

Configuration speech analysis



Administration manual for system providers and tenants

8/19/2020

Product line neo, version 6.x

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

INSPIRATIONneo

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1 General information

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2 Introduction

2 Introduction

This manual describes the configuration of the audio analysis software EML Transcription Server of the company EML European Media Laboratory GmbH to be used with the neo recording system as well as the configuration of emotion detection in the neo software.

EML Transcription Server allows transcribing audio into text or detecting keywords which can then be searched for.

Emotion detection serves to search for emotions, e. g. anger or happiness, in a call.

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*.

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 - INSPIRATION_{neo} server

Preconditions to configure keyword spotting and transcription

- The required licenses are available, see [chapter "Licenses", p. 6](#).
- 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. 6](#)).

4.1 Information

4.1.1 Configuration emotion detection

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

- IP address of the INSPIRATION_{neo} server

4.1.2 Configuration keyword spotting and transcription

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

- IP address of the EML Transcription Server
- IP address of the INSPIRATION_{neo} server

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

- engineID
- projectName
- queueName
- channels
- supportedLanguages

4.2 Configure INSPIRATION_{neo} server

4.2.1 Configure NAS drive



A [NAS](#) drive is required if you would like to use keyword spotting without real-time analysis and transcription.

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



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

4.2.2

Activate replay



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

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

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. 4: Configure replay

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

4.2.3

Activate export



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

1. Start the application System Configuration on the INSPIRATION_{neo} server.
2. Log in as system administrator.
3. Select the menu item *Setup > Servers*.
4. In the detail view of the server *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. 1: 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*.

4.2.4 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 on the INSPIRATION^{neo} server.
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. 2: 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", p. 11](#))
 - Real-time keyword spotting (see [chapter "Configure real-time keyword spotting", p. 12](#))
 - Transcription (see [chapter "Configure transcription", p. 13](#))
 - Emotion detection (see [chapter "Configure emotion detection", p. 14](#))



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.

4.2.4.1 Configure keyword spotting

Analysis Machine/Project ✕

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

OK
Cancel

Fig. 3: Configure keyword spotting (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/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.

4.2.4.2 Configure 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			

OK
Cancel

Fig. 4: Configure real-time keyword spotting (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>	<p>In the entry field, enter the value configured in the EML system (e. g. <i>eml-transcribe</i>).</p> <p>If a customer configures its own EML system, enter the queue name in the entry field which has been configured in the EML system.</p>
<i>Authentication key</i>	In the entry field enter the key configured in the EML system. See chapter "Configure real-time keyword spotting", p. 14 .
<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.

4.2.4.3 Configure transcription

Analysis Machine/Project ✕

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			

OK
Cancel

Fig. 5: Configure transcription (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/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.

4.2.4.4 Configure emotion detection

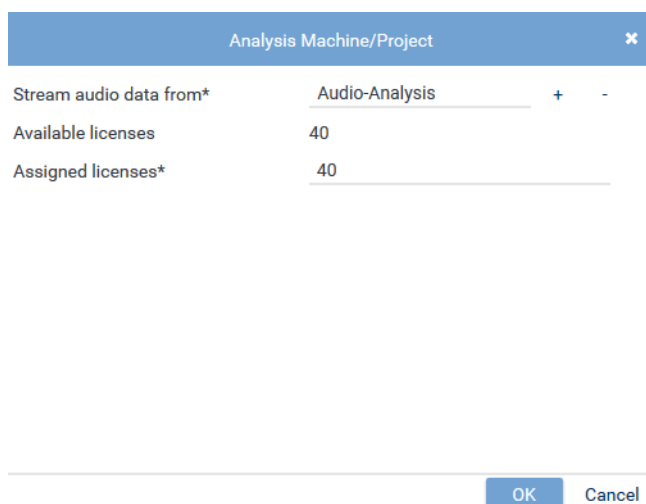


Fig. 6: Configure emotion detection (example)

<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>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 Configure real-time keyword spotting

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. See [chapter "Configure real-time keyword spotting", p. 12](#).

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.

