Liste1	🔒

Name	Usage	Description
Liste1	Active	

Name	Allowed	Locked
Rente	✓	
Audioanalyse	✓	

Fig. 46: Create keyword list

5. In the window on the right in the tab *Details*, click on the button *Add* and select one of the two options (*Add Keyword* or *Import from File*).

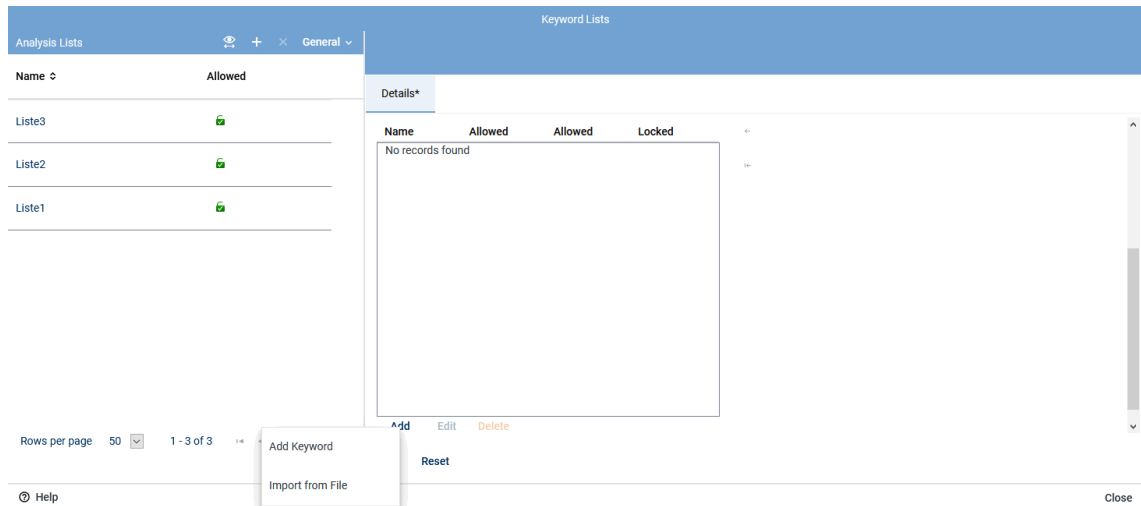


Fig. 47: Create keyword list

When selecting *Import from File*, the CSV file must have two columns. The first column headline must be called *keyword* and the second *soundlike*. The words that sound like the keyword must be listed separated by commas.

Example of the layout of a CSV file:

keyword	soundlike
idiot	
incompetent	inconsequent
incapable	
anger	
cancel	can't sell,cancer

- Configure the keyword according to your requirements and eventually click on the buttons *Save* and *Apply* to save your entries.

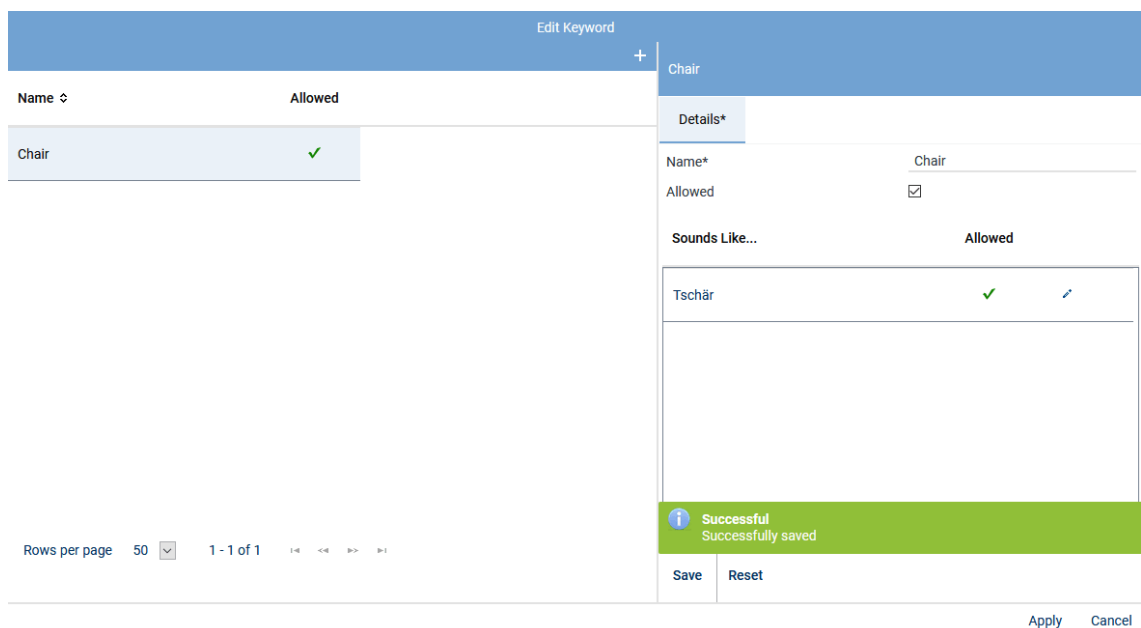
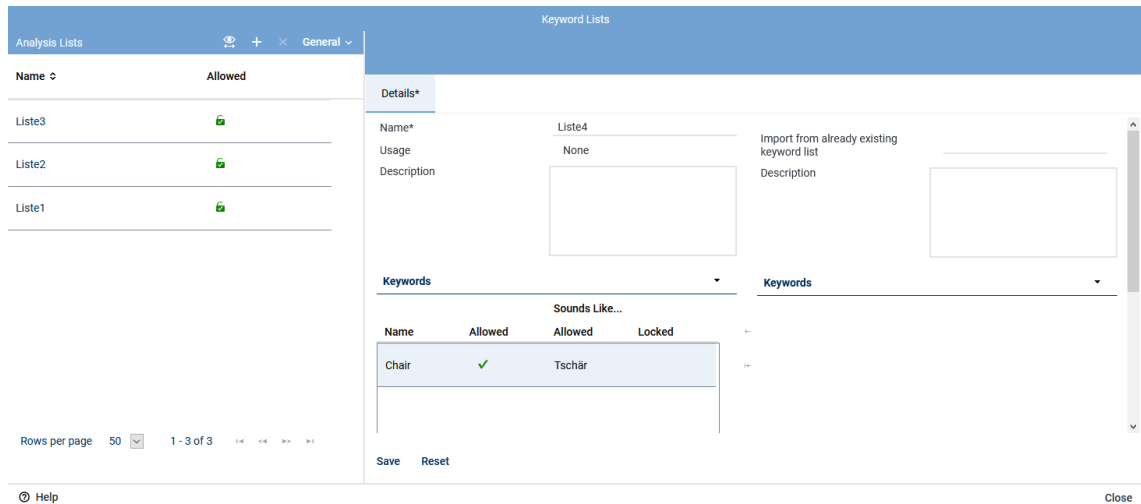


Fig. 48: Configure keyword

- Save the configured keywords by clicking on the button *Save*.



Analysis Lists

Name ↕ Allowed

Liste3

Liste2

Liste1

Rows per page 50 1 - 3 of 3

Help

Close

Keyword Lists

Details*

Name* Liste4

Usage None

Description

Import from already existing keyword list

Description

Keywords

Sounds Like...

