

TDM recording Others (Universal MVTC)



Administration manual for system providers

1/27/2020

Product line neo, version 6.x

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

EVOLUTIONneo / XXL / eco

EVOflex (country-specific)

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 installation and configuration of the recording solution in the application System Configuration.



Basic information about using the application System Configuration can be found in the user manual for administrators *System Configuration - General information*.



Information about the supported PBXs and end devices can be found on ASC's Partner Portal in the document *MVTC Type D integration status and features list*.

This recording solution allows recording digital extensions of different PBXs as well as BRI/S0 trunks.

Depending on the installation level of the [MVTC card](#), the following interface connections can be implemented:

2-wire interface connection (e. g. UP0)	8, 16 or 24-tap
4-wire interface connection (e. g. S0-Bus)	4, 8 or 12-tap

Tab. 1: Interfaces on the MVTC card

Functional description for the recording solution Universal [MVTC](#)

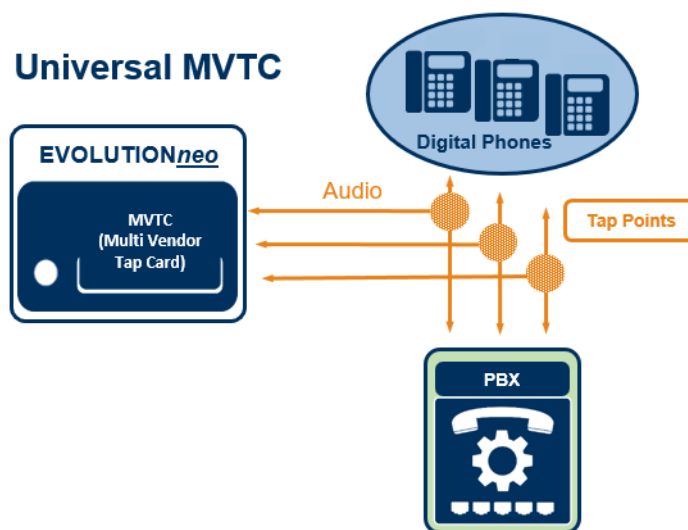


Fig. 1: Overview Universal MVTC

The audio data are sniffed on the digital phone lines between the PBX and the phones. Audio data and additional data from the D-channel are read directly from the [MVTC card](#).

The recording can be controlled via the following functions if they are supported by the end device and the PBX:

- *D-channel*
- *Keys of the phone*
- *LEDs of the phone*
- *Audio level*

Precondition for the level-controlled recording is that the interface between the PBX and the phones is supported by the MVTC card.

Precondition for the recording via keys or LEDs is that the PBX and the phones are supported.

Precondition for D-channel detection is an ASC-provided grammar and that the PBX which is supposed to be recorded as well as its phones are supported. The grammar serves to interpret the transmitted D-channel messages. The grammar has to be adapted to the respective installation since the transmitted D-channel messages greatly depend on the configuration of the PBX and the customer's telephony scenario.

Further functions of Universal MVTC are:

- [DTMF](#) detection (optional)
- [AGC](#) (automatic gain control)
- Compression [G.711](#), [G.726](#) and [G.729](#) (post-compression)

3 System requirements



A list of the PBXs and end devices supported by ASC for MVTC recordings as well as their supported versions can be found on the manual CD. The latest version of the *MVTC Compatibility List neo* is available at ASC XCHANGE (<https://www.asc.de/partner>).

3.1 Supported interface connections

The following interface connections are supported:

- Digital extensions of PBXs
- Trunk-side recording of **ISDN/S0**

Information about the supported end devices and PBXs can be found on ASC's Partner Portal in the document *MVTC Compatibility List neo*.

For further information about the installation of the hardware refer to the respective installation manual of the deployed hardware *EVOLUTIONneo*, *EVOLUTIONneo eco* or *EVOLUTIONneo XXL*.

3.2 Hardware components



For basic information about the necessary hardware components refer to the installation manual *Installation requirements*.



EVOIPneo recording software can be used on the customer's existing hardware. Alternatively, you can use ASC recorders.

3.2.1 Recorder

For the recording solution you can use the following systems:

- *EVOLUTIONneo eco*
- *EVOLUTIONneo*
- *EVOLUTIONneo XXL*



With hybrid systems (**VoIP** and **TDM**) the required software for the recording solution has already been installed on the *EVOLUTIONneo* recorder. If more performance is needed, an additional *EVOLUTIONneo* recorder or *EVOIPneo* server can be added.

3.3 Software components

The required recording software of ASC has already been installed on the recording server upon delivery.

4 Installation requirements



For basic information about the used default ports refer to the installation manual *Installation requirements* in chapter *Communication matrix*.



If you have configured customer-specific ports, you have to open them in the firewall separately.

4.1 Licenses

ASC

Universal MVTC

License name	Number
Recording Server License for MVTC connection	1 license per recording server
Recording Channel Licenses for MVTC, incl. D-channel	1 license per recording channel

Tab. 2: Licenses of ASC

Optional licenses

License name	Number
DTMF detection	1 license per recording channel
Algorithm license for G.729A data compression	1 license per recording channel

Tab. 3: Optional licenses

Sparkassen FI ISP (optional)

License name	Number
CTI <u>connect</u> for Sparkassen FI ISP	1 per recording system

Tab. 4: Licenses for Sparkassen FI ISP optional

4.2 Information

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

- IP address of the recording server
- List of extensions to be recorded
- IP address and port of the TETRA Connectivity Server ([TCS](#))
- Login information to [TCS](#) ([SSIs](#), user name and password)



[DXT](#) and [TCS](#) must be configured according to the manual of Airbus document 624081: "Archive Recording Solution Guide".

The following steps have to be carried out:

1. Configure PBX
2. Configure SmartControl
3. System Configuration
 - Create and activate recording architectures
 - The recording server, recording types, and the integration types are assigned in the Recording Architectures module.
 - Configure server
 - In the Servers module, the usage of the server is configured.
A server can be used for archiving, import, export, replay, data storage or for audio analysis.
 - Create PBX
 - A PBX configuration can either be created via the PBX module or via the configuration in the Integrations module.
 - Create phones
 - In the Phones module, the phones are assigned to a configured time slot. In **MVTC** interface connections which have been configured with Call Control in SmartControl, an assignment of phones is not necessary. In this case, the number of the extension is transmitted in the protocol.
 - Configure TDM Hardware Others
 - Configuration of the recording hardware, e. g. channels, DTMF detection, VOX detection, D-channel detection, and **MVTC** grammar.
 - Configure integration
 - Configure recording architecture
Link the integration to the previously created recording architecture.
 - Activate channels
Configuration of recording options
 - Configure add-on
By default, the add-on has been deactivated.
The following add-ons can be configured optionally for this recording solution:
Sparkassen FI ISP
 - Configure miscellaneous settings
Optional configuration of participant information in an additional data field

6

Configuration

6.1

Configure SmartControl

1. Press the Windows key.
2. Open the system configuration via *Control Panel*.
3. From the drop-down list in the top right corner of the window, select the value *Small icons* to switch to small icons.

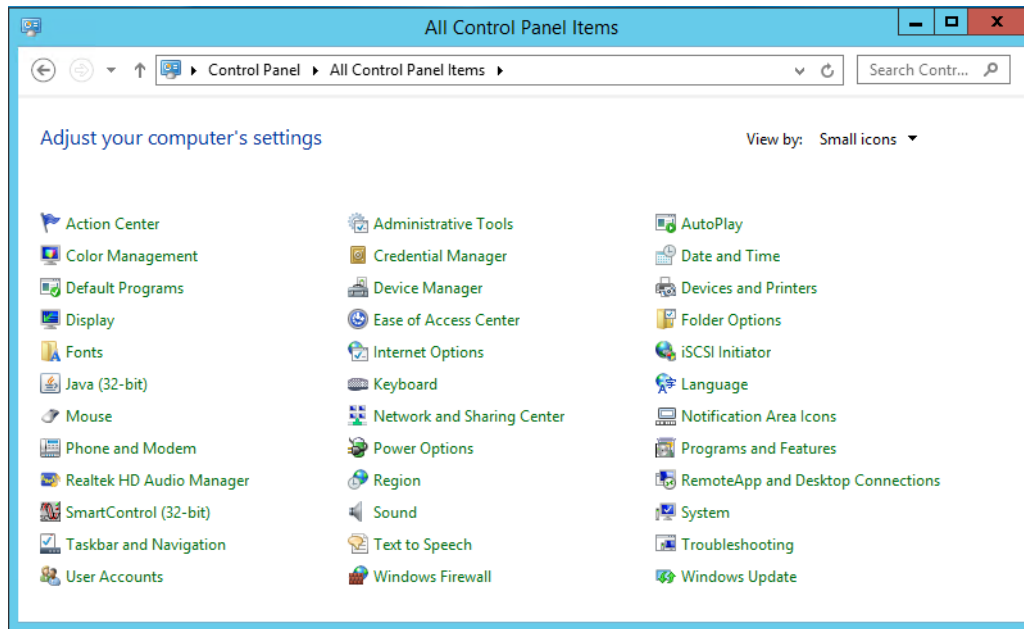


Fig. 2: Open SmartControl

4. Open the program *SmartControl (32-bit)* with a double-click.
⇒ The following window appears:

System | Board | CPM | Parameters | Digital Network

Basic

Driver Version	05.07.01	Max Log Count	100
Driver Build	0820	MVIP Starting Slot	0
Control Panel Version	5.7.1.00095	MVIP Slot Count	256

IPX/HPX Watchdog

Heartbeat Enabled	<input type="checkbox"/>
TCP Port	39998
Connection Retries	2
Retry Interval	20
Polling Interval	30

H100 Stream Speed

☒ 2048 KHz ☐ 4096 KHz ☐ 8192 KHz

GCI Starting Index

☒ 0 ☐ 1

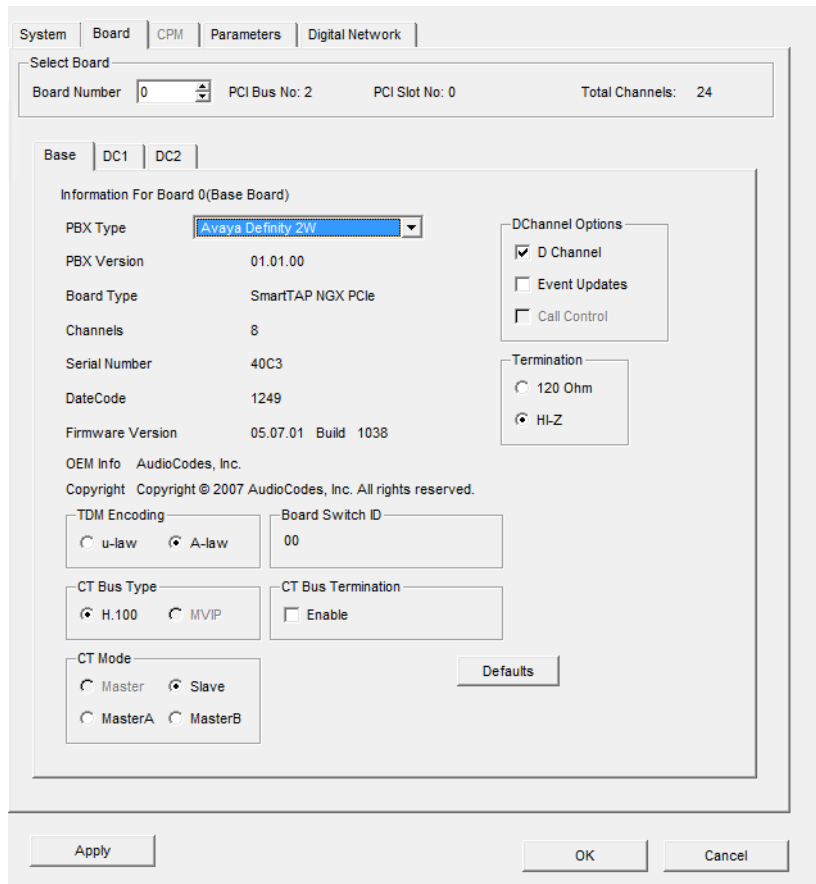
☐ Allow Bus Segmentation

Default

Apply OK Cancel

Fig. 3: SmartControl - tab System

5. Select the tab *Board*.



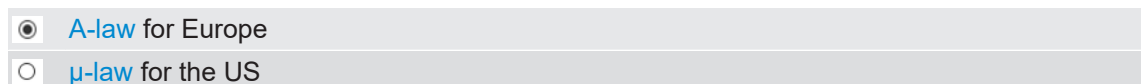
The screenshot shows the 'Board' tab in the SmartControl software. At the top, there are tabs for 'System', 'Board', 'CPM', 'Parameters', and 'Digital Network'. Below these, the 'Select Board' section includes a 'Board Number' dropdown set to '0', 'PCI Bus No: 2', 'PCI Slot No: 0', and 'Total Channels: 24'. The main area has three sub-tabs: 'Base', 'DC1', and 'DC2'. The 'Base' sub-tab is active, showing 'Information For Board 0(Base Board)'. This includes fields for 'PBX Type' (Avaya Definity 2W), 'PBX Version' (01.01.00), 'Board Type' (SmartTAP NGX PCIe), 'Channels' (8), 'Serial Number' (40C3), 'DateCode' (1249), and 'Firmware Version' (05.07.01 Build 1038). It also displays 'OEM Info' as 'AudioCodes, Inc.' and a copyright notice. On the right, 'DChannel Options' are checked for 'D Channel', 'Event Updates', and 'Call Control'. 'Termination' is set to 'HI-Z'. At the bottom, 'TDM Encoding' has 'A-law' selected, 'Board Switch ID' is '00', 'CT Bus Type' is 'H.100', 'CT Bus Termination' is 'Enable', and 'CT Mode' is 'Slave'. A 'Defaults' button is also present. At the very bottom of the window are 'Apply', 'OK', and 'Cancel' buttons.

Fig. 4: SmartControl - tab Board

NOTICE! If you have installed several MVT cards, you can change between the cards in the group field *Select Board* in the rotating field *Board Number*.

Depending on the hardware equipment of the recorder, the tabs *Base*, *DC1*, and *DC2* are displayed. The individual tabs either refer to 8 2-wire channels or to 4 4-wire channels.

6. In the group field *Select Board* in the rotating field *Board Number*, select the number of the MVT card you would like to configure.
7. In the bottom third of the tab *Base* in the group field *TDM Encoding*, activate the respective **PCM** data format.



This screenshot shows the 'TDM Encoding' section with two radio button options: 'A-law for Europe' (which is selected) and 'μ-law for the US'.

Tab. 5: Configure PCM data format

8. Click on the button *Apply* to apply the settings. Otherwise, the settings are lost when switching tabs.



An incorrect configuration of the **PCM** data format causes distortions in the recording.

NOTICE! The settings you make in the tab *Base*, apply to the first 8 2-wire channels or 4 4-wire channels. Depending on the configuration level, you have to configure the D-channel options and the termination for the module add-ons as described below, too.

9. In the top right corner of the tab *Base*, select the D-channel option.

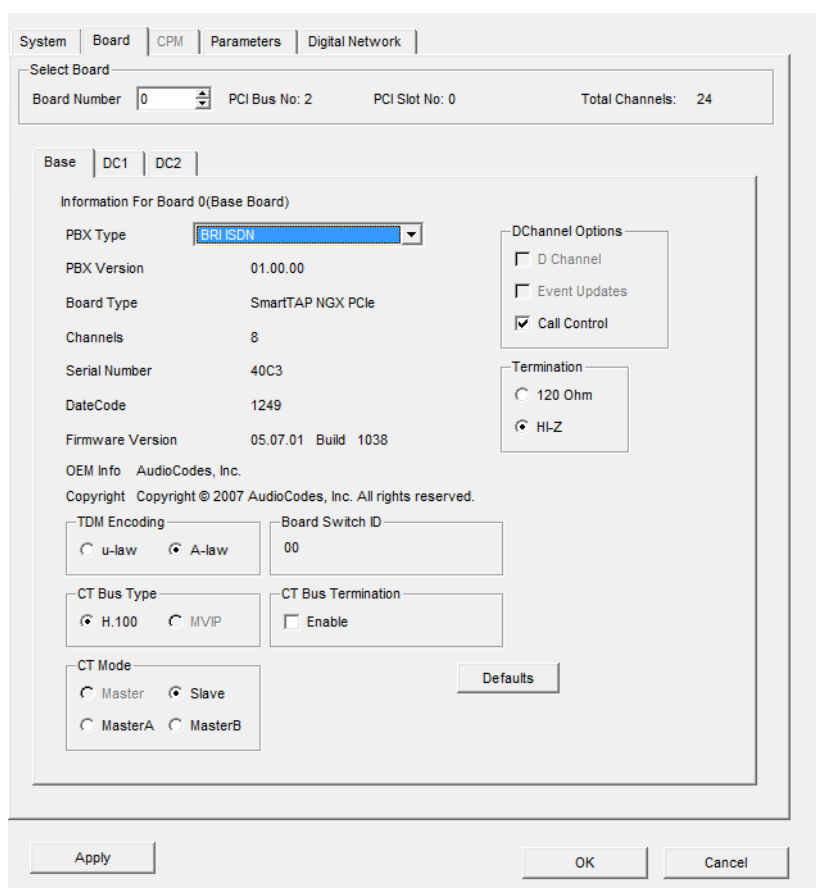


Fig. 5: Basic Board - D-channel options - BRI/ISDN - Call Control

NOTICE! With **BRI/ISDN** interface connections working with BRI-based protocols, the option *Call Control* becomes active.