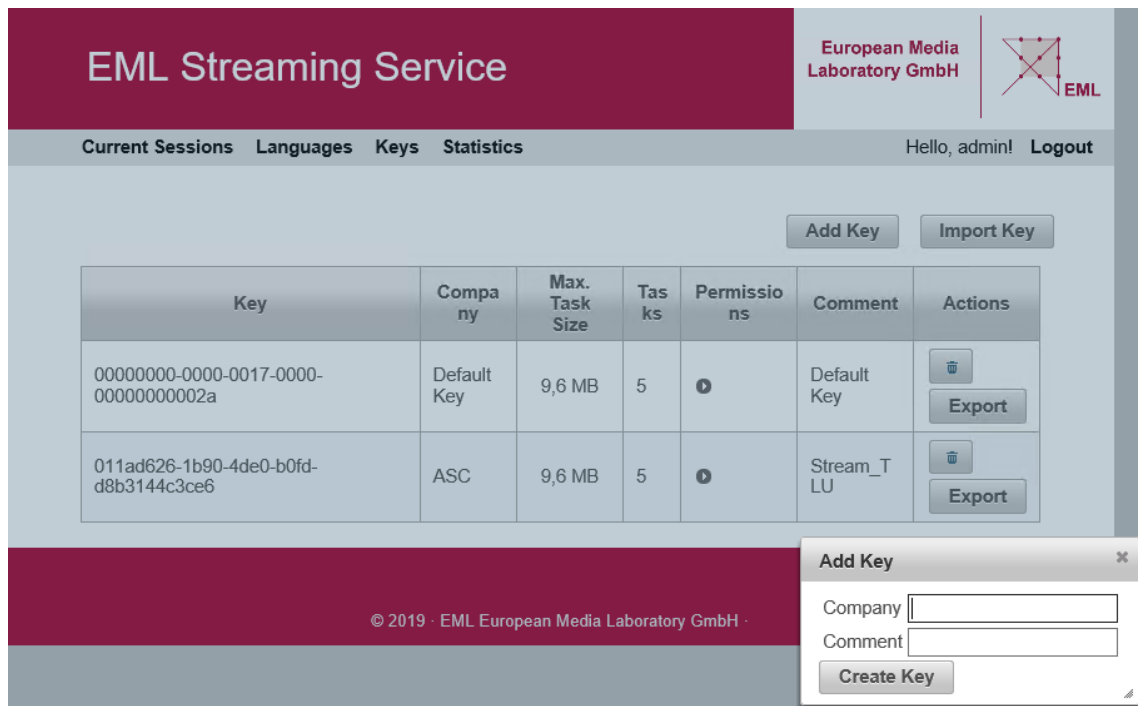


Fig. 7: Create key

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.

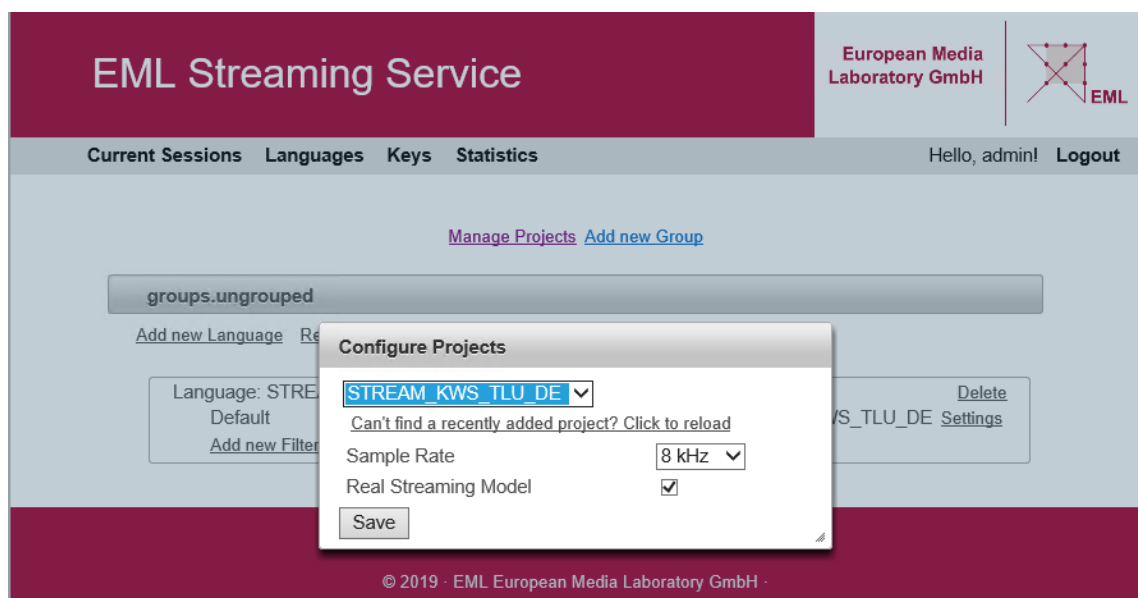


Fig. 8: Create key

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.