Name Allowed Allowed Locked

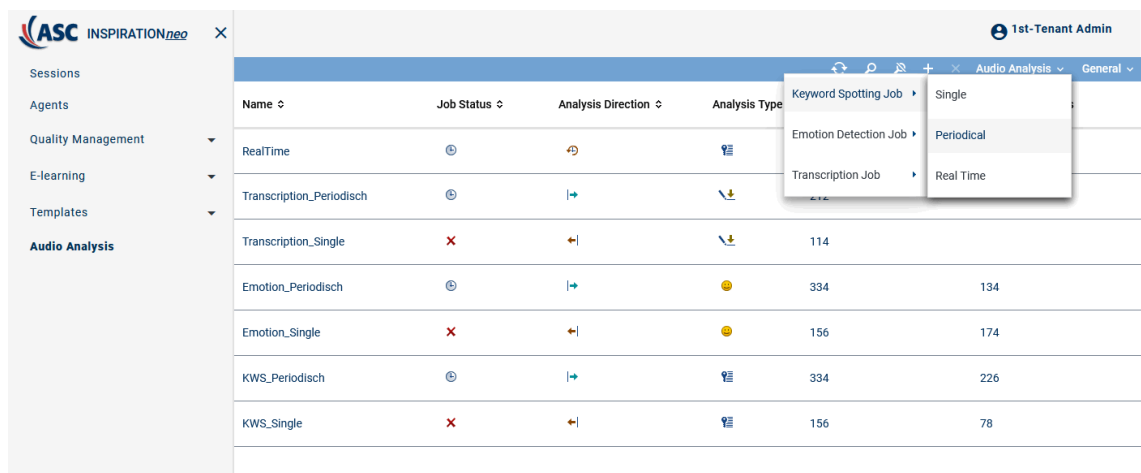
Chair ✓ Tschär

Save Reset

Fig. 49: Create keyword list

5.15 Create keyword spotting configuration in neo

1. In the toolbar of the Audio Analysis module, click on the + icon and select the menu item *Keyword Spotting Job > Periodical*.



ASC INSPIRATIONneo

1st-Tenant Admin

Sessions

Agents

Quality Management

E-learning

Templates

Audio Analysis

Name ↕ Job Status ↕ Analysis Direction ↕ Analysis Type

RealTime

Transcription_Periodisch

Transcription_Single

Emotion_Periodisch

Emotion_Single

KWS_Periodisch

KWS_Single

Keyword Spotting Job > Single

Emotion Detection Job > Periodical

Transcription Job > Real Time

Fig. 50: Create keyword spotting job

2. Configure the job in the tab *Details*.

< Details* Keywords* Schedule Filter* Additional Filters Sun >

② Help

Job status Deactivated
 Job has been activated ☐
 Job name* KWS_Periodisch_Liste
 All agents ☒
 Analysis type Keyword spotting
 Analysis direction Periodical
 Creation date 10.03.2021 14:13:51
 Comment
 Analysis engine/Project KWS_TLU_DE
 Last error message

Fig. 51: Keyword spotting job - tab Details

- Configure the job in the tab *Keywords*.
- In the group field *Audio Analysis Lists*, add the audio analysis list(s) that you have created previously.

< Details* Keywords* Schedule Filter* Additional Filters Sun >

Threshold value 5%
 Automatic categorization ☒

Analysis Lists

Name	Allowed
Liste1	<input checked="" type="checkbox"/>

Fig. 52: Keyword spotting job - tab Keywords

- If you have **not** selected *All agents* in the tab *Details*, add employees or organization units in the tab *Filter* for which the analysis list is supposed to apply.

< Details* Keywords* Schedule Filter* Additional Filters Sun >

Organization Settings

Agents*

Last Name	First Name
Plan	Kai

Fig. 53: Keyword spotting job - tab Filter

6. In the tab *Details*, activate the check box *Job has been activated*.
7. Click on the button *Save* to save the job.
⇒ The job is saved and started immediately.

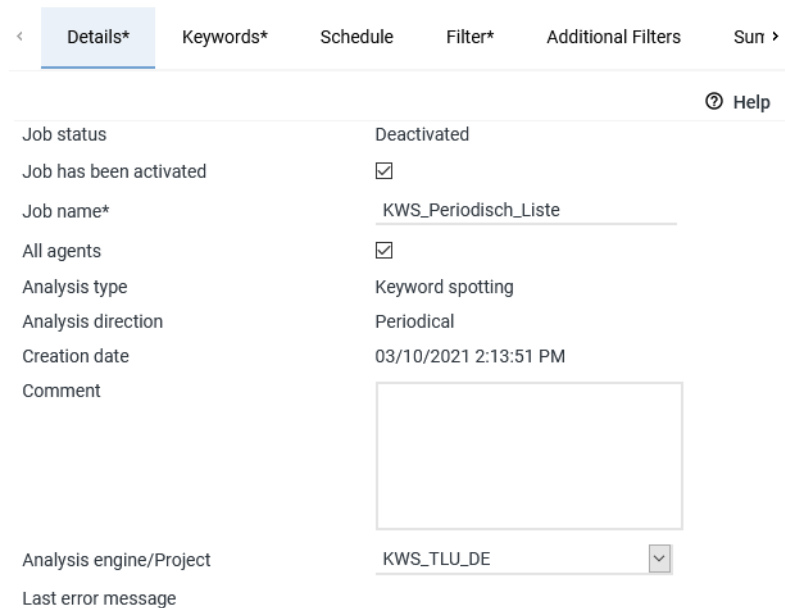
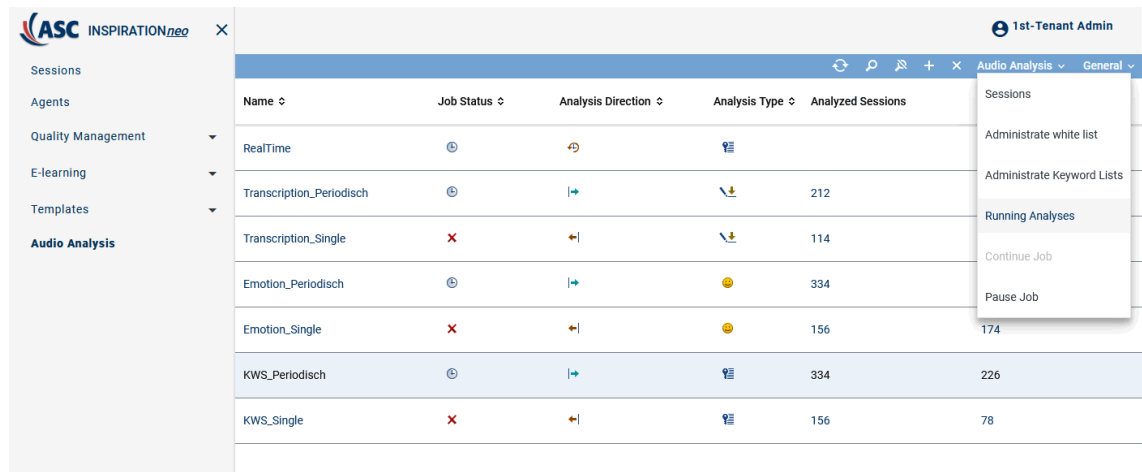


Fig. 54: Activate job

8. Click on the menu item *Audio Analysis > Running Analyses* in the toolbar to view the running analyses.



Name	Job Status	Analysis Direction	Analysis Type	Analyzed Sessions
RealTime	⊕	→	📄	
Transcription_Periodisch	⊕	→	📄	212
Transcription_Single	×	→	📄	114
Emotion_Periodisch	⊕	→	📄	334
Emotion_Single	×	→	📄	156
KWS_Periodisch	⊕	→	📄	334
KWS_Single	×	→	📄	156

Fig. 55: Start job

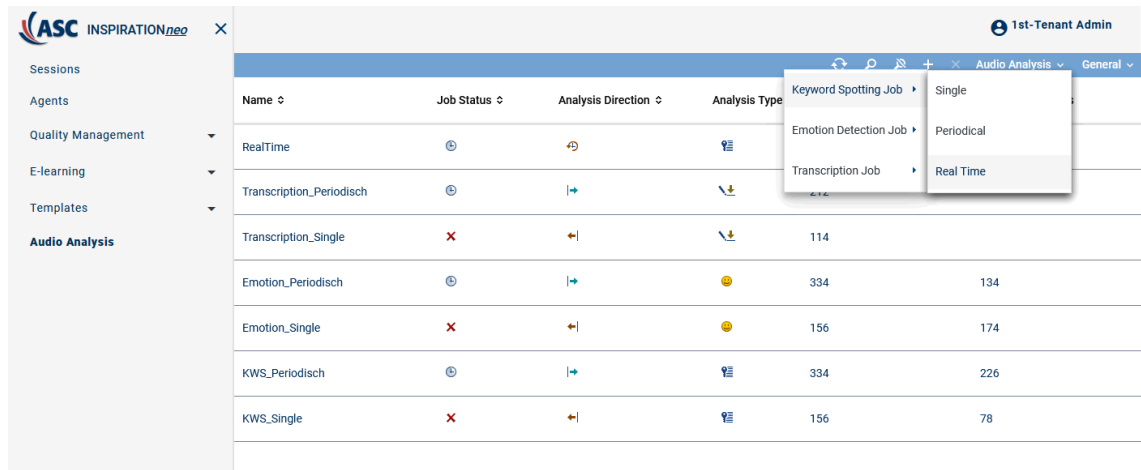


A keyword list must be deactivated before it can be edited.