☒ Call Control

Tab. 6: D-channel options BRI/ISDN

10. Select the option *Call Control* so that the BRI-based protocols can be analyzed.

System | Board | CPM | Parameters | Digital Network

Select Board

Board Number: 0 PCI Bus No: 2 PCI Slot No: 0 Total Channels: 24

Base | DC1 | DC2

Information For Board 0(DC1)

PBX Type: BRI ISDN

PBX Version: 01.00.00

Board Type: SmartTAP NGX

Channels: 8

Serial Number: 4024

DateCode: 1249

Firmware Version: 05.07.01 Build 1038

OEM Info: AudioCodes, Inc.

Copyright: Copyright © 2007 AudioCodes, Inc. All rights reserved.

Defaults

DChannel Options

☐ D Channel

☐ Event Updates

☒ Call Control

Termination

☐ 120 Ohm

☒ HI-Z

Apply OK Cancel

Fig. 6: DC1 - D-channel options - BRI/ISDN - Call Control

NOTICE! With all other interface connections, the option *Call Control* is inactive.

11. Select the employed PBX type from the drop-down list.

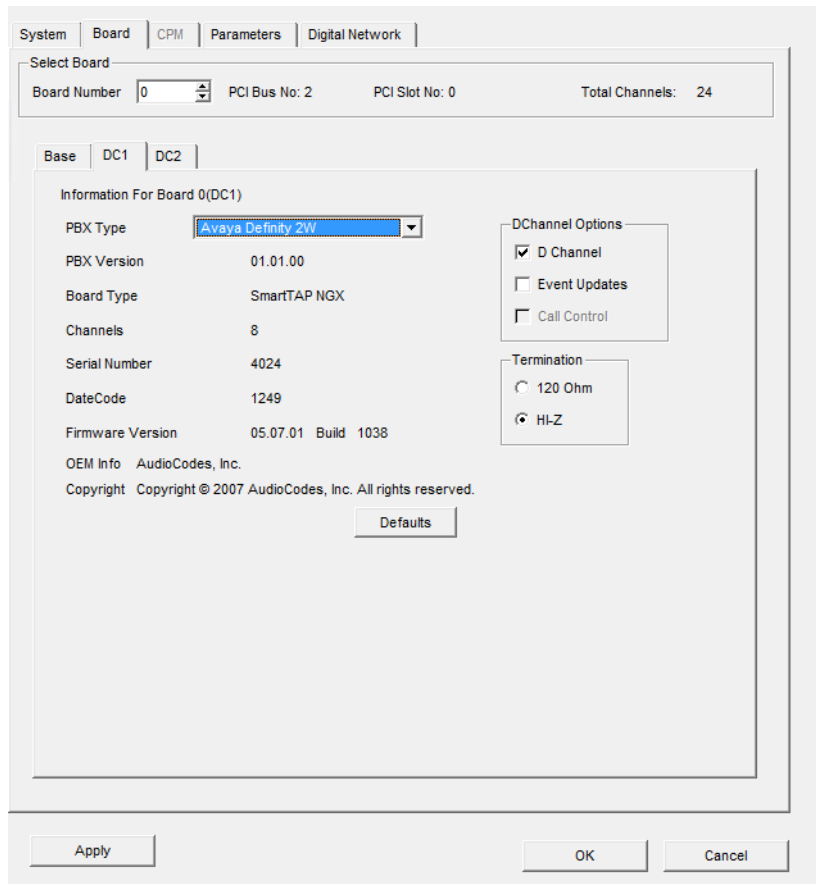


Fig. 7: Example: D-channel options - configure D-channel

D-channel options

The following D-channel options become available:

- ☒ D-channel
- ☐ Event Updates

Tab. 7: D-channel options other PBX types

1. Activate the D-channel option *D-channel*.
2. Deactivate the D-channel option *Event Updates* as otherwise the recording card may be overloaded.
3. Click on the button *Apply* to apply the settings. Otherwise, the settings are lost when switching tabs.

Termination



Termination is optional; no specific recommendation can be made. The termination depends on the cables, lengths, and the cable run.

An inadequate setting can cause inferior audio quality or incorrect D-channel detection.

- ☐ 120 ohm
- ☒ HI-Z

Tab. 8: Configure termination

1. Configure the respective termination.

2. Click on the button *Apply* to apply the settings. Otherwise, the settings are lost when switching tabs.
3. If you have installed module add-ons, select the tabs *DC1* or *DC2* and apply the same settings.
4. Click on the button *OK* to finish the configuration in the application SmartControl.



Once SmartControl has been configured, the recorder has to be rebooted.

6.2

System Configuration



Basic information about using the application System Configuration can be found in the user manual for administrators *System Configuration - General information*.

6.2.1

Start application

During the installation routine, shortcuts for the *neo* programs are created on your desktop.

1. To start the application directly on the server, double-click on the shortcut System Configuration.

To access the application from a computer via the web, enter the following URL in the address bar:

https://<System-IP>/SystemConfiguration.

If you have configured customer-specific ports, you have to include the port in the URL:

https://<System-IP>:<Port>/SystemConfiguration.

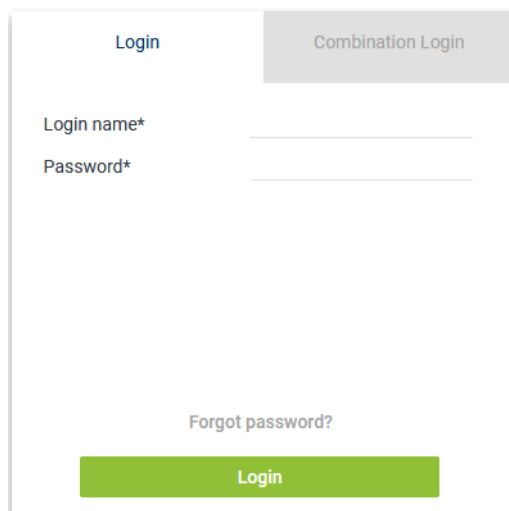


Fig. 8: System Configuration - web interface

To install and configure the recording solutions, you have to log in as system provider.

Login data for the administrator of the system provider:

User name:	<i>system-admin</i>
<i>neo</i> version < 6.3	
Default password:	<i>1</i>
	If the default password <i>1</i> has never been changed before a software update to a <i>neo</i> version ≥ 6.3 , the password must be changed upon the next login or by entering it again.
	If the default password has already been changed before a software update to a <i>neo</i> version ≥ 6.3 , the changed password remains.
<i>neo</i> version ≥ 6.3	

Default password: A\$c123

Tab. 9: Login data - system provider

2. Log in to the web interface.
 - ⇒ The main window System Configuration appears.

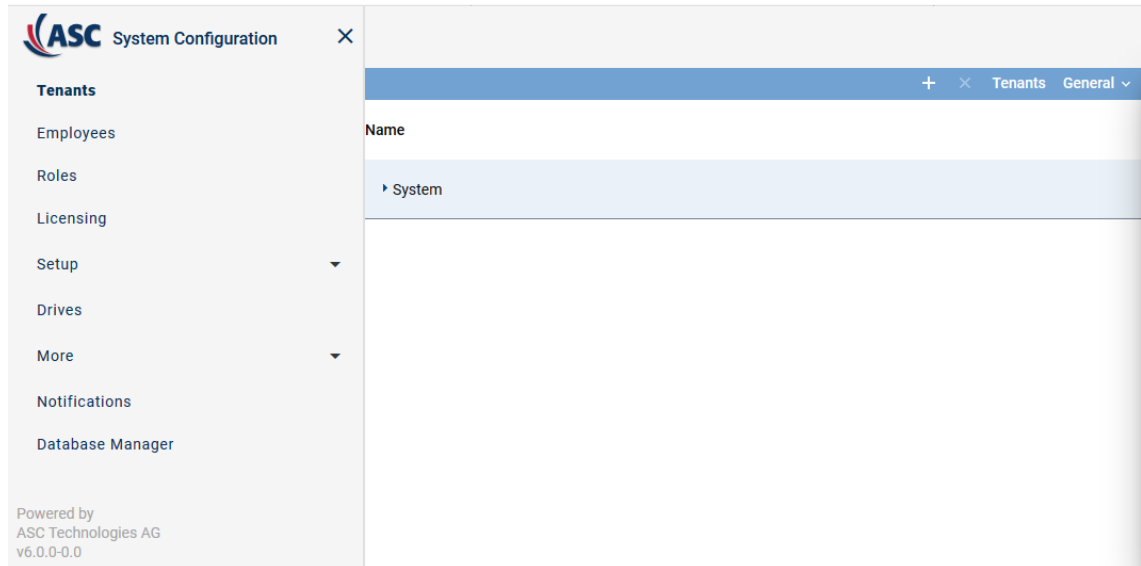


Fig. 9: System Configuration - main view:

6.2.2 Configure recording solution

Supported recording architectures

In this recording solution, the following recording architecture types are supported:

- All-in-one Basic Recording
- All-in-one Parallel Recording
- Multi-Server Recording
- Multi-Server Parallel Recording

6.2.2.1 Configure recording solution All-in-one Basic

6.2.2.1.1 Create recording architecture

Start the configuration in the Recording Architectures module because an activated recording architecture is required for further configuration.

The recording servers, recording types, and the integration types are assigned in the Recording Architectures module.

1. Select the menu item *Setup > Recording Architectures* in the navigation bar.
 - ⇒ The following window appears:

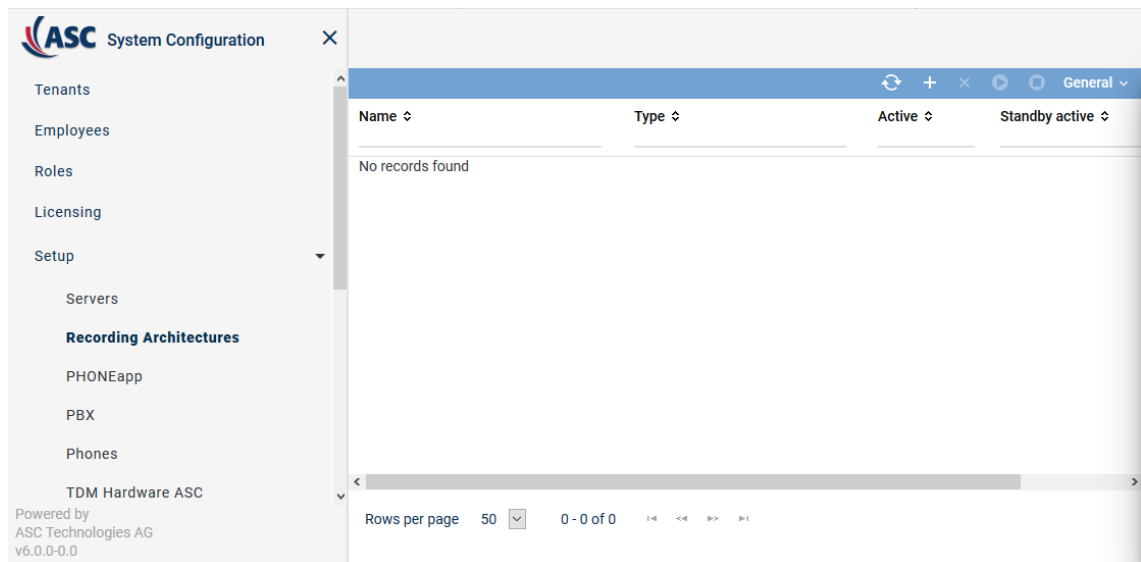




Fig. 10: Recording architectures - main view

Name	Name of the recording architecture
Type	Type of the recording architecture
Active	Shows whether the recording architecture has been activated and is ready to be used for the recording. ✓ = Recording architecture is active and ready to be used for recording. It can be deactivated by clicking on the icon  (Deactivate) in the toolbar. ✗ = Recording architecture is not active. It can be activated by clicking on the icon  (Activate) in the toolbar.
Standby Active	Shows whether the standby server is active for one or several recording components in the recording architecture. ✓ = At least 1 standby server is active. ✗ = No standby server is active or no standby server has been defined.
Creation Date	Date on which the recording architecture was installed.
Updated	Date on which the settings of the recording architecture were updated for the last time.

NOTICE! Hidden columns can be added by clicking on the menu item *General > Adjust Table*.

Toolbar of the Recording Architectures module

The toolbar offers the following functions.

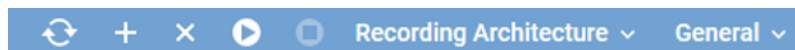







Fig. 11: Toolbar Recording Architectures module

	Refresh	Refreshes the main view.
	Create	Creates a new recording architecture.
	Delete	Deletes the selected recording architecture. The recording architecture is removed from the list of the main view. NOTICE! You can only delete recording architectures which are inactive and have not been assigned to an integration or server for the import.

	<i>Activate</i>	Activates the selected recording architecture.
	<i>Deactivate</i>	Deactivates the selected recording architecture. NOTICE! You can only deactivate recording architectures which have neither been assigned to an active integration nor to an active import.
<i>Recording Architecture</i>	<i>Standby Management</i>	The menu item is only available for recording architectures with failover possibilities. By clicking on the menu item Standby Management, you can open a window in which you can manually define the active server in architectures with failover concepts.
<i>General</i>	<i>Print</i>	Prints the table of the main view.
	<i>Adjust Table</i>	Opens a window in which you can adjust the following settings for the main view: <ul style="list-style-type: none"> • <i>Displayed information</i> • <i>Order of the displayed columns</i> • <i>Number of rows per page</i>
	<i>Save Table Configuration</i>	Saves the current table configuration of the main view as default view of the user.
	<i>Search</i>	Opens the window of the search function. The search function allows searching systematically for sets of data which meet certain criteria.
	<i>Reset Search</i>	Resets all manually entered search criteria.
	<i>General Help</i>	Opens the online help.
	<i>Module Help</i>	Opens the module-specific online help.




For detailed information on default functions such as *Print*, *Adjust table*, or *Help* refer to the user manual for administrators *System Configuration - General Information*.

Create recording architecture All-in-one Basic

If the entire *neo* software has been installed on one server, you must create a recording architecture of the type *All-in-one Basic Recording*.



Depending on the selected recording architecture type, the following configuration steps vary. The following configuration steps are exemplary for the recording architecture *All-in-one Basic Recording*.

- To create a new recording architecture, click on the icon  (*Create*) in the toolbar of the main view.
⇒ The window *New Recording Architecture* appears.

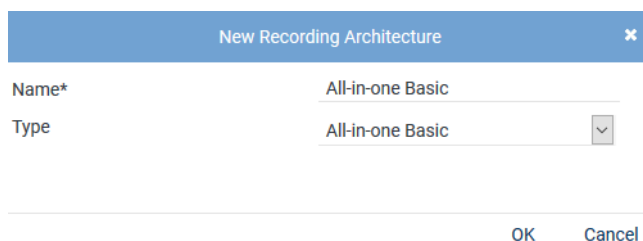


Fig. 12: Create recording architecture - All-in-one Basic Recording

2. In the entry field *Name*, enter a descriptive name for the recording architecture.
3. From the drop-down list *Type*, select the recording architecture type *All-in-one Basic Recording*.
NOTICE! The drop-down list only displays the supported recording architecture types.
4. Click on the button *OK*.
 ⇒ Your entries now appear in the detail view.

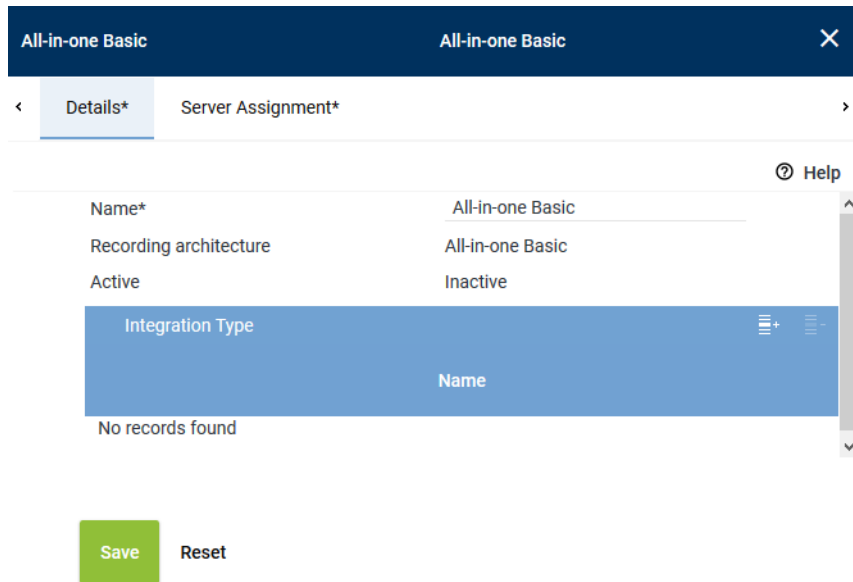



Fig. 13: Recording architecture - tab Details

Add integration type

1. Click on the icon  (*Add*) in the toolbar of the list *Integration Type*.
 ⇒ The window *Integration Type* appears.

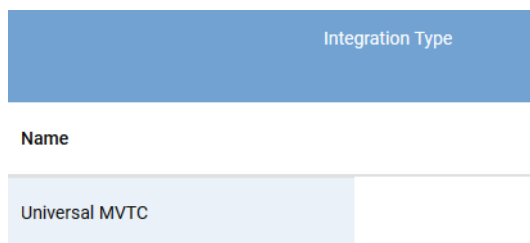



Fig. 14: Select integration type



Only those integration types are displayed which have a license in the system and which support the selected architecture type.