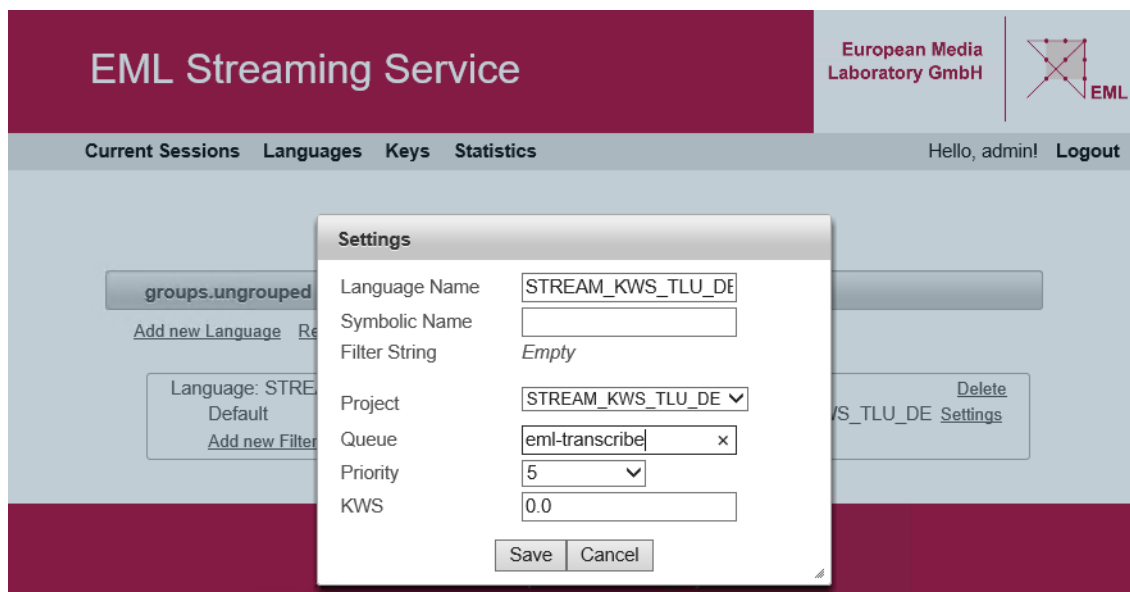


Fig. 9: Create key

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 on the INSPIRATION_{neo} server.
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*.
7. Configure real-time keyword spotting as described in [chapter "Configure real-time keyword spotting", p. 12](#).

4.4 Configure emotion detection

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. See [chapter "Configure emotion detection", p. 14](#).

Activate emotion detection

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

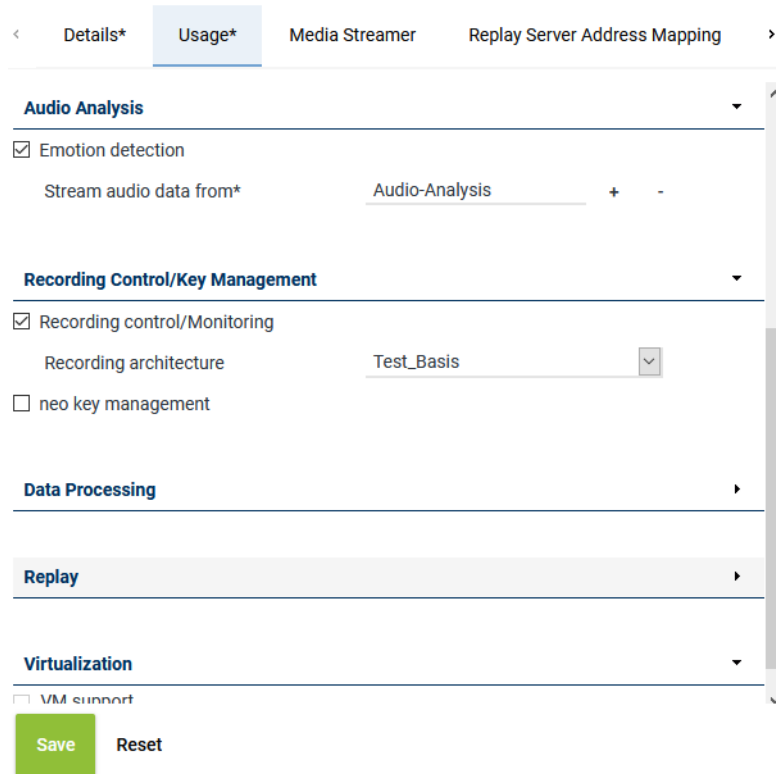


Fig. 10: Activate emotion detection

5. In the group field **Replay**, activate the check box *Emotion detection*.
6. Click on the button **+** to select the server from the list from which the audio data is supposed to be streamed.
7. Configure emotion detection as described in [chapter "Configure emotion detection", p. 14](#).

Configure emotion detection

1. Start the application System Configuration on the INSPIRATION^{neo} server.
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*.
7. Configure emotion detection as described in [chapter "Configure emotion detection", p. 14](#).

4.5

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*.

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Glossary

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)