5.16


Configure real-time keyword spotting configuration in neo

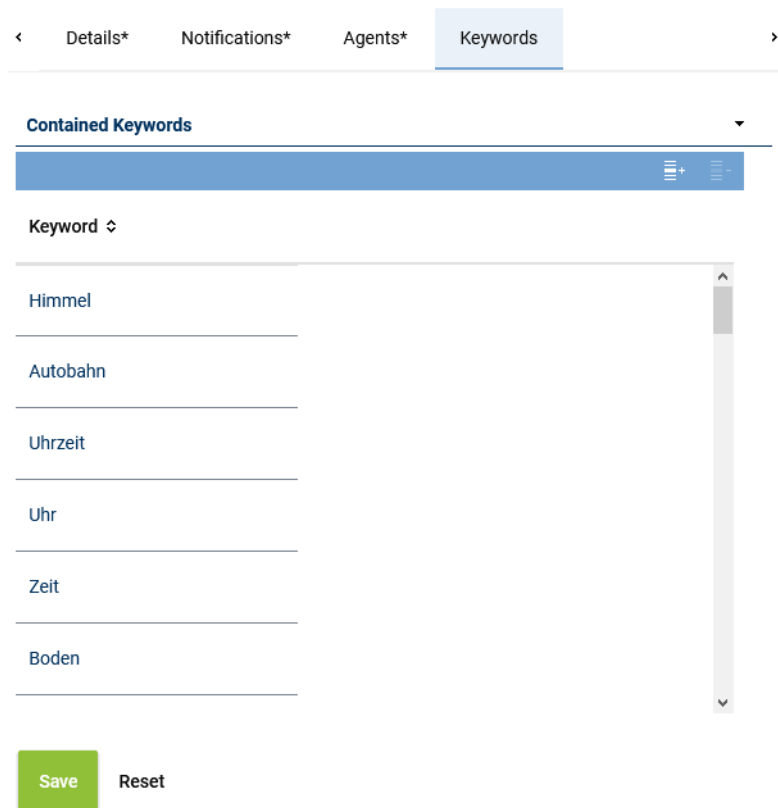
1. In the toolbar of the Audio Analysis module, click on the + icon and select the menu items *Keyword Spotting Job > Real Time*.



Name	Job Status	Analysis Direction	Analysis Type
RealTime	⊕	↔	📄
Transcription_Periodisch	⊕	↔	📄
Transcription_Single	✗	↔	📄
Emotion_Periodisch	⊕	↔	📄
Emotion_Single	✗	↔	📄
KWS_Periodisch	⊕	↔	📄
KWS_Single	✗	↔	📄

Fig. 56: Create real-time keyword spotting job

- Adjust all necessary settings in the tabs of the detail view.
NOTICE! Only those agents are analyzed who have been added in the tab *Filter*.
- Click on the button *Save* to apply the settings.
- In the toolbar of the Quality Alarms module click on the + icon.
- Select the option *Quality Alarm for Real-Time Keyword Spotting*.
- Adjust all necessary settings in the tabs of the detail view.
- In the tab *Keywords*, click on the icon  (*Add*) to add keywords.
NOTICE! In real-time keyword spotting, only the keywords added here are searched for. The found keywords added here are displayed in the application CLIENT command.



Contained Keywords

Keyword

- Himmel
- Autobahn
- Uhrzeit
- Uhr
- Zeit
- Boden

Save Reset

Fig. 57: Keywords for real-time keyword spotting job (example)

- Click on the button *Save* to apply the entries.

- If you would like to be notified whenever a real-time keyword is found, you can configure the INFO notification *QUALITY_ALARM_KEYWORD_REALTIME* in the application System Configuration in the Notifications module accordingly.

5.17 Create transcription configuration in neo

- In the toolbar of the Audio Analysis module, click on the + icon and select the menu item *Transcription Job > Periodical*.

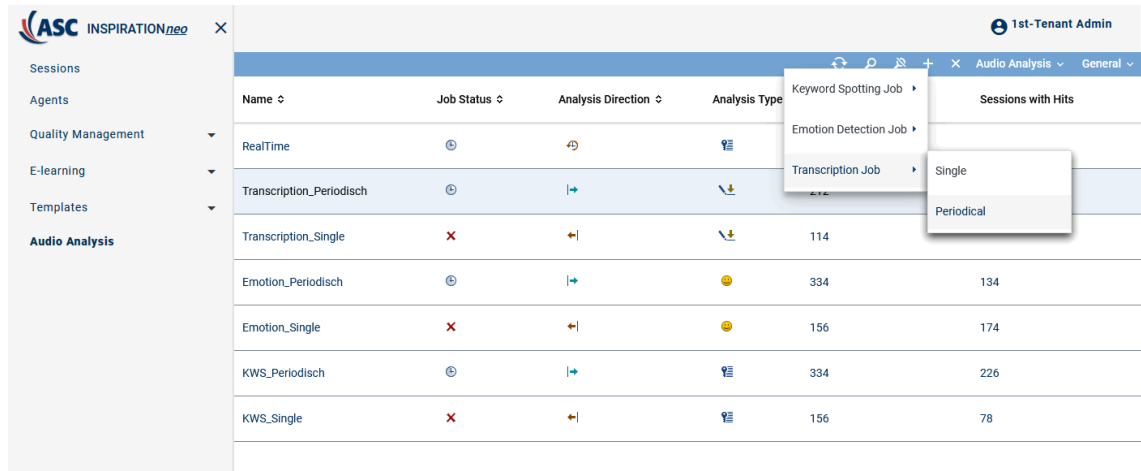


Fig. 58: Create transcription job

- Configure the job in the tab *Details*.

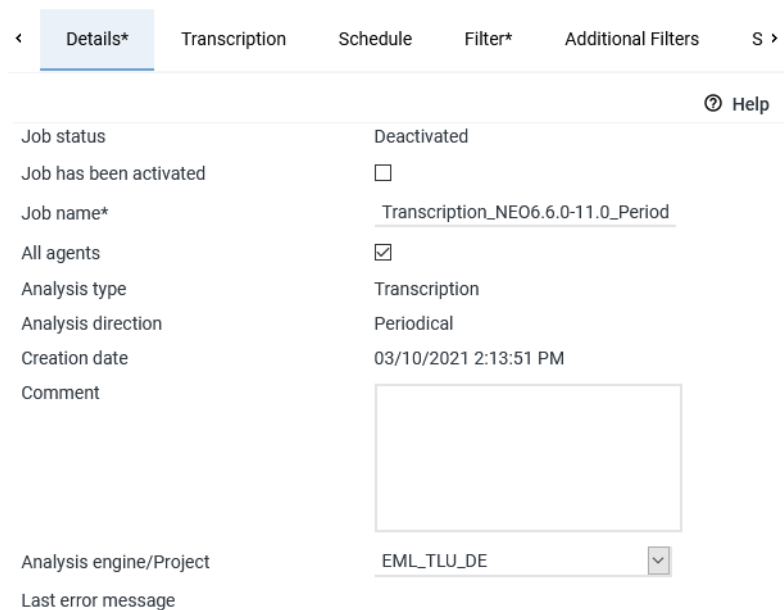


Fig. 59: Transcription job - tab Details

- Configure the export in the tab *Transcription*, if required.