Any number of integration types can be assigned to a recording architecture.

2. Select *Universal MVTC* from the list of available integration types.
3. Click on the button *Add*.
 - ⇒ The name of the integration type now appears in the list in the detail view.

Assign server

1. Click on the tab *Server Assignment* to assign a recording server to the recording architecture.

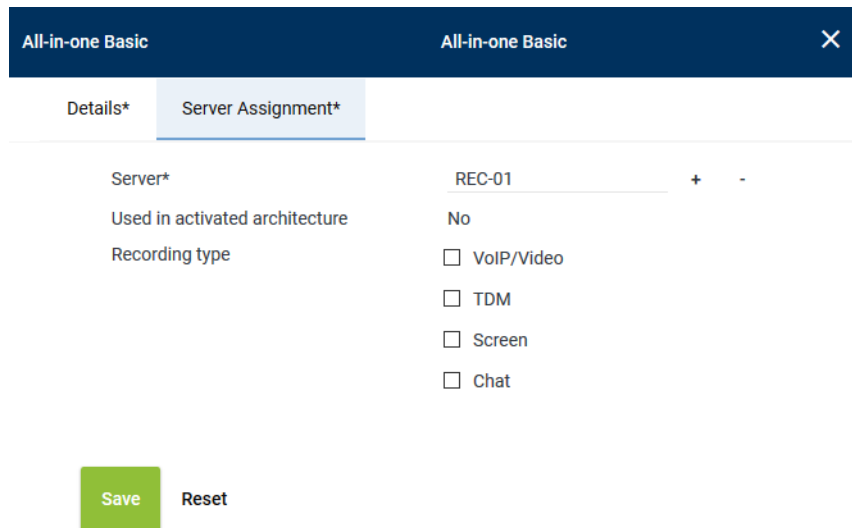
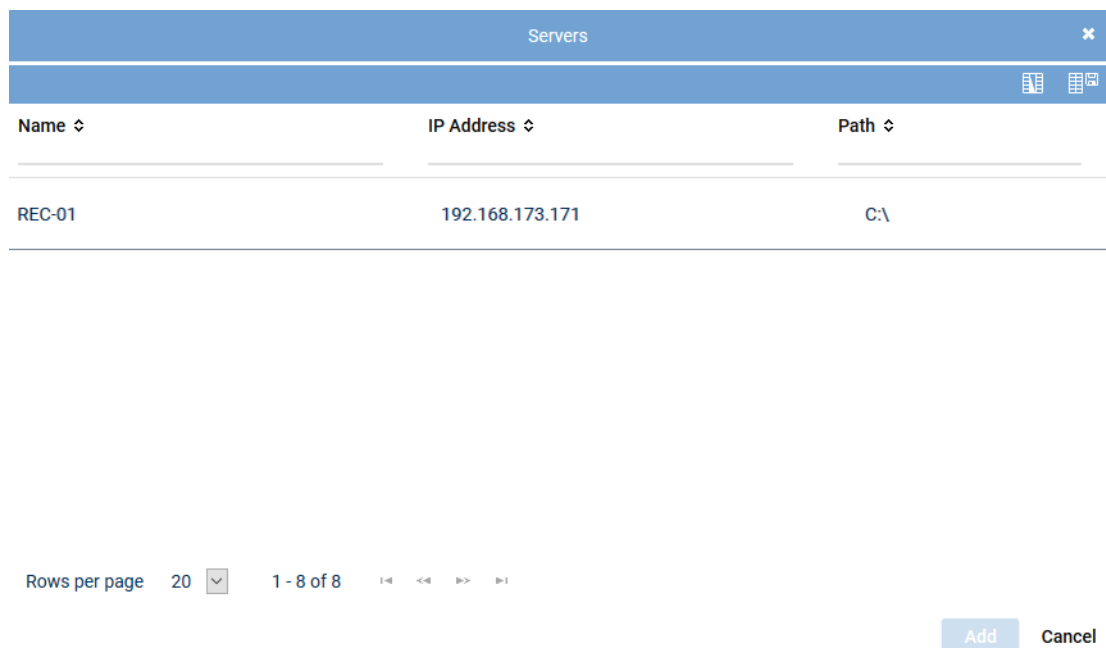


Fig. 15: Recording Architecture - tab Server Assignment

2. Click on the button *+* behind the entry field *Server*.
 - ⇒ The window *Servers* appears.



Name ↕	IP Address ↕	Path ↕
REC-01	192.168.173.171	C:\

Fig. 16: Recording Architecture - assign server

3. Select the entry of the corresponding server.



A server can be configured in several recording architectures, but you cannot activate several recording architectures with the same server at the same time.
If you would like to activate several recording architectures at the same time, you have to use different servers to do so.

4. Click on the button *Add*.
⇒ The name of the server now appears in the detail view.
5. Activate the check box of the recording type *TDM recording*.

Recording type

☐ VoIP/Video

☒ TDM

☐ Screen

☐ Chat

Fig. 17: Recording Architecture - activate recording type






You can activate several recording types if the integration has been designed for this and if you have installed the respective licenses.



The *recording architecture* must have been activated to be able to perform the subsequent configuration.

Upon starting the recording architecture, it may take one or two minutes until the service *ASC TDM Module* is active and the interface cards are displayed.

Activate recording architecture

1. Click on the button *Save*.
2. Select the recording architecture in the main view so that the icon  (*Activate*) in the tool-bar becomes active.
3. To activate the recording architecture, click on the icon  (*Activate*).
⇒ In the column *Active*, the icon  (*Active*) appears.





Recording Architecture			
Name ↕	Type ↕	Active	Standby active ↕
All-in-one Basic	All-in-one Basic		

Fig. 18: Recording architecture - activate recording architecture

4. To deactivate the recording architecture, if required, click on the icon  (*Deactivate*).
⇒ In the column *Active*, the icon  (*Inactive*) appears.



The recording architecture must have been activated so that the integration can be configured.



For updates, the recording architecture is stopped and deactivated. Once the update has been completed, check that the recording architecture has been activated again.



If you install an extension for the integration subsequently, you must deactivate the recording architecture and activate it again after having installed the license.

6.2.2.1.2 Configure servers

Every server in your network that the *neo* software has been installed on is automatically identified as a server of the recording system and displayed in the main view of the Servers module. In the Servers module, you can configure the usage of the servers in your recording system.

1. Select the menu item *Setup > Servers* in the navigation bar.

⇒ The following window appears:

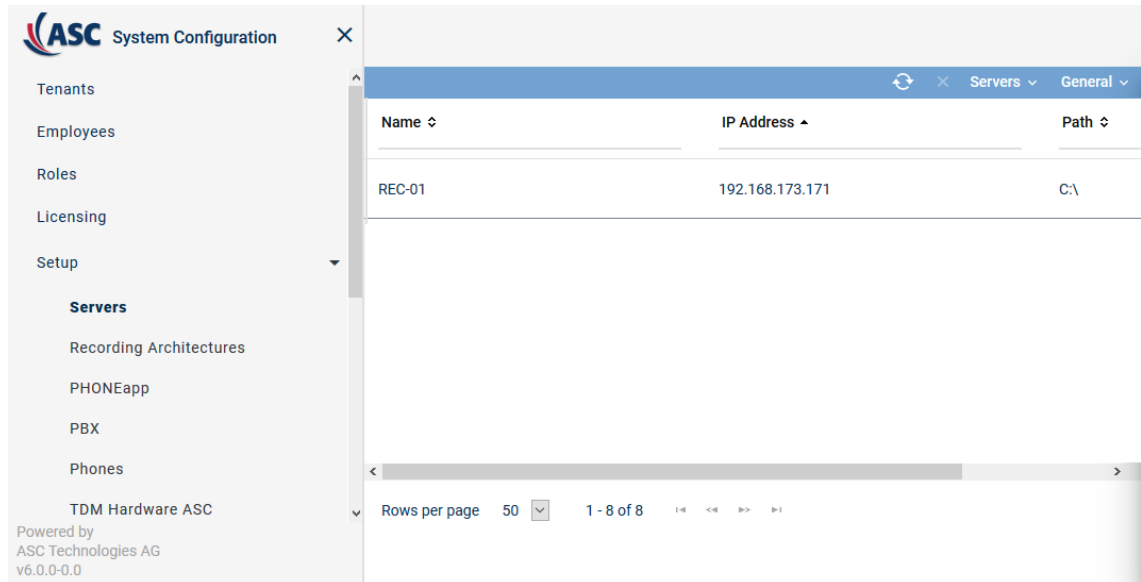


Fig. 19: Servers - main view

Depending on the configuration of the columns, the following information is displayed in the main view:

<i>Name</i>	Shows the name of the server.
<i>IP Address</i>	Shows the IP address of the server.
<i>Path</i>	Shows the path of the server.
<i>Creation Date</i>	Date on which the server was installed.
<i>Updated</i>	Date on which the settings of the server were updated for the last time.

NOTICE! Hidden columns can be added by clicking on the menu item *General > Adjust Table*.

Toolbar of the Servers module

The toolbar offers the following functions.

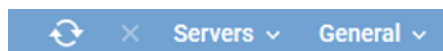




Fig. 20: Toolbar Servers module

	<i>Refresh</i>	Refreshes the main view.
	<i>Delete</i>	Deletes the selected server configuration. This function is meant to delete the server configuration if the hardware of a server has been removed and there is no connection to the <i>neo</i> system.
<i>Servers</i>	<i>Administrate Server Locations</i>	Opens a window in which you can create and administrate locations of the servers, see chapter "Administrate server locations" , p. 24.

	<i>Administrate NTP Server</i>	Opens a window in which you can administrate the servers for the time synchronization, see chapter "Administrate NTP server", p. 41 .
	<i>Manage Synchronization Configurations</i>	Opens a window in which you can manage the synchronization configurations.
<i>General</i>	<i>Adjust Table</i>	Opens a window in which you can adjust the following settings for the main view: <ul style="list-style-type: none"> • <i>Displayed information</i> • <i>Order of the displayed columns</i> • <i>Number of rows per page</i>
	<i>Save Table Configuration</i>	Saves the current table configuration of the main view as default view of the user.
	<i>Search</i>	Opens the window of the search function. The search function allows searching systematically for sets of data which meet certain criteria.
	<i>Reset Search</i>	Resets all search filters so that all sets of data are displayed in the main view again.
	<i>General Help</i>	Opens the online help.
	<i>Module Help</i>	Opens the module-specific online help.



For detailed information on default functions such as *Print*, *Adjust table*, or *Help* refer to the user manual for administrators *System Configuration - General Information*.

Administrate server locations

You can create and manage a list of server locations. In the tab *Details*, you can assign locations to the servers.

Add server locations

1. Click on the menu item *Servers > Administrate Server Locations* in the toolbar of the main view.
⇒ The window *Server Locations* appears.

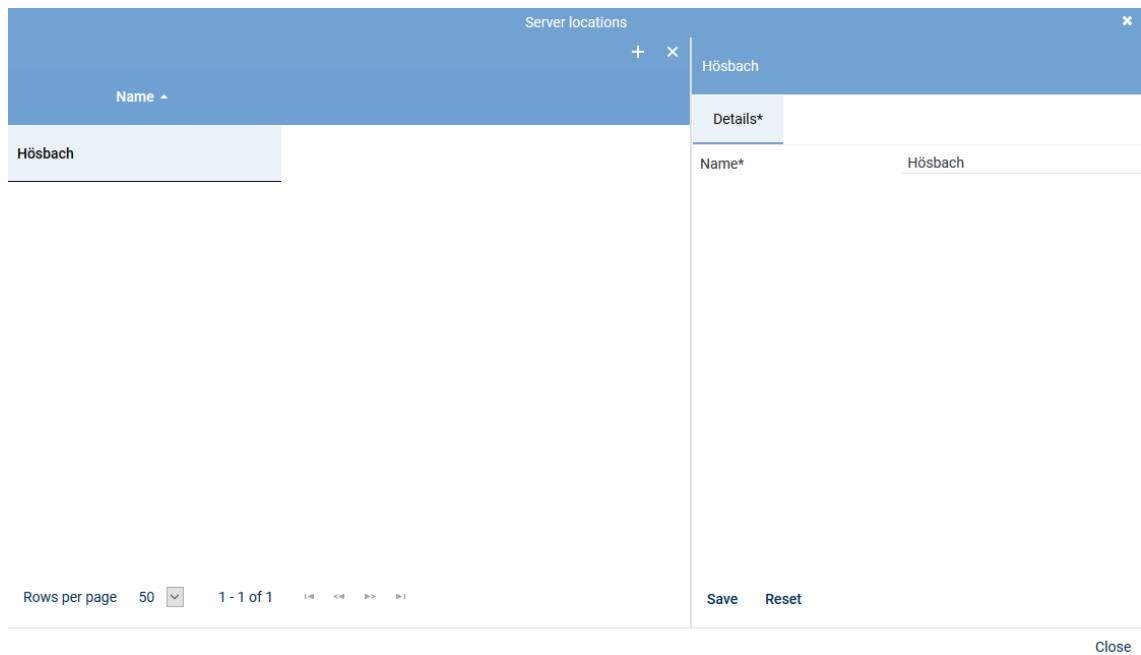



Fig. 21: Add server locations

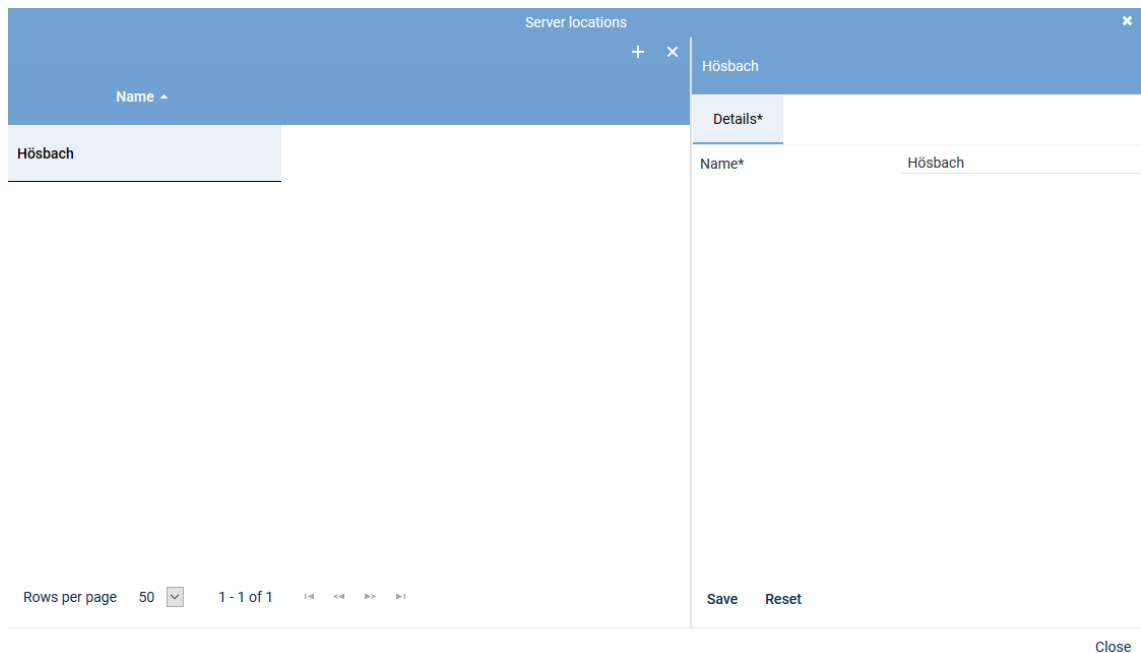
2. Click on the icon  (*Create*) in the toolbar of the window *Server Locations*.
3. Enter the name of the location on the right side in the tab *Details*.
4. To save the entry, click on the button *Save*.
To discard the entry, click on the button *Reset*.
5. To add further locations, repeat the last 3 steps.
6. To close the window, click on the button *Close*.

Delete server location




A server location can only be deleted when it has not been assigned. To be able to delete a server location, you must first delete possible assignments.

1. Click on the menu item *Servers > Administrate Server Locations* in the toolbar of the main view.
⇒ The window *Server Locations* appears.
2. Select the location you would like to delete.



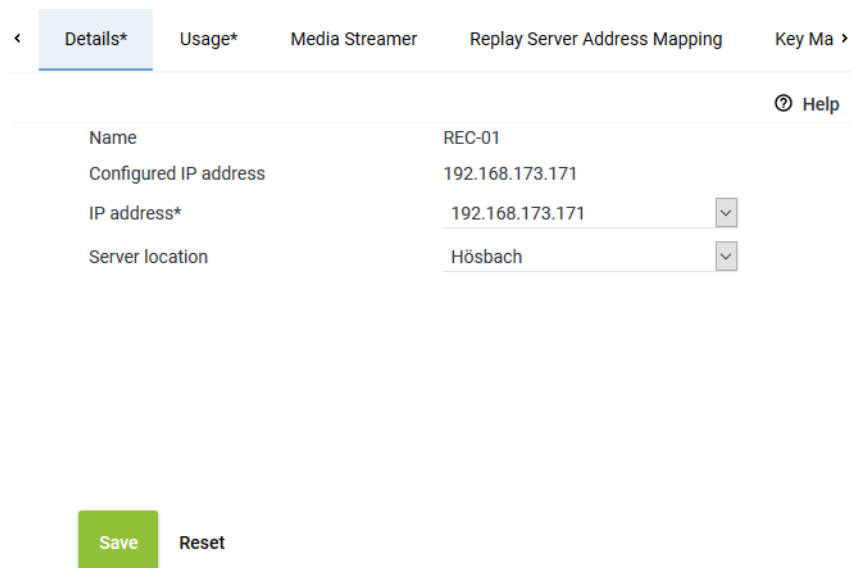
The screenshot shows a window titled "Server locations" with a close button (x) in the top right. Below the title bar is a table with one row containing the name "Hörsbach". To the right of the table is a "Details*" tab. Below the tab, there is a form with a label "Name*" and a text input field containing "Hörsbach". At the bottom of the window, there is a "Save" button and a "Reset" button. A "Close" button is located at the bottom right of the window frame.

Fig. 22: Delete server location



3. Click on the icon  (*Delete*) in the toolbar of the window.
4. To delete further locations, repeat the last 2 steps.
5. To close the window, click on the button *Close*.

Tab Details

1. To configure the server, select the entry of the corresponding server in the main view.
 - ⇒ In the detail view, the tab *Details* appears.
 - The information *Name* and *Configured IP address* has already been entered during the installation and is displayed for your information only.



The screenshot shows a window titled "Servers - tab Details" with a close button (x) in the top right. Below the title bar is a tabbed interface with tabs: "Details*", "Usage*", "Media Streamer", "Replay Server Address Mapping", and "Key Ma". The "Details*" tab is active. Below the tabs is a form with the following fields:

Name	REC-01
Configured IP address	192.168.173.171
IP address*	192.168.173.171 
Server location	Hörsbach 

At the bottom of the window, there is a "Save" button and a "Reset" button.

Fig. 23: Servers - tab Details

2. From the drop-down list, select the IP address which is supposed to be used as default address of the server in the system.
3. Select the *Server location* in the drop-down list. The drop-down list displays all locations which have been created in the location management.

- Click on the button **Save** if the entries are correct.

Tab Usage

- Click on the tab **Usage** to configure the purpose of usage.



Since a server can be used for several recording solutions, all purposes of use are listed. Note that some purposes of use do not apply for some recording solutions. As an example: You cannot use audio analysis or replay via phone in a chat recording.

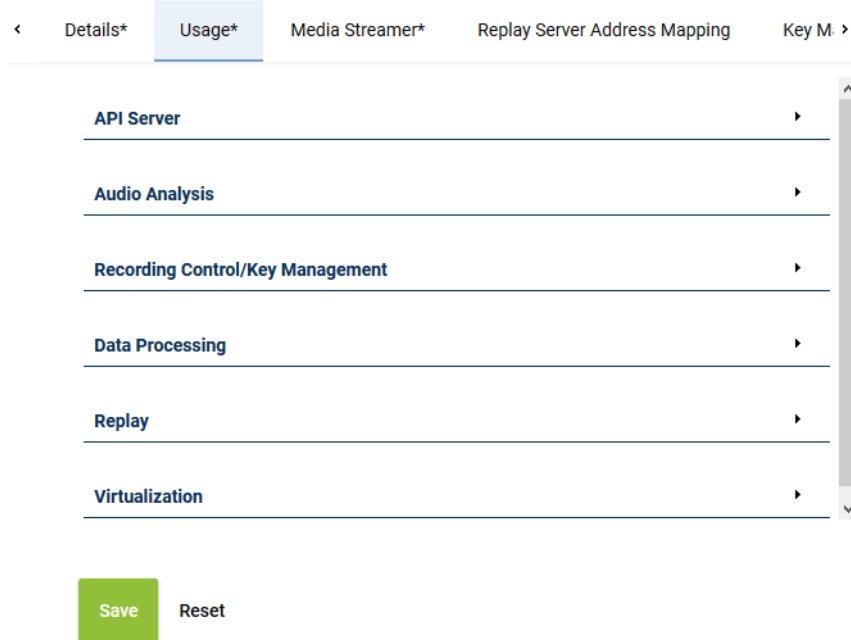


Fig. 24: Servers - tab Usage

Group field API Server

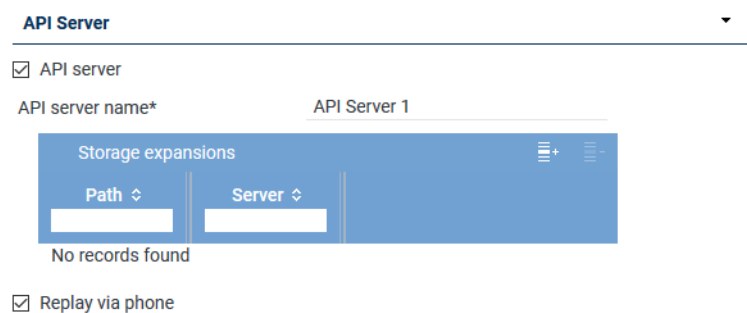




Fig. 25: Group field API Server


The API server is a service in the neo software. It contains the interface for the client applications. Once the service has been started, the client applications can communicate with the neo system via this interface by means of defined commands.

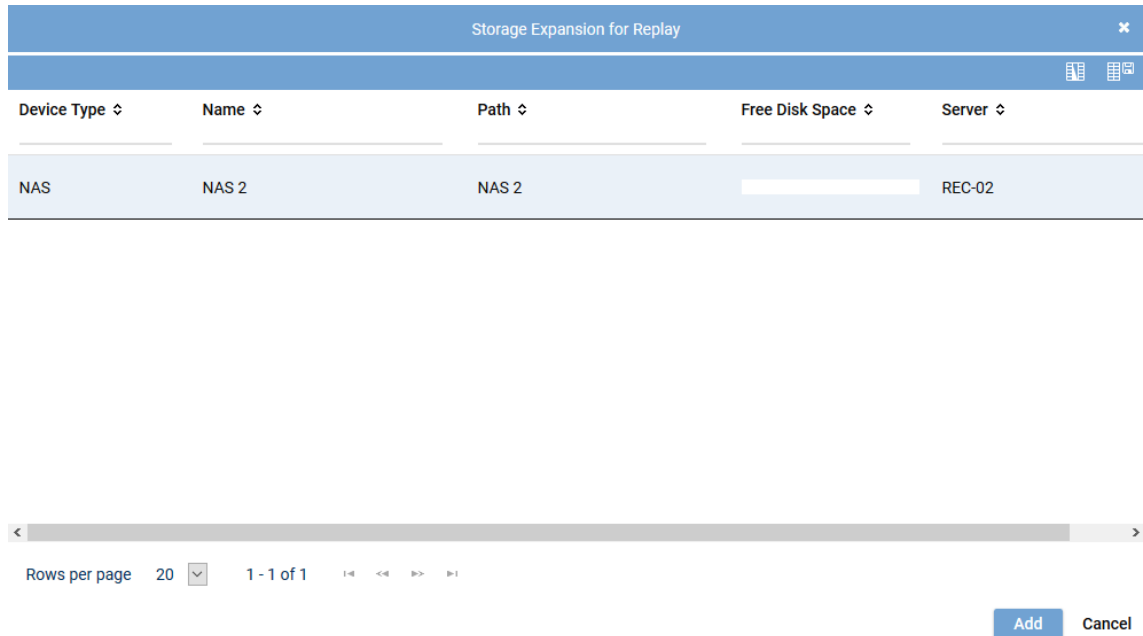
The API server is responsible for replay via the web browser, too. The API server has to be started before the replay server can be activated and the API server assigned for replay via the web applications.

Parameter	Value/Description
API server	Tick the check box to start the API server. <input checked="" type="checkbox"/> = Function has been activated. You have to complete the entry field <i>API server</i> .

Parameter	Value/Description
	<p><input type="checkbox"/> = Function has not been activated.</p> <p>In order to be able to reach the API server from a public network and with configured port forwarding, too, you have to adjust the settings in the tab <i>Replay Server Address Mapping</i>, see chapter "Tab Replay Server Address Mapping", p. 37.</p>
<i>API server name</i>	<p>Enter the name which is supposed to denote the server in the system. The displayed name can be selected arbitrarily and is a kind of pseudonym.</p> <p>The displayed name is meant to make it easier for users to select a server as different API servers may be used across the system by different tenants. When selecting the API server, these pseudonyms are displayed on the client computers instead of the real server name or the IP address.</p>
<i>List Storage expansions</i>	<p>Here, you can add storage expansions for replay. If a recording which is supposed to be replayed cannot be found on the server, the search is continued on the storage expansions which have been entered here. That way, even recordings can be replayed which have not been transferred to the server.</p> <p>If the function <i>Replay</i> has been activated, you can adjust the following settings:</p> <ul style="list-style-type: none"> • By clicking on the icon  (<i>Add</i>), you can add the storage expansions, see chapter "Add storage expansion for replay", p. 29. • By clicking on the icon  (<i>Remove</i>), you can remove the storage expansions from the list. <p>If you use several recording servers in your system for which storage expansions have been configured, you can add any storage expansion of any recording server on every API server of the system.</p>
<i>Replay via phone</i>	<p>Activate this function if you would like to use the functions <i>Replay via phone</i> or <i>Last Call Repeat</i>.</p> <p><input checked="" type="checkbox"/> = Function has been activated.</p> <p><input type="checkbox"/> = Function has not been activated.</p> <p>NOTICE! The function <i>Replay via phone</i> has been implemented in the following <i>neo</i> components:</p> <ul style="list-style-type: none"> • Application POWERplay Pro • Application POWERplay Instant • Replay module <p>In order to enable a client to use the functionality <i>Replay via phone</i>, you have to assign this client an identifier either in the Employees module or in the Phones module which allows the system to clearly identify the phone.</p> <p>NOTICE! In the tab <i>Media Streamer</i>, you have to assign this function to a PBX, see chapter "Tab Media Streamer", p. 36. To be able to do so, at least 1 PBX must have been configured in the system.</p>

Add storage expansion for replay

1. Click on the icon  (Add) in the toolbar of the list.
2. Select 1 or several storage expansions.
If you would like to select several storage expansions or revoke a selection, click on the respective line while holding the [Ctrl] key down.



Device Type	Name	Path	Free Disk Space	Server
NAS	NAS 2	NAS 2	<div></div>	REC-02

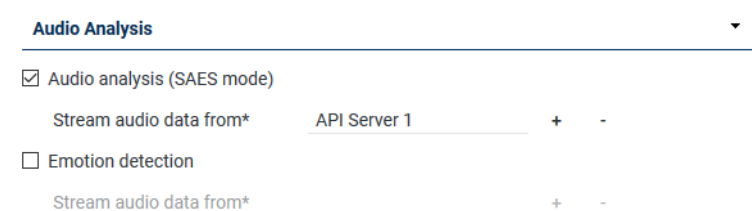
Rows per page 20 1 - 1 of 1

Add Cancel

Fig. 26: Select storage expansion

3. To apply the selected storage expansions, click on the button *Add*.
To discard the selection and close the window, click on the button *Cancel*.

Group field Audio Analysis



Audio Analysis


☒ Audio analysis (SAES mode)

Stream audio data from* API Server 1 + -

☐ Emotion detection

Stream audio data from* + -

Fig. 27: Group field Audio Analysis

Parameters	Value/Description
Audio analysis	<p>Activate this check box to use the server for audio analysis. The audio data is then streamed for audio analysis from the configured server to this server.</p> <ul style="list-style-type: none"> Stream audio data from From the list of available servers, select the server from which the audio data is supposed to be streamed for audio analysis via the button .
Emotion detection	<p>Activate this check box to activate emotion detection for the audio analysis.</p> <p><input checked="" type="checkbox"/> = Function has been activated. Tenants can use the emotion detection function.</p>

Parameters	Value/Description
	<input type="checkbox"/> = Function has not been activated.

Tab. 10: Configure audio analysis

Group field Recording Control/Key Management

Recording Control/Key Management ▼

☒ Recording control/Monitoring

Recording architecture Please choose... ▼

☒ neo key management

Fig. 28: Group field Recording Control/Key Management

Parameters	Value/Description
<i>Recording control/Monitoring</i>	<p>Activate the check box if you would like to use <i>CLIENT^{command}</i> or an API recording control or if you would like to use <i>Monitoring</i>. This feature is only available if a recording architecture has been configured and activated.</p> <ul style="list-style-type: none"> Recording architecture From the drop-down list, select the respective recording architecture you would like to use for the control.
- <i>neo key management</i>	<p>The function allows customer-specific encryption of the recordings. To be able to configure the key management, you have to activate the check box <i>Key management</i>.</p> <p>This function can only be activated if the license <i>ASC_KEY_MANAGEMENT</i> is available.</p> <p>For further information about the configuration of the key management refer to the administration manual <i>Configuration of servers and recording architectures</i> and to the installation manual <i>Installation Dongle Manager</i>.</p>

Tab. 11: Configure Recording Control/Key Management

Group field Data Processing

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 ☒

from 11:59:36

to 11:59:36

Receives data from

Name	Only Replay
No records found	



☒ Archiving





☒ Export

☒ Import

Recording architecture Please choose... ▼


Fig. 29: Group field Data Processing

Parameter	Value/Description
<i>Data storage</i>	Activate the check box to allow the modification of the additional functions of data processing.
<i>Transfer data for replay</i>	<p>Activate the check box if you would like to transfer data only for replay to another server.</p> <p>If the function has been activated, you can select a server from the list <i>Target Server</i> to which the recorded data is supposed to be transferred for replay. The data is not stored on the target server but deposited in a cache temporarily in order to be replayed.</p> <ul style="list-style-type: none"> By clicking on the icon  (<i>Add</i>), you can add the target server, see chapter "Add target server to a list", p. 32. By clicking on the icon  (<i>Remove</i>), you can remove the target server from the list. <p>NOTICE! Only those servers are displayed on which an API server and a replay server have been configured.</p>
<i>Transfer data for data storage</i>	<p>Activate the check box if you would like to transfer data for storage to another server.</p> <p>If the function has been activated, you can select a server from the list <i>Target Server</i> to which the recorded data is supposed to be transferred for data storage purposes. In the drop-down list, all servers are displayed on which the function <i>Data Storage</i> has been activated. The data is copied to the target server and stored there.</p>

Parameter	Value/Description
	<ul style="list-style-type: none"> By clicking on the icon  (Add), you can add the target server, see chapter "Add target server to a list", p. 32. By clicking on the icon  (Remove), you can remove the target server from the list. <p>NOTICE! Only those servers are displayed on which the function <i>Data Storage</i> has been activated.</p> <p>If the function has been activated, you can activate the transfer for a certain period of time.</p> <ul style="list-style-type: none"> Activate period of time <input checked="" type="checkbox"/> = Function has been activated. The fields for entering the time become active. Select the time via the rotating field for the period from – to. Active period of time <input type="checkbox"/> = Function has not been activated. <p>NOTICE! In distributed systems with slow network connections, the storage interval for the data transfer can be adjusted. The storage interval for the data transfer has to be configured by an ASC service technician or by an authorized partner company.</p>
<i>Receives data from</i>	<p>This table contains those servers which transfer data to this server.</p> <p>In the column <i>Name</i>, the name of the server appears from which data has been transferred.</p> <p>In the column <i>Only Replay</i>, the purpose of the transfer is displayed:</p> <p> = Data is transferred only for replay.</p> <p> = Data is transferred for data storage.</p>
<i>Archiving</i>	Activate the check box <i>Archiving</i> if you would like to use the server for archiving purposes.
<i>Export</i>	Activate the check box <i>Export</i> to allow the export from this server.
<i>Import</i>	<p>Activate the check box <i>Import</i> so that the imported data can be stored on this server.</p> <ul style="list-style-type: none"> Recording architecture From the drop-down list, select the recording architecture that fulfills this function. In the drop-down list, all recording architectures are displayed which enable this function as well. <p>NOTICE! If you would like to use a server for the import function on which no recording is supposed to take place, you can configure an architecture exclusively for the import.</p>

Tab. 12: Configure data storage

Add target server to a list

- In the toolbar of the list *Target Server*, click on the icon  (Add).
- Select the server from the list to which you would like to transfer the data.
If you would like to select several servers or revoke a selection, click on the respective line while holding the [Ctrl] key down.