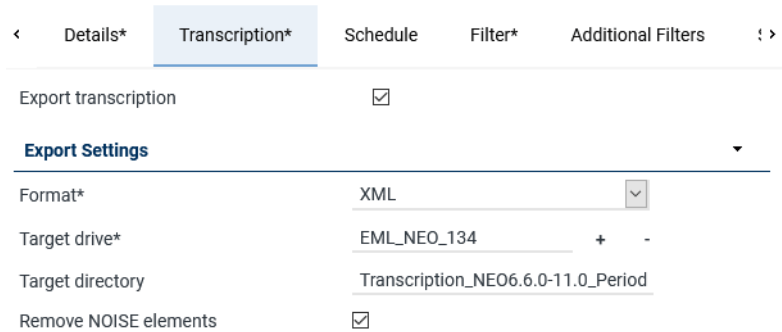


Fig. 60: Transcription job - tab Transcription

- If you have **not** selected *All agents* in the tab *Details*, add employees or organization units in the tab *Filter* for which the analysis list is supposed to apply.

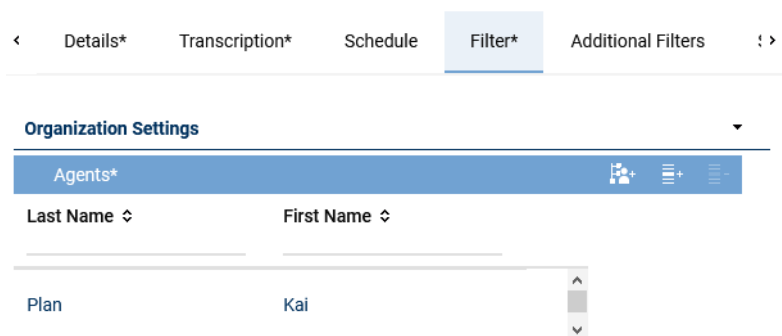


Fig. 61: Transcription job - tab Filter

- In the tab *Details*, activate the check box *Job has been activated*.
- Click on the button *Save* to save the job.
 - ⇒ The job is saved and then started immediately.
- Start the job in the toolbar.

5.18 Create emotion detection in System Configuration

- Log in to the application System Configuration as system-admin.
- Open the Servers module in the navigation bar.
- In the tab *Usage* in the group field *API Server*, activate the check box *API server*.
- In the tab *Usage* in the group field *Audio Analysis*, activate the check box *Emotion detection*.

[Details*](#)
[Usage*](#)
[Media Streamer](#)
[Replay Server Address Mapping](#)

API Server ▼

☒ API server

API server name*

Storage expansions ⋮ + ⋮ -

Path ↕	Server ↕
No records found	

☐ Replay via phone

Audio Analysis ▼

☒ Emotion detection

Stream audio data from* + -

Recording Control/Key Management ▶

Data Processing ▶

Replay ▶

Virtualization ▶

Fig. 62: Configure emotion detection

5.19

Configure emotion detection in neo

1. Change to the Applications module and select *Audio Analysis* in the main view.
2. In the detail view in the tab *General Settings* in the group field *Analysis Engines/Projects*, click on the button *Add*.
3. Select the menu item *Emotion Detection > ASC* and configure your project in the window *Analysis Engine/Project*.

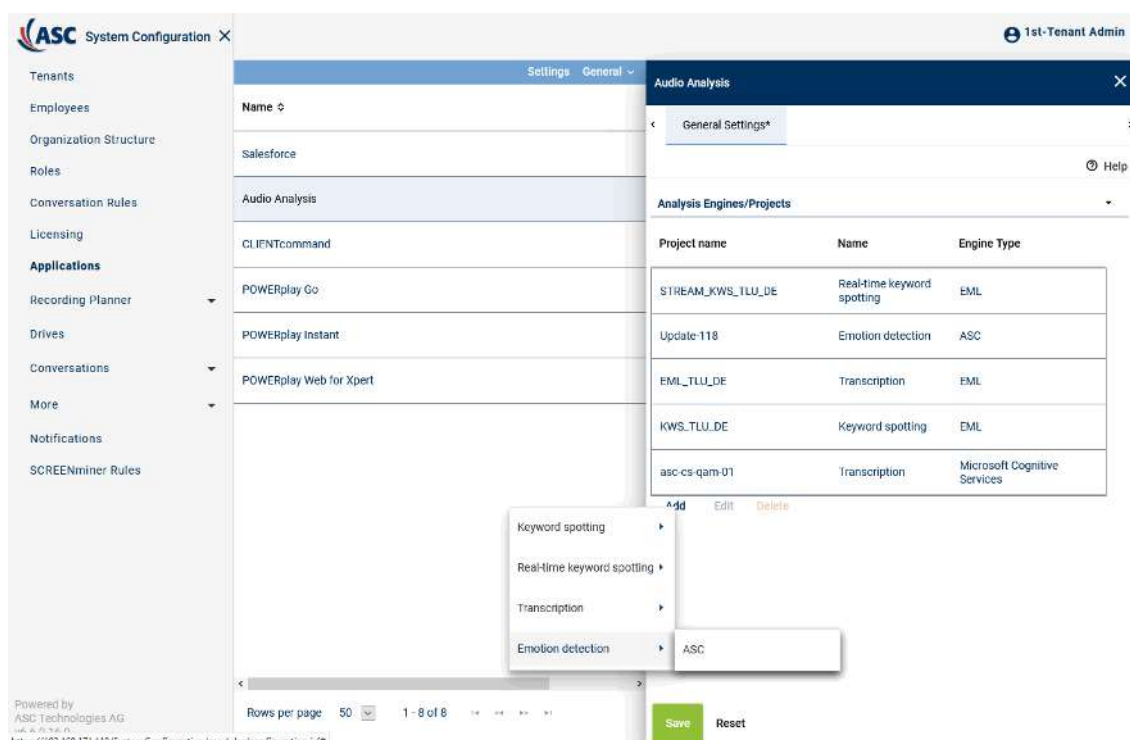


Fig. 63: Configure emotion detection (example)

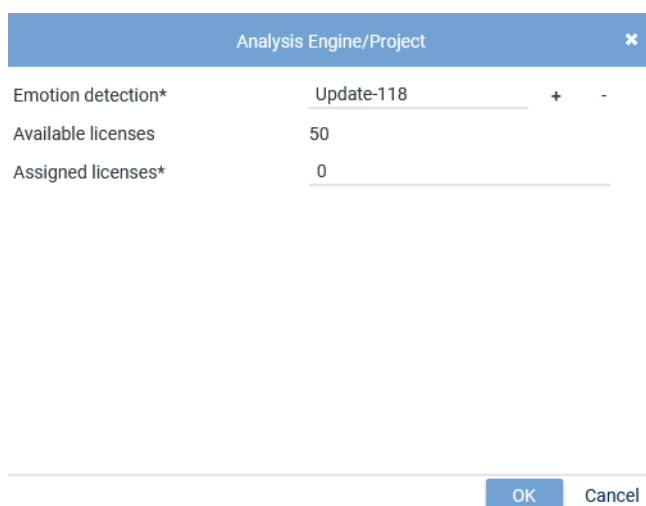


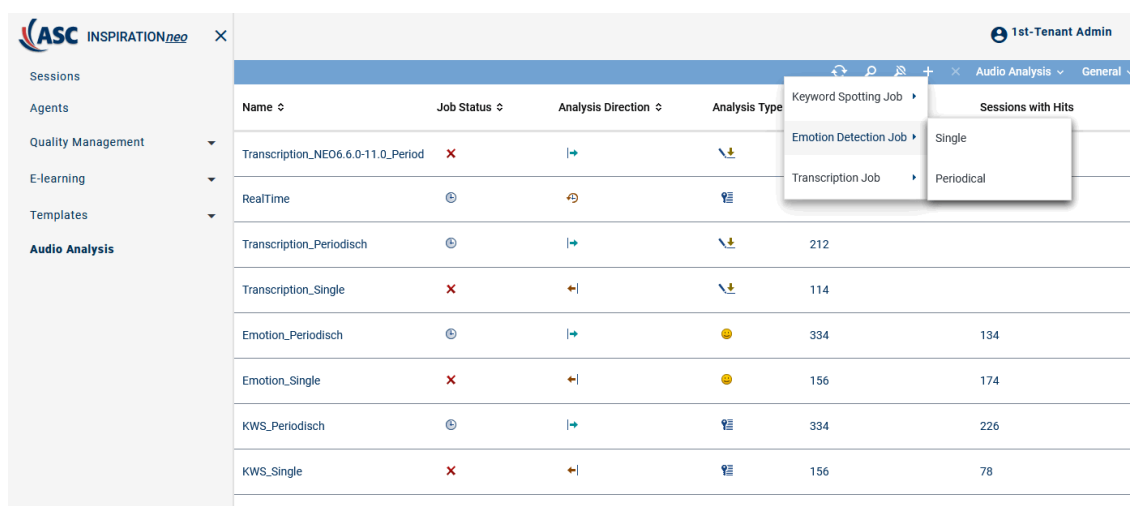
Fig. 64: Analysis engine/Project

Emotion detection Click on the button **+** to select the server from the list on which the function *emotion detection* has been activated. Example: *Update-118*