Name	IP Address
RC-02	192.168.173.176
REC-04	192.168.173.174
RC-01	192.168.173.175
REC-02	192.168.173.172
CTI-01	192.168.173.177
REC-03	192.168.173.173

Rows per page: 20 | 1 - 6 of 6

Add **Cancel**

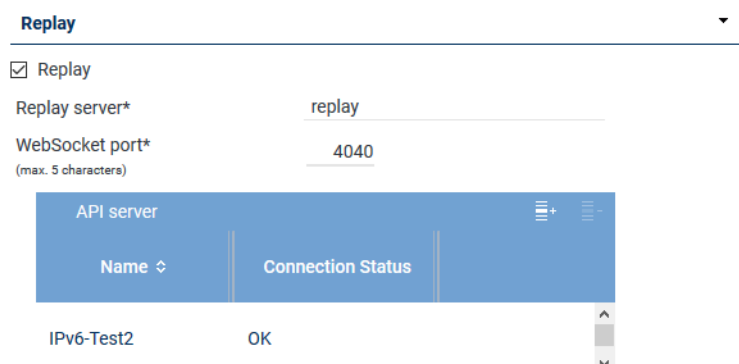
Fig. 30: Select server



Only those servers are available on which the function *Data storage* has been activated.

- To apply the selected servers, click on the button *Add*.
To discard the selection and close the window, click on the button *Cancel*.

Group field Replay



Replay

☒ Replay



Replay server*

WebSocket port*
(max. 5 characters)

Name	Connection Status
IPv6-Test2	OK

Fig. 31: Group field Replay

Parameter	Value/Description
<i>Replay</i>	<p>A replay server can replay recordings via the integrated <i>Replay Feature</i>. Only data which has either been recorded directly on this server or which has been transferred to this server for data storage or only for replay purposes can be replayed. The client computers of the system can connect to a replay server for replay purposes.</p> <p>Activate the check box <i>Replay</i> to be able to use the replay function of the players and the phones.</p> <p><input checked="" type="checkbox"/> = Function has been activated. You have to complete the entry field <i>Replay server</i>.</p> <p><input type="checkbox"/> = Function has not been activated.</p>

Parameter	Value/Description
<i>Replay server</i>	<p>If the function has been activated, you can enter a displayed name which is supposed to denote the server as the replay server in the system in the entry field <i>Replay server</i>. The displayed name can be selected arbitrarily and is a kind of pseudonym. As the replay server and the API server must not be identical, you can select different pseudonyms.</p> <p>The displayed name is meant to make it easier for users to select a server as different replay servers may be used across the system by different tenants. When selecting the replay server, these pseudonyms are displayed on the client computers instead of the real server name or the IP address.</p> <p>In order to be able to reach the server activated for replay from a public network and with configured port forwarding, you have to set the configuration in the tab <i>Replay Server Address Mapping</i>. For further details about the configuration refer to the administration manual <i>Configuration of servers and recording architectures</i>.</p>
<i>WebSocket port (maximum of 5 characters)</i>	Enter the port via which the data to be replayed in <i>POWERplay</i> Web are supposed to be transmitted.
<i>List API server</i>	<p>Here, you can add API servers that the replay server may use. If a recording which is supposed to be replayed cannot be found on a server, the search is continued on the API servers which have been entered here.</p> <p>If the function <i>Replay</i> has been activated, you can adjust the following settings:</p> <ul style="list-style-type: none"> By clicking on the icon  (<i>Add</i>), you can add the API server, see chapter "Add API server to a list", p. 34. By clicking on the icon  (<i>Remove</i>), you can remove selected API servers from the list.

Tab. 13: Configure replay

Search and replay functions



To be able to use the search and replay functions via [LCR](#) as well as to use replay via phone, you have to create the users with the respective access rights in the application System Configuration in the Employees module. For information about the configuration refer to the administration manual *User management* for tenants.

Add API server to a list

The replay server required the services of an [API](#) server. The configuration must be as follows:


- If the replay server runs on a server with a local [API](#) server, it must not necessarily be assigned as the replay server always addresses the local [API](#) server first.
 - If the replay server runs on a separate server, you must assign at least one [API](#) server that the replay server can address.
 - If several [API](#) servers are available in the network, you can assign further [API](#) servers in addition to the local [API](#) server. The assigned [API](#) servers are addressed in order. For this reason, the local [API](#) server should always be first in the list.
- To assign an [API](#) server, click on the icon  (*Add*) in the toolbar of the list *API Server*.
 - Select the server from the list on which the [API](#) service is running.



Fig. 32: Select server



Only those servers are available on which the [API](#) service has been installed and activated. See [chapter "Group field API Server", p. 27](#).

- To apply the selected servers, click on the button *Add*.
To discard the selection and close the window, click on the button *Cancel*.

Group field Virtualization



Fig. 33: Group field Virtualization

Parameter	Value/Description
<i>VM support</i>	<p>Activate the check box <i>VM support</i> to be able to use the licensing for several VM installations.</p> <p>This function can only be activated if the system has been installed in a VMware and no <i>TRUSTED_VIRTUALIZATION</i> license has been imported to the system.</p> <p>When activating the function <i>VM support</i>, you have to configure the respective settings in the tab <i>Keystore/VM Licensing</i>. For further details about the configuration of this function refer to the administration manual <i>Configuration of servers and recording architectures</i>.</p>

Tab. 14: Configure virtualization



For the *virtualization* without Internet connection, a dongle is required which contains the system information. The application *Dongle Manager*, required to read the dongle, has to be installed on the server that the dongle has been connected to.

- To save the entries, click on the button *Save* in the detail view.
To reset the entries, click on the button *Reset* in the detail view.

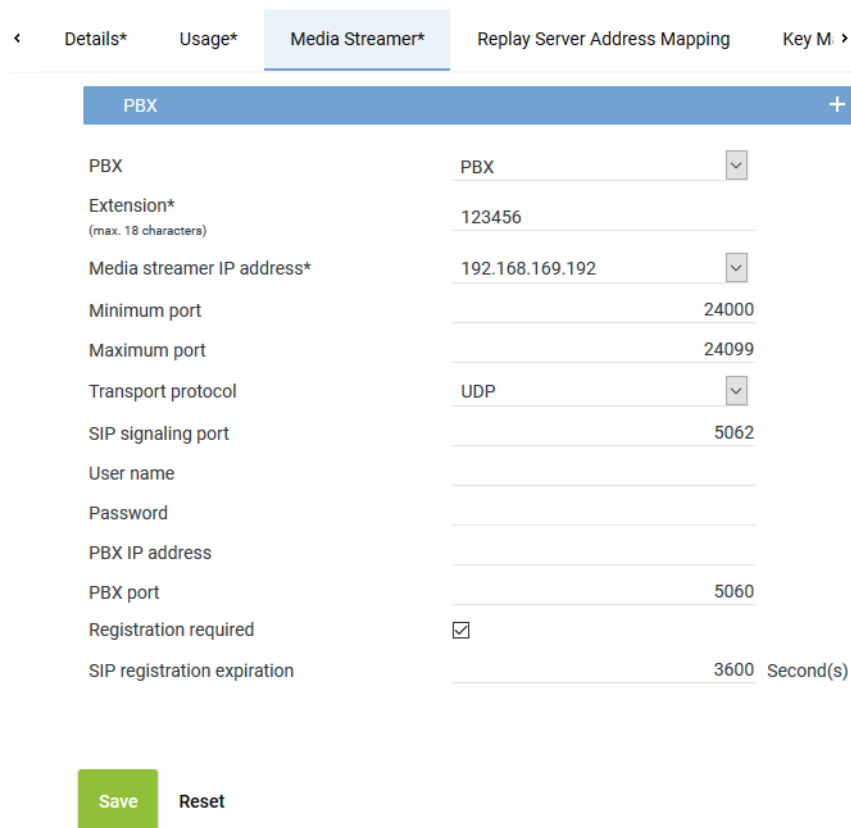
Tab Media Streamer

1. Click on the tab *Media Streamer* in the detail view.

In this tab, you can configure the Media Streamer for the functionalities *Replay via phone* and *Last Call Repeat Facility*.



The tab *Media Streamer* is only active if the function *Replay via phone* has been activated in the tab *Usage*.



< Details* Usage* **Media Streamer*** Replay Server Address Mapping Key M. >

PBX +

PBX	PBX	▼
Extension*	123456	
(max. 18 characters)		
Media streamer IP address*	192.168.169.192	▼
Minimum port	24000	
Maximum port	24099	
Transport protocol	UDP	▼
SIP signaling port	5062	
User name		
Password		
PBX IP address		
PBX port	5060	
Registration required	<input checked="" type="checkbox"/>	
SIP registration expiration	3600	Second(s)

Save Reset

Fig. 34: Servers module - tab Media Streamer

2. Enter the following parameters:

PBX	<p>PBX that the Media Streamer is supposed to be mapped to.</p> <p>Select a PBX from the drop-down list. The drop-down list displays all PBXs which have been created in the system.</p> <p>If no PBX has been created in the system yet, you can create a PBX via the blue bar PBX, see chapter "Create PBX", p. 42.</p>
Extension	<p>Extension which is supposed to be mapped to the Media Streamer. This is a mandatory field; the configuration cannot be saved if this information is missing.</p> <p>If an external analog gateway has been integrated, enter the value 8000.</p>
Media streamer IP address	<p>IP address which is supposed to be used for the exchange of the audio data and for the SIP communication.</p> <p>Select an IP address from the drop-down list. In the drop-down list, all IP addresses of the server are displayed.</p> <p>If an external analog gateway has been integrated, select the IP address 169.254.254.100 in the drop-down list.</p>

<i>Minimum port</i>	Enter the minimum port which is supposed to be used for the audio data exchange.
<i>Maximum port</i>	Enter the maximum port which is supposed to be used for the audio data exchange. A port range of 100 (e. g. 24000-24099) is sufficient for 50 licenses. The port range should be twice as wide as the number of available licenses.
<i>Transport protocol</i>	Select the transport protocol type you would like to use for the SIP communication from the drop-down list. TCP = unencrypted UDP = unencrypted TLS = encrypted If an external analog gateway has been integrated, select UDP in the drop-down list.
<i>SIP signaling port</i>	Enter the port for the SIP communication. Port for data exchange: 5062
<i>User name</i>	Enter the user name for the authentication on the SIP server.
<i>Password</i>	Enter the password for the authentication on the SIP server.
<i>PBX IP address</i>	Enter the IP address of the SIP registrar of the PBX . If an external analog gateway has been integrated, enter the IP address 169.254.254.101.
<i>PBX port</i>	Enter the port of the SIP registrar of the PBX . If an external analog gateway has been integrated, enter the value 5060.
<i>Registration required</i>	Select whether the SIP extension has to be registered with the SIP registrar of the PBX . <input checked="" type="checkbox"/> = SIP extension has to be registered. <input type="checkbox"/> = SIP extension does not have to be registered. If an external analog gateway has been integrated, deactivate the check box <i>Registration required</i> .
<i>SIP registration expiration</i>	Enter the time interval after which the registration has to be repeated.

Tab Replay Server Address Mapping

1. Click on the tab *Replay Server Address Mapping* in the detail view.

In this tab, you can configure the replay server address mapping. Servers which have been activated for replay require this address mapping so that they can be reached from a public network and with configured port forwarding.



The tab *Replay Server Address Mapping* is only active if the function *Replay* has been enabled in the tab *Usage*.

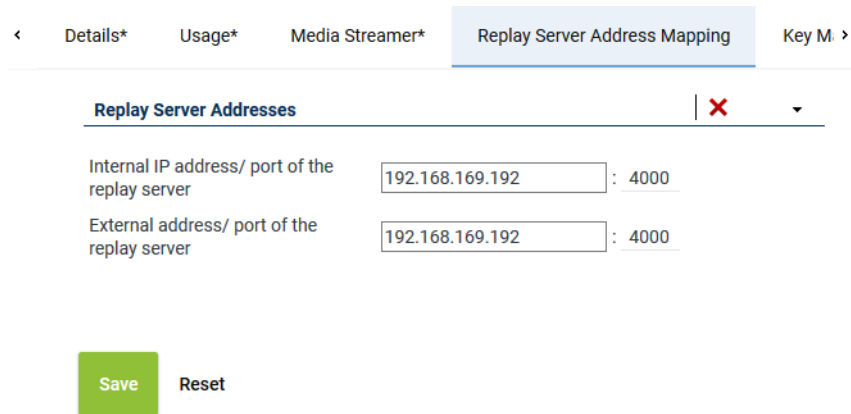


Fig. 35: Servers Module - tab Replay Server Address Mapping

Group field Replay Server Addresses

1. Enter the following parameters:

<i>Internal IP address/ port of the replay server</i>	Enter the destination IP address and the port of the replay server at which the Replay module can be reached internally.
<i>External address / Port of the replay server</i>	Enter the URL or the IP address and the port at which the Replay module can be reached via the browser from outside. When entering the external address consider whether the SSL certificate has been created for an IP address or for a DNS address. In the latter case, it is imperative to enter the DNS name! Otherwise the certificate check in the replay applications will fail.

If you would like to remove the addresses, click on the icon  in the title bar of the group field.



If address mapping has been configured, the Replay module receives the configured address and the configured port.

If address mapping has not been configured, the Replay module receives the IP address and the default port *4040* as entered in the tab *Details*.



To allow the users of the respective tenant to access the replay server via the browser, an internal address and/or an external IP address or a DNS name must be configured in the *Tenants* module.



For information about the configuration refer to the administration manual for tenants *User management tenant*.

Tab Key Management

1. Click on the tab *Key Management* in the detail view.

In this tab, you can configure the settings for the *neo* key management. This tab is only active if you have installed the corresponding license and enabled the function *neo Key Management* in the tab *Usage*.

< Usage* Media Streamer* Replay Server Address Mapping
Key Management >

Key creation interval

☒ All

365 Day(s)

☐ Create key manually

Delay usage

until

0 Day(s)

0 Hour(s)

☐ Key expiration date

after

0 Day(s)

☒ In case of an error switch to simple key management automatically

Save

Reset

Fig. 36: Servers module - tab Key Management

<i>Key creation interval</i>	<p>Select whether a key is supposed to be generated automatically or manually. Select one of the following options:</p> <ul style="list-style-type: none"> • <i>All</i> Select the intervals in which a new key is supposed to be generated automatically. Possible time interval: 1 to 365 days Default value: 365 days • <i>Create key manually</i> Select that a key is supposed to be generated manually. <p>Old keys which are no longer used for encryption become inactive for the time being. They remain in the database, though, since they are still required for the decryption of old recordings.</p>
<i>Delay usage</i>	<p>If required, enter a time interval during which the new key is not supposed to be used yet after having been created. Not until after this time interval has passed can the key be actually used for encryption.</p> <p>Possible time interval: 0 to 14 days Default value: 0 days (new keys are immediately used for encryption)</p> <p>A delay guarantees that the key has been captured by a database backup before it will actually be used.</p>
<i>Key expiration date</i>	<p>Select whether an inactive key is supposed to become invalid after the expiration of the time interval defined here.</p> <p><input type="checkbox"/> = Key never becomes invalid.</p> <p><input checked="" type="checkbox"/> = Key becomes invalid. In the entry field, enter the time interval after which the key loses its validity. Once this time interval has passed, the key cannot be used anymore. If recording data must be deleted after a certain period of time, this option offers additional security on top of the configured date of deletion. This especially applies to the case when recording data has been transferred manually to a storage location where the deletion mechanism of the system cannot find it.</p>

CAUTION! All recordings which have been encrypted with a key which has meanwhile become invalid are useless and cannot be replayed anymore.

In case of an error ... automatically

Select whether simple key management is supposed to be used if the neo key management does not work (e. g. if the service *DongleMan* fails). If you have not activated the option, no recording takes place as long as the neo key management has been activated but does not work.

☒ = In case of an error, simple key management is used as replacement.

☐ = In case of an error, no recording takes place as long as the neo key management has been activated. In this case, disable key management in the tab *Usage*.



On top of the settings in this tab, each tenant who would like to use the neo key management has to define individual settings in his own user management (Tenants module).



For information about the configuration refer to the administration manual for tenants *User management tenant*.

Tab Keystore/Virtualization

1. Click on the tab *Keystore/Virtualization* in the detail view.

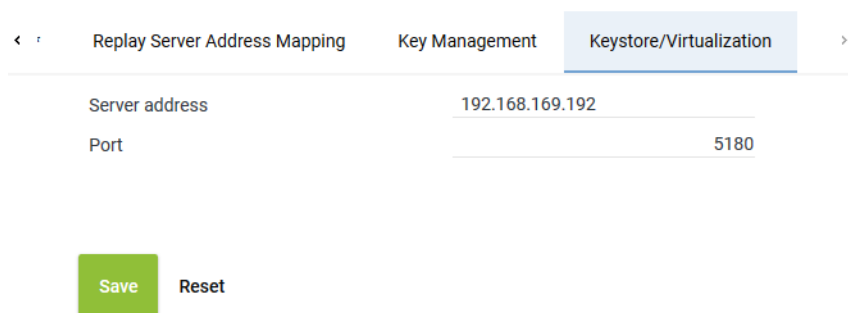
In this tab, you can configure the connection data for the service *DongleMan* for the neo key management and for the authentication of the VM.



If your system has been installed in a virtual environment, the application Dongle Manager must have been installed and started locally outside the VM so that the access to the dongle works. The dongle must have been connected to the server on which the VM has been installed.



For detailed information about neo key management refer to the administration manual *Encryption of recordings*.



The screenshot shows a configuration interface with three tabs: 'Replay Server Address Mapping', 'Key Management', and 'Keystore/Virtualization'. The 'Keystore/Virtualization' tab is active. It contains two input fields: 'Server address' with the value '192.168.169.192' and 'Port' with the value '5180'. Below these fields are two buttons: 'Save' (green) and 'Reset' (grey).

Fig. 37: Servers module - tab Keystore/Virtualization

Server address

Enter the address of the server for this connection.

- If you use the neo key management as well as the virtualization:
IP address of the server that the service *DongleMan* has been installed on.
- If you use only virtualization, you can authenticate the VM via the ASC License Management System, too. In this case, enter the following address:
licensing.asc.de

	<ul style="list-style-type: none"> If you use only the ASC key management: IP address of the server with the master password database
Port	Enter the port for the connection. Default value: 5180

- To save the settings, click on the button *Save*.
To discard the settings, click on the button *Reset*.

Administrate NTP server

The recording system works with an **NTP**-based time synchronization. The function *Administrate NTP server* allows defining several **NTP** servers. Every server in the system identifies all **NTP** servers configured within the system and can use any **NTP** server for time synchronization. That way, every server can connect immediately to another **NTP** server if its current **NTP** server connection breaks down.

Add NTP server

- Select the menu item *Servers > Administrate NTP Server* in the toolbar of the main view.
⇒ The window *NTP Server* appears.

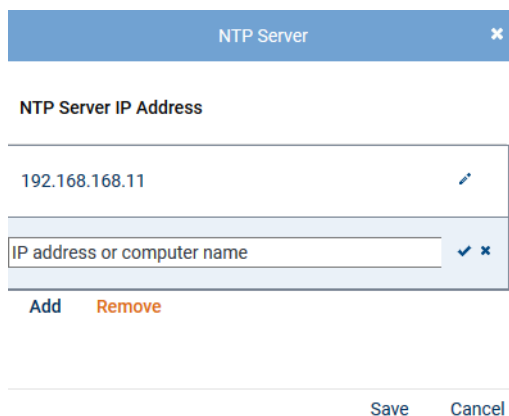





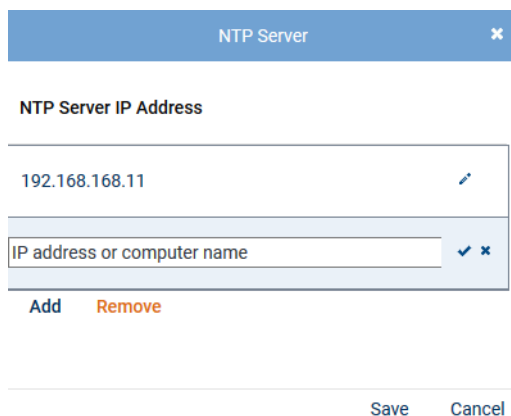
Fig. 38: Add NTP server

The list displays all NTP servers that have been configured during the installation.

- To add a server, click on the button *Add*.
- In the newly added row, click on the icon  (*Edit*).
- Enter the **IP** address or the name of the **NTP** server in the entry field.
- To save the entry in the row, click on the icon  (*Save*).
To discard the entry in the row, click on the icon  (*Discard*).
- To save all changes in the list, click on the button *Save*.
To discard the changes and close the window, click on the button *Cancel*.




Edit IP address

- Select the menu item *Servers > Administrate NTP Server* in the toolbar of the main view.
⇒ The window *NTP Server* appears.



NTP Server




NTP Server IP Address

192.168.168.11	
IP address or computer name	 

Add Remove

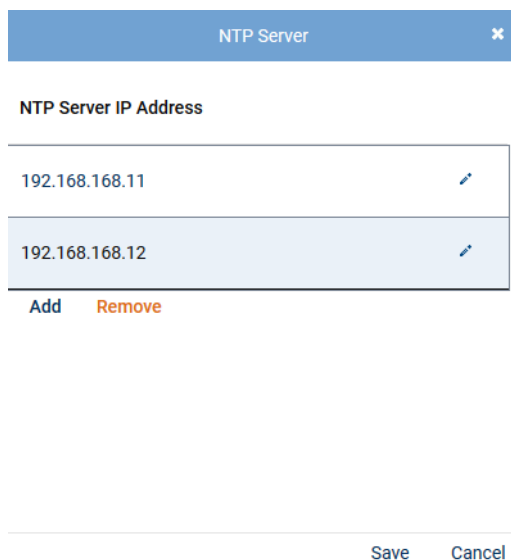
Save Cancel

Fig. 39: Edit IP address

- Click on the icon  (*Edit*) in the row with the IP address that you would like to edit.
- Change the entry in the entry field.
- To save the change, click on the icon  (*Save*).
To discard the change, click on the icon  (*Discard*).
- To save the changes, click on the button *Save*.
To discard the changes and close the window, click on the button *Cancel*.



Remove NTP server

- Select the menu item *Servers > Administrate NTP Server* in the toolbar of the main view.
⇒ The window *NTP Server* appears.



NTP Server

NTP Server IP Address

192.168.168.11	
192.168.168.12	

Add Remove

Save Cancel

Fig. 40: Remove NTP server

- In the list, select the NTP server that you would like to remove.
- Click on the button *Remove*.
⇒ The NTP server is removed from the list.
- To save the change, click on the button *Save*.
To discard the change and close the window, click on the button *Cancel*.

6.2.2.1.3 Create PBX

The PBX can either be configured via the PBX module or via the Integrations module.

In this configuration step, the parameters for the PBX are configured, e. g. the name, the area code and the net code.

1. Select the menu item *Setup > PBX* in the navigation bar.

⇒ The following window appears:

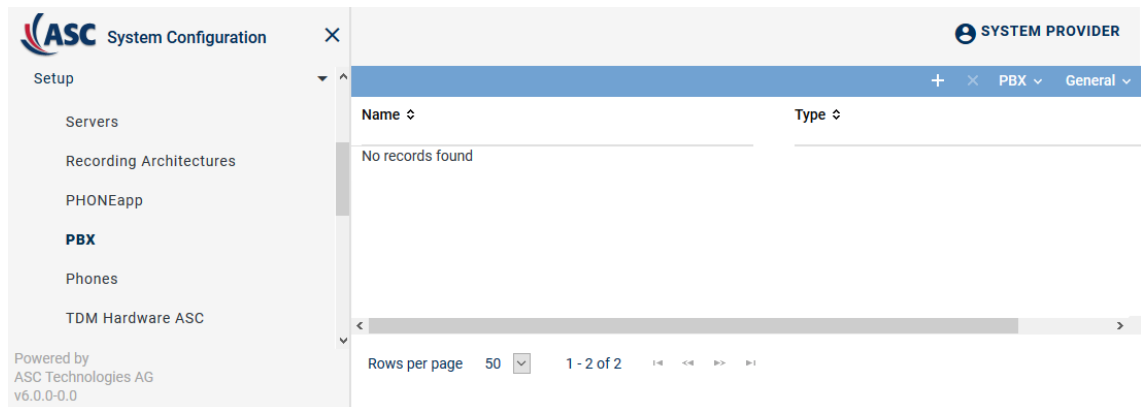




Fig. 41: Create new PBX

Toolbar of the PBX module

The toolbar offers the following functions.



Fig. 42: Toolbar PBX module

	<i>Create</i>	In the detail view, you can enter the parameters of the new PBX.
	<i>Delete</i>	Deletes the selected PBX configuration. A PBX can only be deleted if it is not used in any configuration.
<i>PBX</i>	<i>Phone Configuration</i>	Opens a window in which you can create and configure phones.
	<i>Administrate Unused Extensions</i>	Opens a window in which you can delete extensions that are not used in any configuration.
<i>General</i>	<i>Print</i>	Prints the table of the main view.
	<i>Adjust Table</i>	Opens a window in which you can adjust the following settings for the main view: <ul style="list-style-type: none"> • <i>Displayed information</i> • <i>Order of the displayed columns</i> • <i>Number of rows per page</i>
	<i>Save Table Configuration</i>	Saves the current table configuration of the main view as default view of the user.
	<i>General Help</i>	Opens the online help.
	<i>Module Help</i>	Opens the module-specific online help.



For detailed information on default functions such as *Print*, *Adjust table*, or *Help* refer to the user manual for administrators *System Configuration - General Information*.

Create new PBX

1. Click on the icon  (*Create*) in the toolbar of the main view of the PBX module.

⇒ In the detail view, the tab *Details* appears.

MVTC
×

Details*
PHONEapp Configuration
Web Service

Name* MVTC

PBX type Universal MVTC

Maximum length of extensions 4

Country code
☒ Select from list
United States (1)
☐ Enter manually

Area code* 6021

Net code* 5963

Non Phone IPs

No records found

Add
Delete

IPs to be Ignored

No records found

Add
Delete

MACs to be Ignored

No records found

Add
Delete

Save
Reset

Fig. 43: Create new PBX - tab Details

- Set the following parameters in the detail view:

Parameter	Value/Description
<i>Name</i>	This <i>name</i> serves as the identifier of this PBX.
<i>PBX type</i>	Select the type of the PBX from the drop-down list.
<i>Maximum length of the extensions</i>	Enter the number of digits of the extensions, e. g. 4.
<i>Country code</i>	Select the option for the country code: <ul style="list-style-type: none"> <i>Select from list</i> Select the country code from the drop-down list. <i>Enter manually</i> If the corresponding country code is not available in the drop-down list, you can enter the 3-digit code manually. e. g. for Sri Lanka 094.
<i>Area code</i>	Enter the area code without the preceding 0, e. g. 6021.
<i>Net code</i>	Enter the net code, e. g. 5963. Do not enter an extension here.

Tab. 15: Create PBX

- To save the settings, click on the button **Save**.
To discard the settings, click on the button **Reset**.

Phone configuration

Phones can be configured in three different ways in the following modules:

- PBX module as described here
- or in the Phones module
- or in the corresponding TDM Hardware module
- or in the Integrations module



As an alternative to creating the phones manually, you can also import the phone configurations. For further information about the configuration import refer to the administration manual for system providers *Import of phone configurations*.

1. In the main view, select the PBX for which you would like to create the phones.
 2. To create or configure phones in the PBX module, click on the menu item (*Phone Configuration*) in the toolbar of the main view of the .
- ⇒ The following window appears:

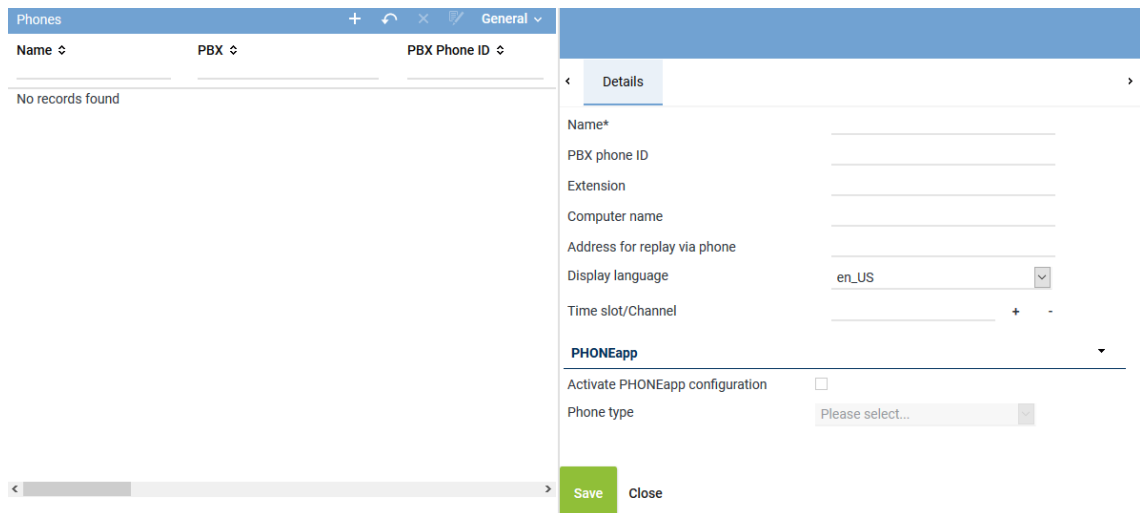


Fig. 44: Phone configuration

Depending on the table configuration, the following information is displayed in the table in the main view:





<i>Name</i>	Shows the name of the phone.
<i>PBX</i>	Shows the name of the PBX.
<i>PBX Phone ID</i>	Shows the identifier which has been configured for the phone in the PBX.
<i>Extension</i>	Shows the assigned extension of the phone.
<i>Computer Name</i>	Shows the computer name if it has been defined in the details.
<i>Phone Type</i>	Shows the selected phone type if the PHONEapp configuration has been activated.
<i>Display Language</i>	Shows the selected display language for the PHONEapp.
<i>Time Slot/Channel</i>	Shows the assigned time slot or channel.

Toolbar of the Phone Configurations window

The toolbar offers the following functions.



Fig. 45: Toolbar PBX module - Phone configuration

	<i>Create</i>	In the detail view, you can enter the parameters of the new phone.
	<i>Import</i>	Opens a window in which you can select the source of the CSV file and of the XSLT file that contain the corresponding phone configurations. In addition, this dialog allows you to define criteria according to which phones are supposed to be created or deleted. Additionally, you can configure stop criteria.
	<i>Delete</i>	Deletes the selected phone.
	<i>Edit</i>	By selecting several phones from the list, you can configure the display language and the phone type for the selected phones.
<i>General</i>	<i>Adjust Table</i>	Opens a window in which you can adjust the following settings for the main view: <ul style="list-style-type: none"> • <i>Displayed information</i> • <i>Order of the displayed columns</i> • <i>Number of rows per page</i>
	<i>Save Table Configuration</i>	Saves the current table configuration of the main view as default view of the user.

Create new phone

1. Click on the icon  (*Create*) in the toolbar of the window Phones to create new phones.

In recording solutions using TDM phones as well as IP phones, a context menu appears in which you can select which phone type you would like to create. The selection depends on the PBX and the installed licenses.

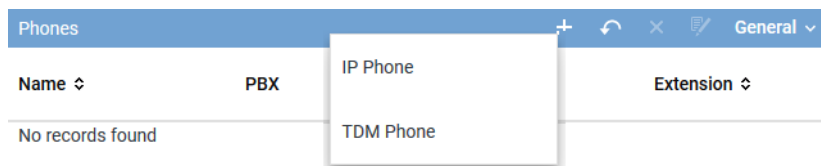


Fig. 46: Create phones Select phone type

The parameters to be configured appear in the tab *Details*.

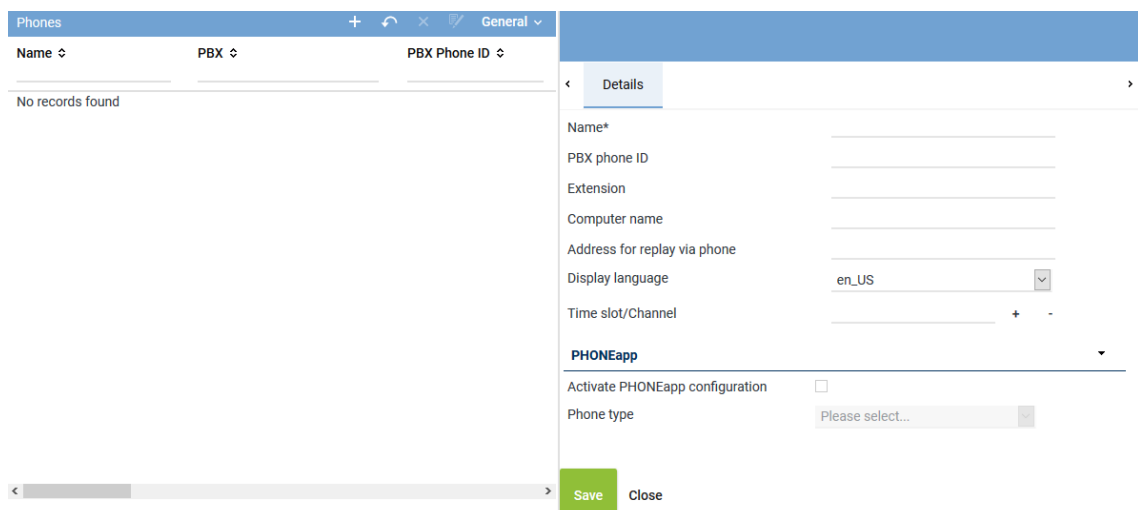


Fig. 47: Create phone

The configuration parameters directly depend on each other. For the unambiguous mapping at least one of the following combinations must be configured for the name of the phone:

- PBX phone ID and SSRC
 - PBX phone ID and extension
 - PBX phone ID and computer name
 - Extension and computer name
2. Enter the following parameters:

Parameter	Value/Description
<i>Name</i>	This name is used as the identifier of the phone.
<i>PBX phone ID</i>	Not used in this recording solution.
<i>Extension</i>	Enter the extension of the phone.
<i>Computer name</i>	Optional mapping of the computer for SCREEN ^{rec} or CLIENT- ^{command} . This option cannot be used in the recording solution.
<i>Address for replay via phone</i>	Enter the address of the phone which is supposed to replay the calls. Depending on which agent logs in on this phone, the audio data that the participant is allowed to replay is provided.
<i>Display language</i>	This parameter is only relevant for the PHONE ^{app} .
<i>Time Slot/Channel</i>	Map the phone to a configured channel. If the respective recording resource has not been configured yet, the mapping can be carried out via the module TDM Hardware Others, too. For M ^{VTC} interfaces it is necessary to map the phone to a channel. An exception are B ^{RI} interfaces since the assignment is carried out via the protocol.