5.20

Create emotion detection configuration in neo

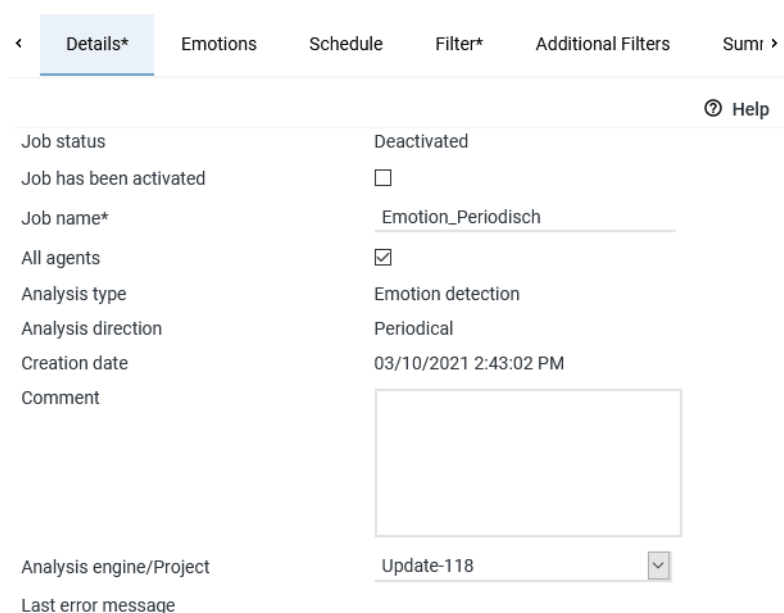
1. Log in to the application INSPIRATION_{neo}.
2. Open the Audio Analysis module in the navigation bar.
3. In the toolbar of the Audio Analysis module, click on the + icon and select the menu items *Emotion Detection Job > Periodical*.



Name	Job Status	Analysis Direction	Analysis Type	Keyword Spotting Job	Sessions with Hits
Transcription_NEO6.6.0-11.0_Period	✗	→	↓		
RealTime	⊕	↻	≡		
Transcription_Periodisch	⊕	→	↓	212	
Transcription_Single	✗	←	↓	114	
Emotion_Periodisch	⊕	→	😊	334	134
Emotion_Single	✗	←	😊	156	174
KWS_Periodisch	⊕	→	≡	334	226
KWS_Single	✗	←	≡	156	78

Fig. 65: Create emotion detection job

4. Configure the job in the tab *Details*.



< **Details*** Emotions Schedule Filter* Additional Filters Sumr >

Job status: Deactivated
 Job has been activated: ☐
 Job name*: Emotion_Periodisch
 All agents: ☒
 Analysis type: Emotion detection
 Analysis direction: Periodical
 Creation date: 03/10/2021 2:43:02 PM
 Comment:
 Analysis engine/Project: Update-118
 Last error message:

Fig. 66: Emotion detection job - tab Details

5. Configure the job in the tab *Emotions*.

< Details*	Emotions	Schedule	Filter*	Additional Filters	Sumr >
Smoothing factor				10	
Percentage check	<input checked="" type="checkbox"/>				
Silence	<input checked="" type="checkbox"/>				
Minimum duration				1000 ms	
Threshold value				-60 dB	
Silence percentage				90 %	
High volume	<input checked="" type="checkbox"/>				
Minimum length				1000 ms	
Threshold value				-30 dB	
High-volume percentage				80 %	
Cross talk	<input checked="" type="checkbox"/>				
Minimum duration				500 ms	
Cross talk percentage				70 %	

Fig. 67: Emotion detection job - tab Emotions

- If you have **not** selected *All agents* in the tab *Details*, add employees or organization units in the tab *Filter* for which the analysis list is supposed to apply.

< Details*	Emotions	Schedule	Filter*	Additional Filters	Sumr >
Organization Settings					
<div>Agents*</div> <div> <div>Last Name ↕</div> <div>First Name ↕</div> </div> <div> <div>Plan</div> <div>Kai</div> </div>					

Fig. 68: Emotion detection job - tab Filter

5.21

Check results: keyword spotting

- Log in to INSPIRATION^{neo} as 1st-tenant-admin.
- Confirm that recordings are displayed in the Sessions module:

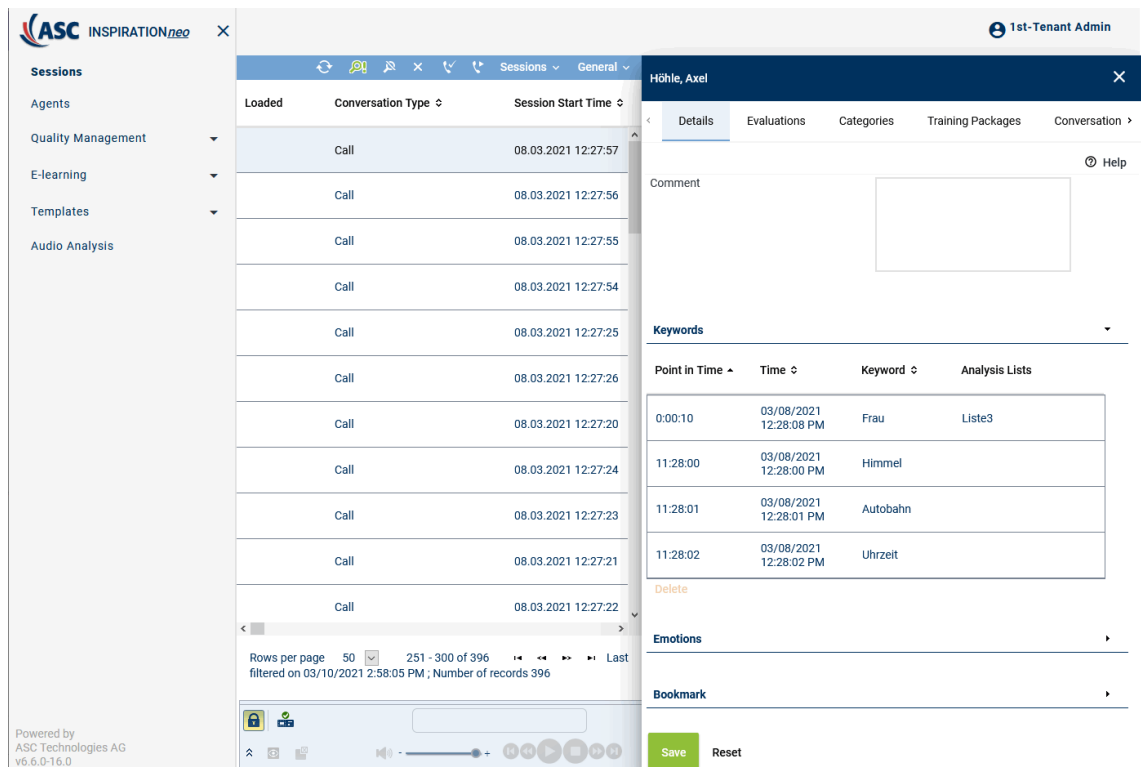


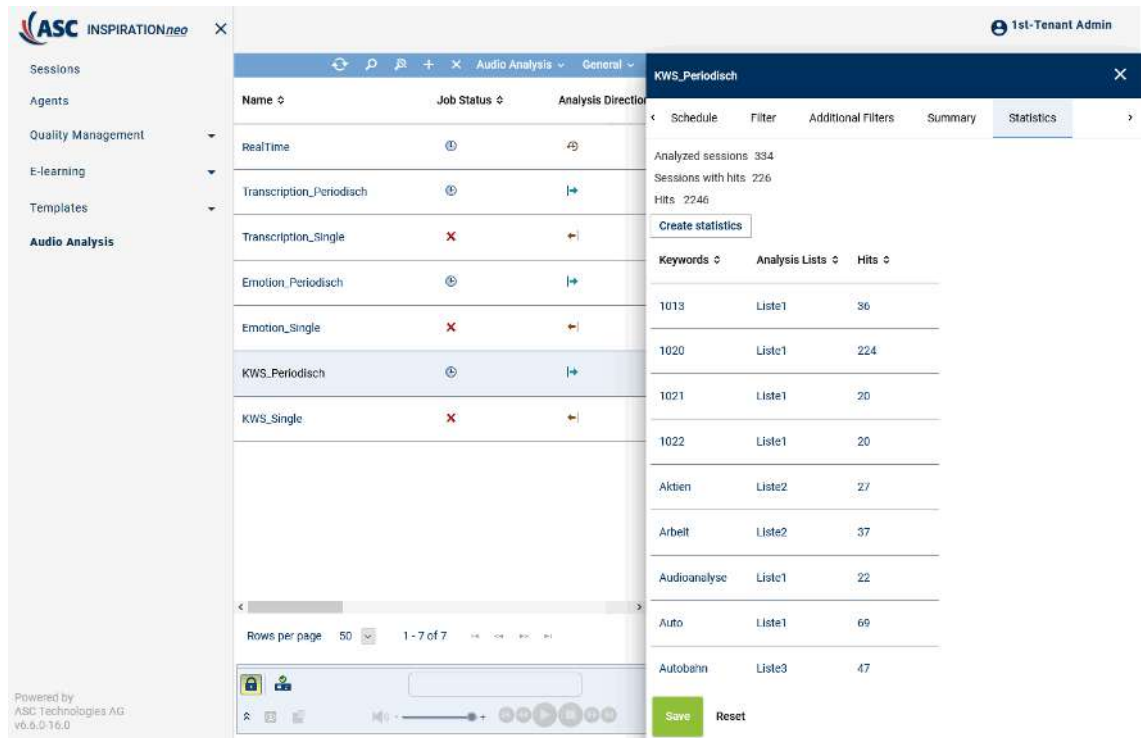
Fig. 69: Sessions module

- When clicking on the menu item *Audio Analysis > Running Analyses* in the Audio Analysis module, a window is displayed for the analysis job which displays the progress of the running analyses.
 Status **EXPORTING** = The session is exported for analysis.
 Status **ANALYZING** = The session is being analyzed.
 Once the analysis of a session has been completed, the session disappears from the window *Running Analyses*. The analysis result can be viewed in the Sessions module.
 When the window *Running Analyses* is empty, the analysis is complete.

Running Analyses					
Task ID	Session ID	Conversation ID	Status	Recordings in Progress	Last Update
4aa810bf-7b7a-4418-8cbc-f6b2e7b62285	0cd833b6-9c65-42ba-8f0e-519d3ceb1d39	3f8989f3-d56f-47e2-adc8-ff672062a2b3	EXPORTING	[e00bc46c-319e-4abc-b583-91f3f293cec, 1d17a2d3-c0a9-4a40-9f65-72a7414f7ce9]	03/03/2020 12:54:56 PM
bc4979c4-6da5-46c5-a7d2-d355b96aed27	b1d06739-cd6e-41ea-9a1d-b4d1b0ea94e	68328b24-062c-4308-8675-9bb8092a9800	EXPORTING	[75e1febb-8ed5-472f-a4a6-202084264ea9, 21b19547-e705-4de4-8f98-96bd01769902]	03/03/2020 12:54:56 PM
5ddb031e-728f-4115-b689-2c4191430c02	830c942f-cae0-4554-96c0-4b7f1d0a0fc4	d1d2bea1-cd8e-4d69-a094-d0b725c1848b	EXPORTING	[d2deae95-b971-470d-be9e-1ff687c30d49, 6e931597-03bd-4e95-8374-39446146cc6b3]	03/03/2020 12:54:56 PM
22c5a31e-6c3d-4d39-8759-b653a26da675	f88bd15-bc55-4aeb-8790-03006c46c52c	0e234235-496a-4c37-b349-ffd1740660b6	EXPORTING	[30ca3c17-5c33-4390-9aa1-16917ec283d8, 63913286-42c8-4575-a40f-cd158f02295e]	03/03/2020 12:54:56 PM
1e2aa673-996d-4357-9b3e-b41b5af01db7	6ad19c01-0899-40fa-a91c-c5d9c42aa1b8	d516be7a-edb5-46d7-9906-6b450367f6a3	EXPORTING	[c9f44ed6-587c-48c5-8297-76994b90037c, 7748e7eb-ee45-4e61-9b58-0ab9a222f6d2]	03/03/2020 12:54:56 PM
9386aaa7-5b43-4225-b276-9b1dda929cb6	543088de-60f8-4a4a-ac99-83d806600e45	2338c481-0284-4b29-b723-d9864dde3284	EXPORTING	[1911a2de-co4e-48e8-8192-2dd84aa07217, e5c4f309-23cc-4cb0-b0be-5dd45ac19018]	03/03/2020 12:54:56 PM
600d3fde-e4f4-4897-aac1-3ee07fd944ff	9267466f-59ca-47f6-a076-496c7664c8a8	bc36b2a4-c22e-4382-8862-680a51863f01	EXPORTING	[c002796-f422-435d-98dd-978abb5298b6, c4d4cb9e-cdad-40e0-bcdc-45d6d22706e99]	03/03/2020 12:54:56 PM
19ee49dc-6620-48ad-a056-25432f1c7725	ee2a1932-2000-45a3-a6f9-c885374bb5fc	c3c82ed0-fffa-4cd4-4126-bc757fca4adf	EXPORTING	[9f9175df-eae8-4f89-a55d-3da045474131, 9183a9f0-c0b0-4576-be53-13f1b1a3bbe5]	03/03/2020 12:54:56 PM
773bf7e6-16c7-47e0-8e90-b73facba83e9	371d2c55-7e14-4255-ad40-f687d0cta468	8d4a698e-2492-4b04-ac79-ea9f496b23e2	EXPORTING	[327f40f3-905e-4ab3-828f-59f530ca8879, be5087f0-1c10-4a77-ac11-91922c0c325c]	03/03/2020 12:54:56 PM
c8f12ccfb082-d1b4ab5-35fc-1c232ae48	7a81115c-08d4-f463-bbca-d45778307709	b536f85e-d613-d20d-a55a-ba46013b114	EXPORTING	[80614785-d449-4ba5-ab89-a0770c680138, 6e45b284-1ab6-449a-a088-	03/03/2020

Fig. 70: Running Analyses

- Confirm that analysis results are displayed in the Audio Analysis module in the tab *Statistics*:



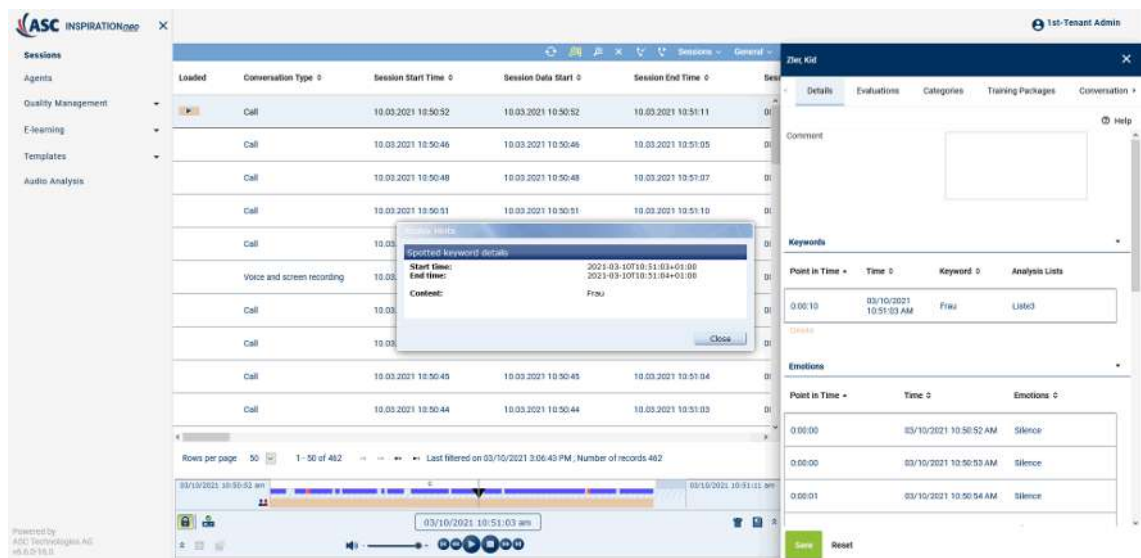
The screenshot shows the 'Audio Analysis' module in the ASC INSPIRATIONneo interface. The left sidebar lists various modules, with 'Audio Analysis' selected. The main window displays a table of analysis jobs. The job 'KWS_Periodisch' is selected, and its details are shown on the right. The 'Statistics' tab is active, displaying a table of keyword hits.

Keywords	Analysis Lists	Hits
1013	Liste1	36
1020	Liste1	224
1021	Liste1	20
1022	Liste1	20
Aktien	Liste2	27
Arbeit	Liste2	37
Audioanalyse	Liste1	22
Auto	Liste1	69
Autobahn	Liste3	47

Buttons for 'Save' and 'Reset' are visible at the bottom right of the statistics panel.

Fig. 71: Audio Analysis module Keyword spotting

5. Confirm that keywords are displayed in the Sessions module in the tab *Details*:



The screenshot shows the 'Sessions' module in the ASC INSPIRATIONneo interface. The 'Details' tab is active, displaying a table of sessions. A 'Spotted keyword details' dialog box is open, showing the start and end times of a keyword hit. The main window also displays a table of sessions with columns for 'Loaded', 'Conversation Type', 'Session Start Time', 'Session Data Start', and 'Session End Time'.

Loaded	Conversation Type	Session Start Time	Session Data Start	Session End Time
Call	Call	10.03.2021 10:50:52	10.03.2021 10:50:52	10.03.2021 10:51:11
Call	Call	10.03.2021 10:50:46	10.03.2021 10:50:46	10.03.2021 10:51:05
Call	Call	10.03.2021 10:50:48	10.03.2021 10:50:48	10.03.2021 10:51:07
Call	Call	10.03.2021 10:50:51	10.03.2021 10:50:51	10.03.2021 10:51:10
Call	Call	10.03.2021 10:50:45	10.03.2021 10:50:45	10.03.2021 10:51:04
Call	Call	10.03.2021 10:50:44	10.03.2021 10:50:44	10.03.2021 10:51:03

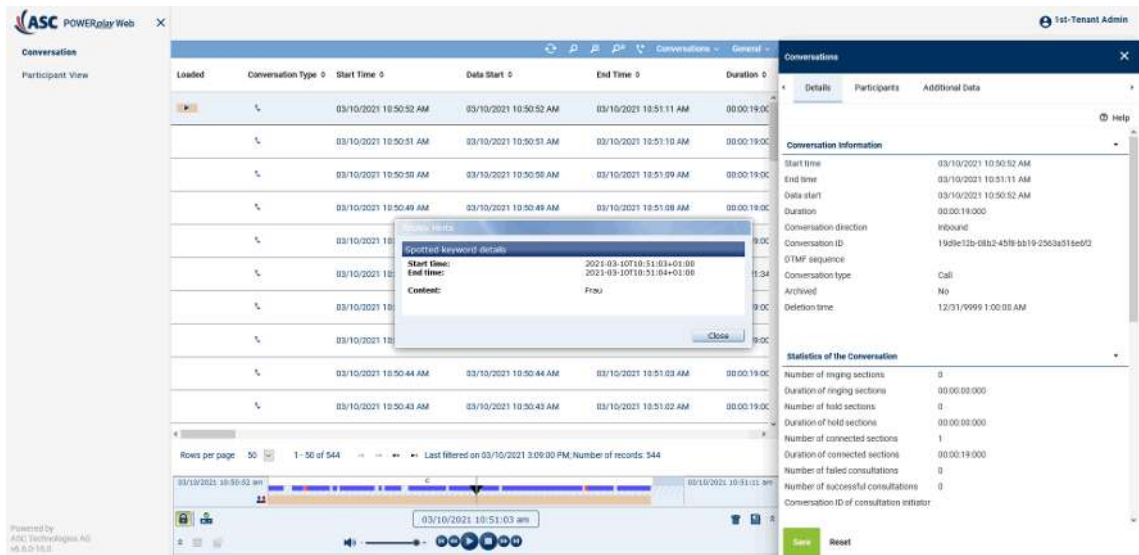
The 'Spotted keyword details' dialog box shows the following information:

- Start Time: 2021-03-10T10:51:03+01:00
- End Time: 2021-03-10T10:51:04+01:00
- Context: Frau

The main window also displays a table of sessions with columns for 'Loaded', 'Conversation Type', 'Session Start Time', 'Session Data Start', and 'Session End Time'.

Fig. 72: Analysis results with keywords in the player

6. Alternatively, you can check in **POWERplay** Web whether results are displayed:



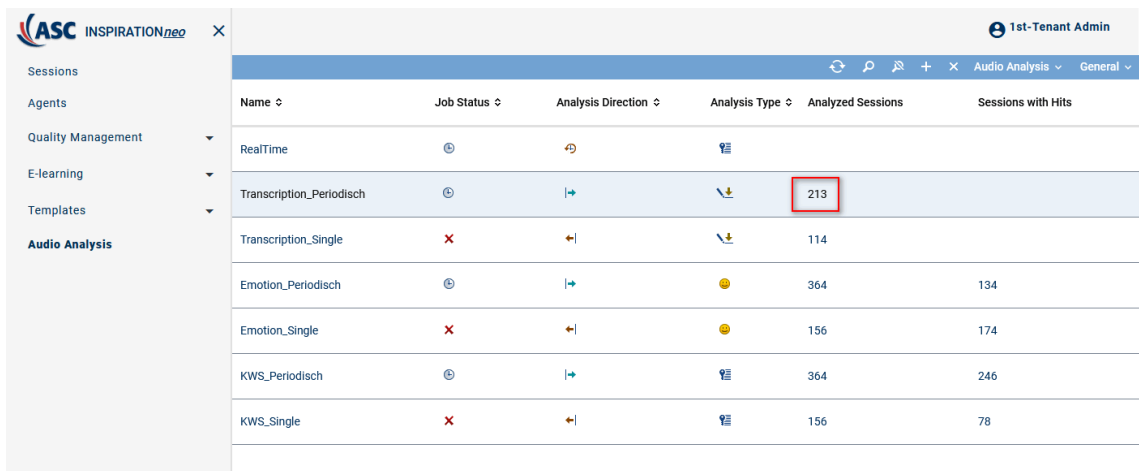
The screenshot shows the ASC POWERplay Web interface. On the left, there's a sidebar with 'Conversation' and 'Participant View'. The main area displays a table of conversations with columns: Loaded, Conversation Type, Start Time, Data Start, End Time, and Duration. A modal window titled 'Spotted keyword details' is open, showing 'Start Time: 2021-03-10T10:51:03+01:00', 'End Time: 2021-03-10T10:51:04+01:00', and 'Context: Frau'. On the right, a 'Conversations' panel shows 'Conversation Information' and 'Statistics of the Conversation'.