Tab. 16: Create phone

Group field PHONE^{app}

Parameter	Description
Activate PHONE ^{app} configuration	Activate the check box to use the functions of the PHONE ^{app} . This function is only available if it has been activated previously in the modules: <ul style="list-style-type: none"> • in the PBX module in the tab PHONE^{app} • and in the PHONE^{app} module
Phone type	If the functions of the PHONE ^{app} have been activated, you can select the respective phone type from the drop-down list. The phone types are only displayed if the appropriate license for the PHONE ^{app} has been installed and if the PHONE ^{app} has been activated in the PHONE ^{app} module.

1. Click on the button *Save* to apply the entries.
2. Repeat the steps for every end device.

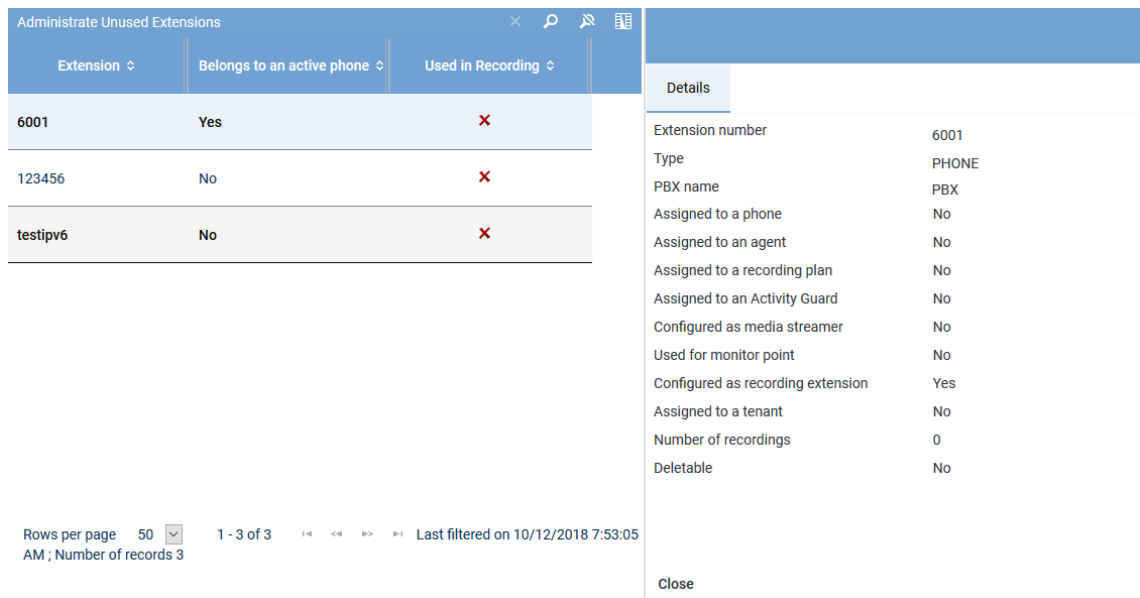
Selecting a PBX in this configuration step is not necessary as the respective PBX has already been selected. Upon saving a new phone, the name of the assigned PBX appears in the second line in the detail view.

3. Click on the button *Save*.
4. Click on the button *Close* to finish this configuration step.

Administrate unused extensions

This function allows you to delete extensions which are currently not used. Even extensions via which recording have been made can be deleted. To do so, the extensions just must not be used in any current configuration.

1. To delete unused extensions, you must go to the main view of the PBX module and select the PBX that the extension belongs to.
2. Click on the menu item *PBX > Administrate Unused Extensions* in the toolbar.
⇒ A window containing a list of the extensions of the selected PBX opens.



Extension	Belongs to an active phone	Used in Recording
6001	Yes	No
123456	No	No
testipv6	No	No

Details	
Extension number	6001
Type	PHONE
PBX name	PBX
Assigned to a phone	No
Assigned to an agent	No
Assigned to a recording plan	No
Assigned to an Activity Guard	No
Configured as media streamer	No
Used for monitor point	No
Configured as recording extension	Yes
Assigned to a tenant	No
Number of recordings	0
Deletable	No

Rows per page: 50 | 1 - 3 of 3 | Last filtered on 10/12/2018 7:53:05 AM; Number of records 3

Fig. 48: Administrate unused extensions


In the detail view, you see in which context the selected extensions are used.

<i>Extension number</i>	Shows the number of the extension.
<i>Type</i>	Shows the type of the extension.
<i>PBX name</i>	Show the PBX that the extension belongs to.
<i>Assigned to a phone</i>	Shows whether the extension has been assigned to a phone.
<i>Assigned to an agent</i>	Shows whether the extension has been assigned to an agent.
<i>Assigned to a recording plan</i>	Shows whether the extension has been assigned to a recording plan.
<i>Assigned to an Activity Guard</i>	Shows whether the extension has been assigned to an Activity Guard.
<i>Configured as media streamer</i>	Shows whether the extension has been configured as media streamer.
<i>Used as monitor point</i>	Shows whether the extension is used as monitor point.
<i>Configured as recording extension</i>	Shows whether the extension has been assigned to a recording server.
<i>Assigned to a tenant</i>	Shows whether the extension has been assigned to a tenant.
<i>Number of conversations</i>	Shows the number of recordings for this extension.
<i>Deletable</i>	Shows whether the extension can be deleted.

The last property *Deletable* indicates whether this extension can be deleted. It is possible to delete extensions for which recordings exist, but the extension must not be used in any current configuration.

Configurations that the user has made are not deleted automatically. If the user has created a configuration to use an extension as media streamer, then this extension cannot be deleted. If an assigned configuration continues to exist, you have to revoke this assignment first. The information in the detail view indicates which assignments continue to exist.

The deletion procedure removes the reference of the call participants to the extensions to be deleted as well as the entries to display the extensions in the Portal. The number of the extension remains in the system. Recordings which have been made with these extensions continue to be displayed in the players as only the number of the extensions and not the reference is required to do so. The deletion procedure does not remove any recordings.

3. If the extension can be deleted, click on the icon  (*Delete*) in the toolbar.
4. To really delete the selected extension, confirm the security prompt by clicking *OK*.

6.2.2.1.4 Assign recording resources

In multi-tenant systems, you have to assign each tenant its own recording resources.

Depending on the recording type, agents can be assigned to the recording resource via the extension, via the PBX Agent ID or via the chat ID. Within one tenant, you can configure all three possibilities.

Assign extensions to tenants

If you would like to make an assignment based on extensions, you can assign the respective tenant the extension designated for recording in the Tenants module.



In 1-tenant systems, all extensions are automatically assigned to the tenant who has been created by the system (1st tenant). Extensions are assigned to the user in the Employees module.

When installing a 1-tenant system, you can skip this chapter.



In multi-tenant systems, you have to assign the extensions manually to each tenant who is supposed to be able to use them. There are multi-tenant systems, too, in which only 1 tenant has been set up.

The manual assignment of extensions is not possible until a PBX has been created since extensions are assigned in relation to the PBX.

1. Select the menu item *Tenants* in the navigation bar.

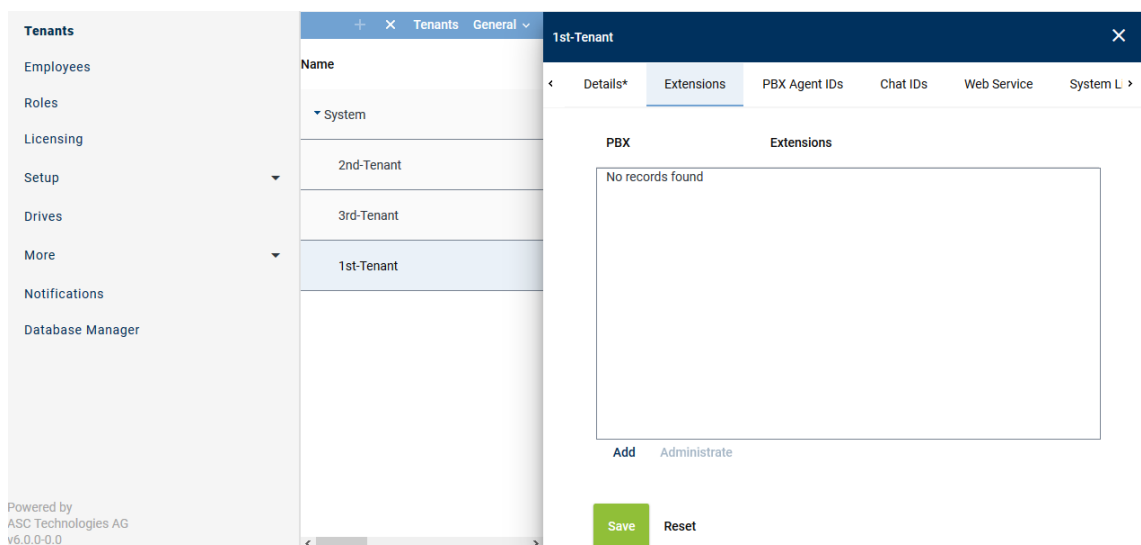


Fig. 49: Tenants - main view - tab Extensions

Add extensions

1. In the main view, select the tenant to whom you would like to assign extensions.
2. Click on the tab *Extensions*.
3. Click on the button *Add*.
⇒ The following window appears:

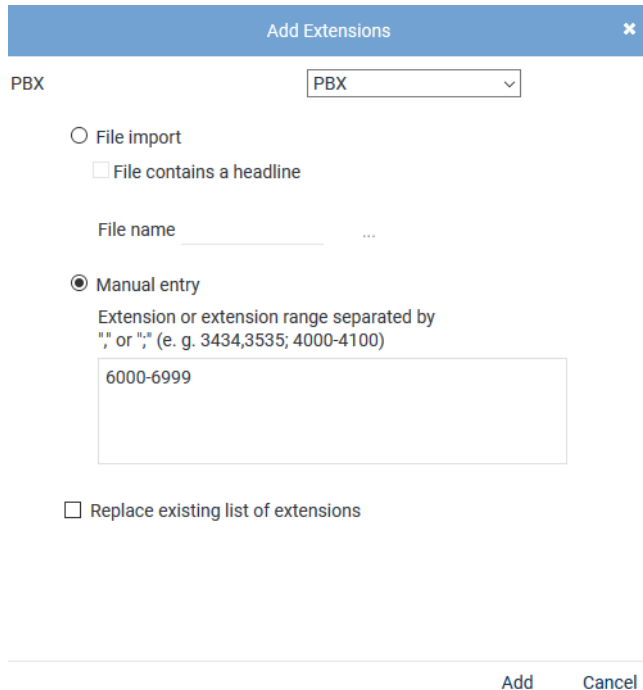




Fig. 50: Assign extensions to tenants

4. From the drop-down list, select the PBX in which the extensions for this tenant have been configured.

File import	Select this option to import extensions from an existing CSV file and add them to the table of extensions.
File contains a headline	Activate this option so that this structured is recognized correctly when importing the file. The CSV file may not contain more than 1 column. If commas or other column delimiters are found in the CSV file, then the file is not valid and an error message appears. Only ZIP files are supported as file format. To be able to import a CSV file, you have to pack it in a ZIP file.
File name	To import the file, proceed as follows: <ul style="list-style-type: none"> • Click on the button  behind the field <i>File name</i>. • Click on the button <i>Choose File</i>. • Select the respective ZIP file via the Explorer and click on the button <i>Open</i>. • Click on the button  <i>Upload File</i>.
Manual entry	Select this option to enter extensions or extension ranges manually.

Enter the extension range that is reserved for this tenant using a hyphen, e. g. from 6000 to 6999. Alphanumerical entries with a hyphen are not detected as a range, they must be entered individually. You can separate the different extensions and extension ranges by the delimiters indicated in the screenshot.

NOTICE! Wildcards cannot be used!

Replace existing list of extensions

Activate the check box to replace the list of extensions.

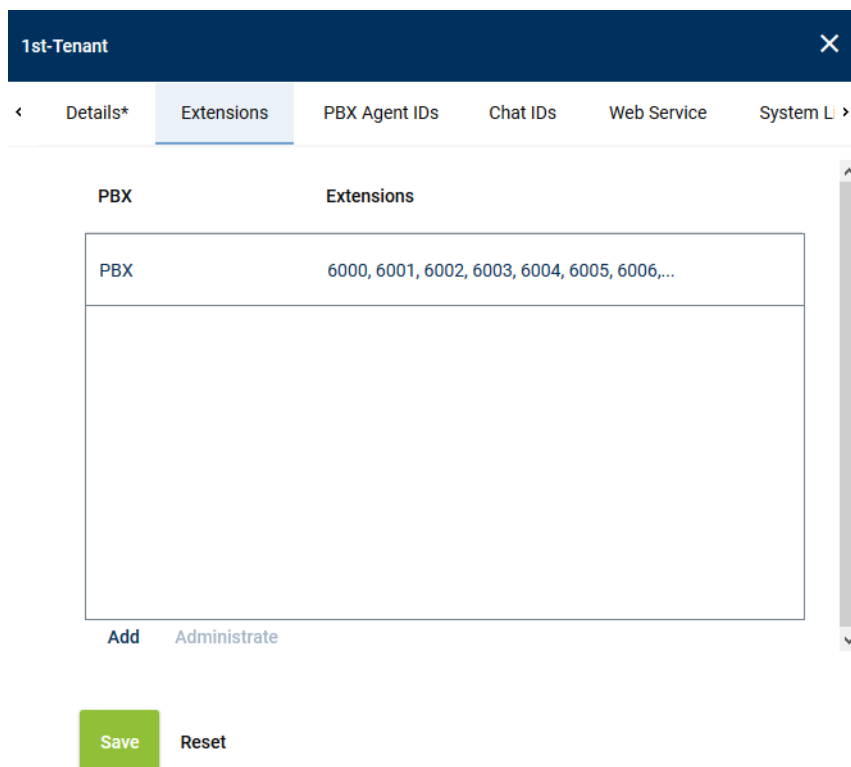
☒ = Function has been activated; the entry replaces the extensions of the selected PBX.

☐ = Function has not been activated; the configured extensions of all PBXs are kept and the new extensions are added to the selected PBX.

5. Click on the button *Add*.
⇒ The extensions are added in the table of extensions.
6. If errors have been detected, the window *Result* appears.
Click on the button *Display Error Report* to open the window *Error Report*.
To close the window *Error Report*, click on the button *Close*.
To close the window *Result*, click on the button *Close*.
7. The configured extensions now appear in the detail view.
8. Click on the button *Save* in the detail view to save the entries.

Remove extensions

1. In the list, select the **PBX** for which you would like to remove the assigned extensions.



1st-Tenant

Details* Extensions PBX Agent IDs Chat IDs Web Service System L

PBX	Extensions
PBX	6000, 6001, 6002, 6003, 6004, 6005, 6006,...

Add Administrate

Save Reset

Fig. 51: Remove extensions

2. Click the button *Administrate*.
3. Select one or several extensions you would like to remove from the assignment.
To select several extensions or to revoke the selection, click on the respective line while holding the [Ctrl] key down.

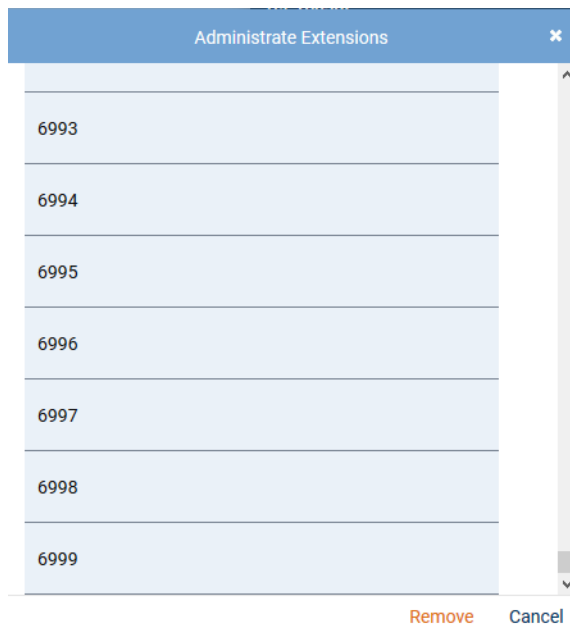


Fig. 52: Select extensions

4. To remove the selected extensions, click on the button *Remove*.
To cancel the process and close the window, click on the button *Cancel*.

Assign PBX Agent IDs to tenants

If the information about PBX Agent IDs is delivered by the PBX, you can make an assignment by means of the PBX Agent IDs. In this case, you can assign the respective tenant the PBX Agent IDs designated for recording in the Tenants module.



In 1-tenant systems, the PBX Agent IDs are automatically assigned to the tenant who has been created by the system (1st tenant). PBX Agent IDs are assigned to the user in the Employees module.

When installing a 1-tenant system, you can skip this chapter.



In multi-tenant systems, you have to assign the PBX Agent IDs manually to each tenant who is supposed to be able to use them. There are multi-tenant systems, too, in which only 1 tenant has been set up.