Fig. 73: Analysis results keywords in POWERplay Web

5.22

Check result: transcription

1. Confirm that *analyzed sessions* are displayed for the job in the Audio Analysis module:



Name	Job Status	Analysis Direction	Analysis Type	Analyzed Sessions	Sessions with Hits
RealTime	Ⓢ	↻	📄		
Transcription_Periodisch	Ⓢ	↻	📄	213	
Transcription_Single	✗	↻	📄	114	
Emotion_Periodisch	Ⓢ	↻	📄	364	134
Emotion_Single	✗	↻	📄	156	174
KWS_Periodisch	Ⓢ	↻	📄	364	246
KWS_Single	✗	↻	📄	156	78

Fig. 74: Audio Analysis module transcription

2. Confirm that transcripts are displayed in the Sessions module by clicking on the icon *Load* in the toolbar and subsequently on the menu item *Load Transcript*.

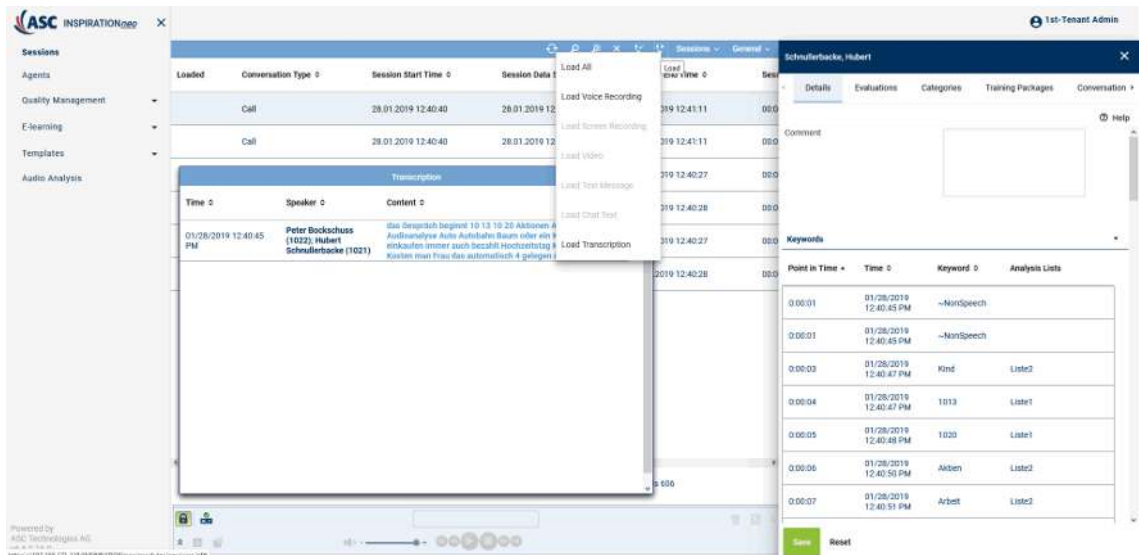


Fig. 75: Results transcription Sessions module

5.23

Check result: emotion

1. Confirm that results are displayed in the player in the Sessions module at the bottom of the main view:

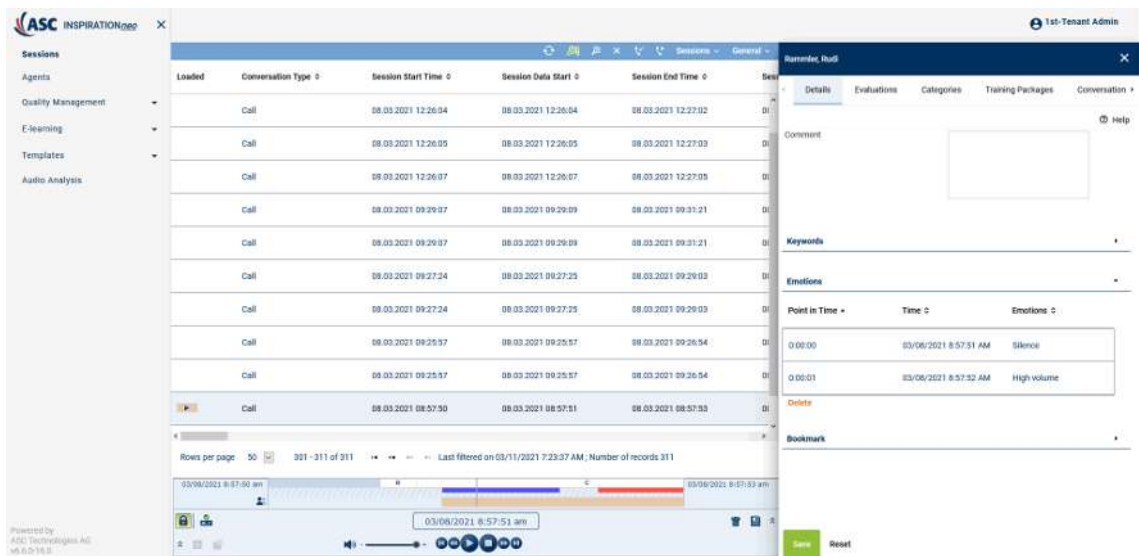


Fig. 76: Results emotion Sessions module in the player

2. Alternatively, you can check in [POWERplay Web](#) whether results are displayed:

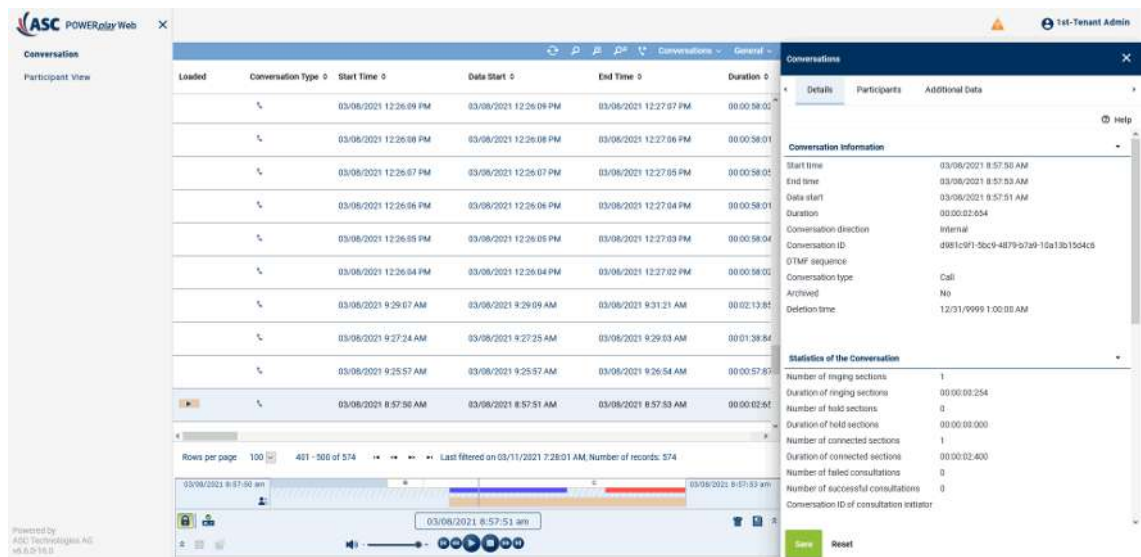


Fig. 77: Analysis results emotion in POWERplay Web

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Glossary

API server

Server on which the API service runs. (API=Application Programming Interface)

NAS

Network Attached Storage is a file-level computer data storage server connected to a computer network providing data access to other devices on the network. NAS is usually used to provide independent storage capacity in a computer network without major effort. (Source: Wikipedia 4th May 2017)

URL

Uniform resource locator. Identifies and locates a resource (e. g. a website) about the used access method (e. g. the used network protocol as HTTP or FTP) and the location of the resource in the computer network. (Source: Wikipedia 20th November 2013)