The manual assignment of PBX Agent IDs is not possible until a PBX has been created since the assignment is PBX-related.

1. Select the menu item *Tenants* in the navigation bar.

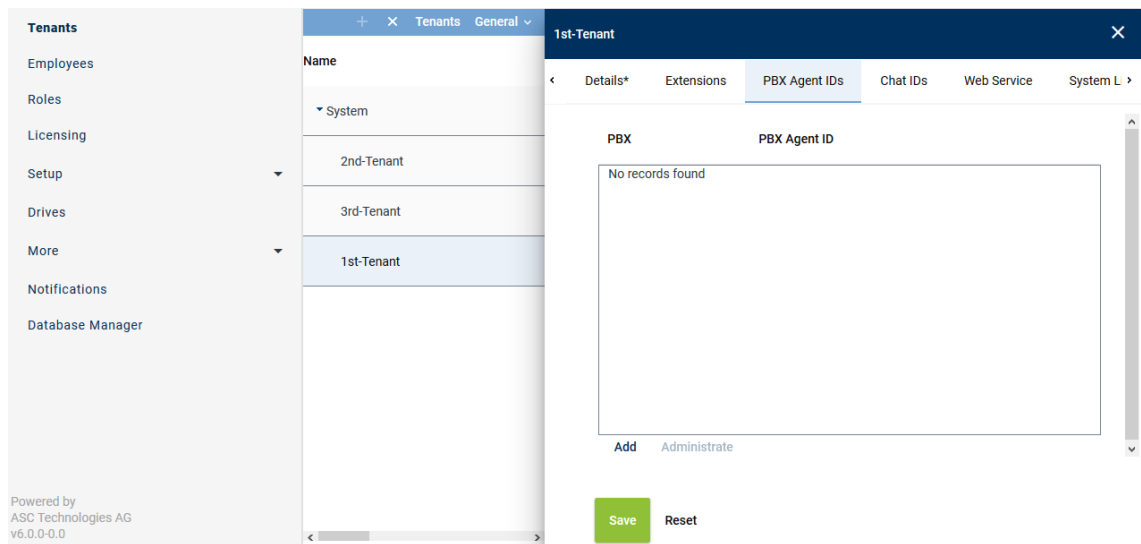


Fig. 53: Tenants - main view - tab PBX Agent ID

Add PBX Agent ID

1. In the main view, select the tenant to whom you would like to assign the PBX Agent IDs.
2. Click on the tab *PBX Agent IDs*.
3. Click on the button *Add*.

⇒ The following window appears:

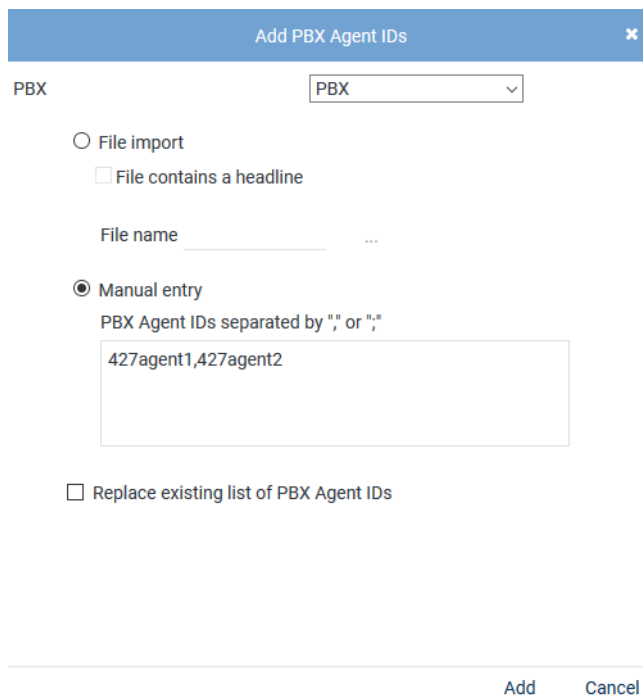




Fig. 54: Assign PBX Agent IDs to tenants

4. From the drop-down list, select the PBX in which the PBX Agent IDs for this tenant have been configured.

<i>File import</i>	Select this option to import the PBX Agent IDs from an existing CSV file and add them to the table of PBX Agent IDs.
<i>File contains a headline</i>	

	<p>Activate this option so that this structured is recognized correctly when importing the file.</p> <p>The CSV file may not contain more than 1 column. If commas or other column delimiters are found in the CSV file, then the file is not valid and an error message appears.</p> <p>Only ZIP files are supported as file format. To be able to import a CSV file, you have to pack it in a ZIP file.</p>
	<p><i>File name</i></p> <p>To import the file, proceed as follows:</p> <ul style="list-style-type: none"> • Click on the button  behind the field <i>File name</i>. • Click on the button <i>Choose File</i>. • Select the respective ZIP file via the Explorer and click on the button <i>Open</i>. • Click on the button  <i>Upload File</i>.
<i>Manual entry</i>	<p>Select this option to enter PBX Agent IDs manually.</p> <p>You can separate the individual PBX Agent IDs by the delimiters indicated in the screenshot.</p> <p>NOTICE! Wildcards cannot be used!</p>
<i>Replace existing list of PBX Agent IDs</i>	<p>Activate the check box to replace the list of PBX Agent IDs.</p> <p><input checked="" type="checkbox"/> = Function has been activated; the entry replaces the PBX Agent IDs of the selected PBX.</p> <p><input type="checkbox"/> = Function has not been activated; the configured PBX Agent IDs of all PBXs are kept and the new PBX Agent IDs are added to the selected PBX.</p>

- Click on the button *Add*.
⇒ The PBX Agent IDs are added to the table of PBX Agent IDs.
- If errors have been detected, the window *Result* appears.
Click on the button *Display Error Report* to open the window *Error Report*.
To close the window *Error Report*, click on the button *Close*.
To close the window *Result*, click on the button *Close*.
- The configured PBX Agent IDs now appear in the detail view.
- Click on the button *Save* in the detail view to save the entries.

Remove PBX Agent ID

- In the list, select the **PBX** for which you would like to remove the assigned PBX Agent IDs.
- Click the button *Administrate*.
- Select one or several PBX Agent IDs you would like to remove from the assignment.
To select several PBX Agent IDs or to revoke the selection, click on the respective line while holding the [Ctrl] key down.

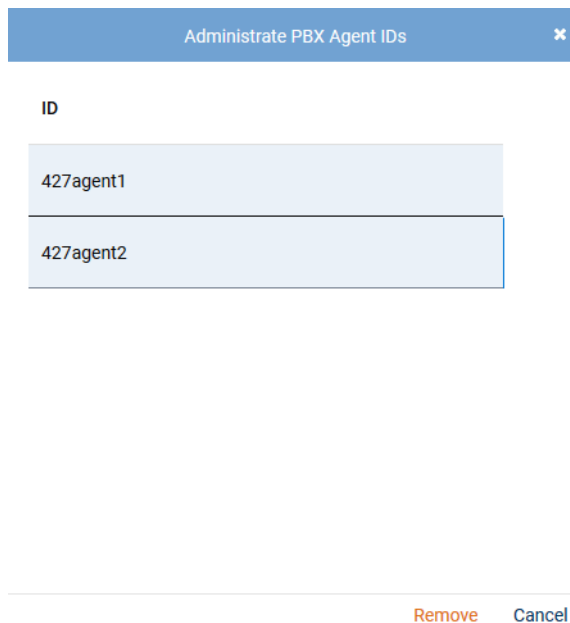


Fig. 55: Select PBX Agent IDs

4. To remove the selected PBX Agent IDs, click on the button *Remove*.
To cancel the process and close the window, click on the button *Cancel*.

6.2.2.1.5 Configure Phones module

Phones can be configured in the following modules:

- *PBX module*

If you have created and configured the phones in the PBX module, you can skip this chapter.

- *Phones module*

If you have not created the phones yet, you can create them here in the Phones module.

- *TDM Hardware module*

Alternatively, you can create phones automatically via the TDM Hardware module, see Create phones automatically.

- *Integrations module*

If you have not created phone during the creation of the integration, you can carry out the configuration in the Integrations module, too.

Each phone is assigned a time slot so that the additional data can be mapped to the calls made via it.



As an alternative to creating the phones manually, you can also import the phone configurations. For further information about the configuration import refer to the administration manual for system providers *Import of phone configurations*.

1. Select the menu item *Setup > Phones* in the navigation bar.
⇒ The following window appears:

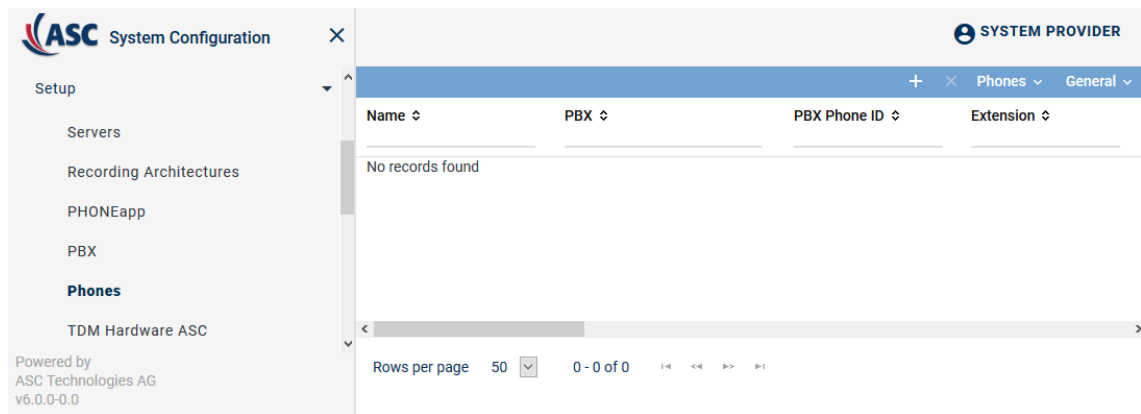



Fig. 56: Phones - main view

Depending on the table configuration, the following information is displayed in the table in the main view:

<i>Name</i>	Shows the name of the phone.
<i>PBX</i>	Shows the name of the PBX.
<i>PBX Phone ID</i>	Shows the identifier which has been configured for the phone in the PBX.
<i>Extension</i>	Shows the assigned extension of the phone.
<i>Computer Name</i>	Shows the computer name if it has been defined in the details.
<i>Phone Type</i>	Shows the selected phone type if the <i>PHONEapp</i> configuration has been activated.
<i>Display Language</i>	Shows the selected display language.

Create new phone

1. To create and configure new phones manually, click on the icon  (*Create*) in the toolbar of the main view.

In recording solutions using TDM phones as well as IP phones, a context menu appears in which you can select which phone type you would like to create. The selection depends on the PBX and the installed licenses.

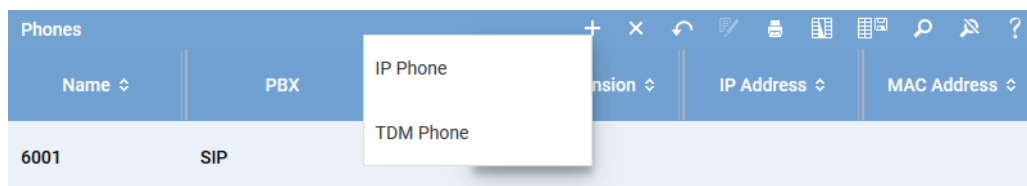


Fig. 57: Create phone

2. Select the menu item *TDM Phone*.
⇒ In the detail view, the tab *Details* appears.

1234
×

<
Details*
>

Name*	<input type="text" value="1234"/>
PBX	<input type="text" value="MVTC"/>
PBX phone ID	<input type="text"/>
Extension	<input type="text" value="1234"/>
Computer name	<input type="text"/>
Address for replay via phone	<input type="text"/>
Display language	<input type="text" value="de_DE"/> ▼
Time slot/Channel	<input type="text"/> + -

PHONEapp ▼

Activate PHONEapp configuration ☐

Phone type ▼

Save

Reset

Fig. 58: Create phone

The configuration parameters directly depend on each other. For the unambiguous mapping at least one of the following combinations must be configured for the name of the phone:

- PBX phone ID and SSRC
- PBX phone ID and extension
- PBX phone ID and computer name
- Extension and computer name

3. Enter the following parameters:

Parameter	Value/Description
<i>Name</i>	This name is used as the identifier of the phone.
<i>PBX</i>	From the drop-down list, select the previously created PBX that the phone is supposed to be assigned to.
<i>PBX phone ID</i>	Currently not used.
<i>Extension</i>	Enter the extension of the phone.
<i>Computer name</i>	Optional mapping of the computer for SCREEN <u>rec</u> or CLIENT- <u>command</u> . This option cannot be used in the recording solution.
<i>Address for replay via phone</i>	Enter the address of the phone which is supposed to replay the calls. Depending on which agent logs in on this phone, the audio data that the participant is allowed to replay is provided.
<i>Display language</i>	Only relevant for the PHONE <u>app</u> .
<i>Time Slot/Channel</i>	Map the phone to a configured time slot or channel. If the respective recording resource has not been configured yet, the mapping can be carried out via the module TDM Hardware

Parameter	Value/Description
	Others, too. For MVTC interfaces it is necessary to map the phone to a time slot/channel. An exception are BRI interfaces since the assignment is carried out via the protocol.

Tab. 17: Create phone

Group field **PHONEapp**

Parameter	Description
Activate PHONEapp configuration	Activate the check box to use the functions of the PHONEapp .
Phone type	If the functions of the PHONEapp have been activated, you can select the respective phone type from the drop-down list. The phone types are only displayed if the appropriate license for the PHONEapp has been installed and if the PHONEapp has been activated in the PHONEapp module.


1. Click on the button *Save*.
2. Click on the button *Close* to finish this configuration step.
3. Repeat the steps for every end device.



As an alternative to creating the phones manually, you can also import the phone configurations. For further information about the configuration import refer to the administration manual for system providers *Import of phone configurations*.

4. To save the settings, click on the button *Save*.
To discard the settings, click on the button *Reset*.

Delete phones

1. In the main view, select the phone you would like to delete.
2. Click on the icon  (*Delete*).
⇒ The security prompt to delete an element appears.
3. To really delete the selected phone, confirm the security prompt.

6.2.2.1.6 Configure TDM Hardware Others

The MVT cards which have been configured in the application SmartControl have to be configured for recording in the module TDM Hardware Others.

1. Select the menu item *Setup > TDM Hardware Others* in the navigation bar.
⇒ The following window appears:

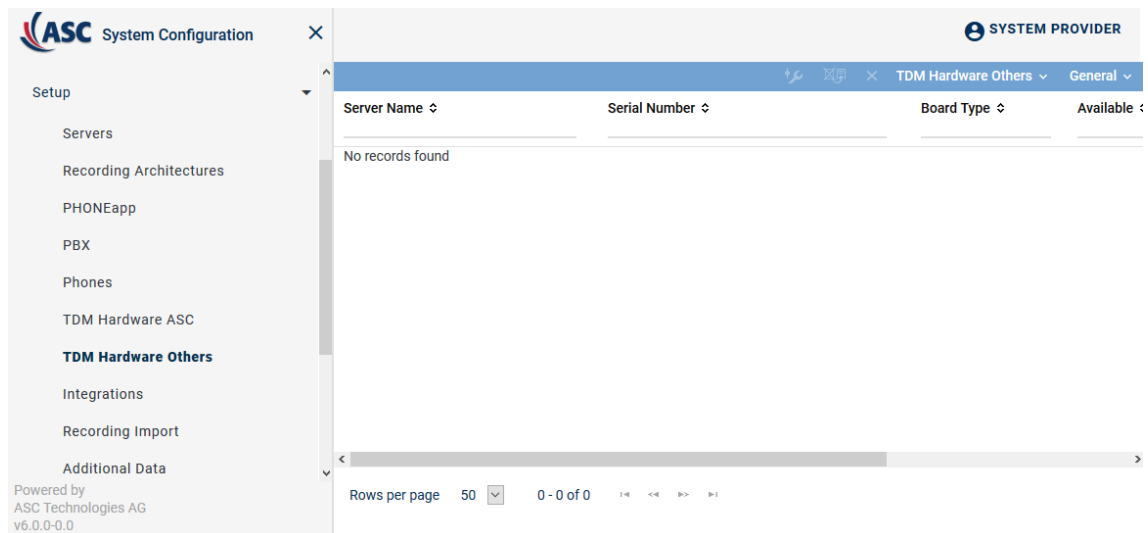



Fig. 59: TDM Hardware Others - main view

Depending on the configuration of the columns, the following information is displayed in the main view:

Server Name	Shows the name of the server in which the recording card has been inserted.
Serial Number	Shows the serial numbers of the PCM30 DT, the analog LD, and the MVT cards as well as of the DP cards.
Board Type	NGX: Card for Universal MVT DP: Card for Universal PRI passive LD: Card for Universal analog LD DT: Card for Universal PCM30 DT
Available	Shows whether the recording card is available. ✓ = Recording card is available. ✗ = Recording card is not available.
Status	Shows the state of readiness of the recording card. ✓ (OK) = Recording card can be used. ❗ (Error) = Recording card cannot be used. ⚠ (Warning) = Recording card is only partially functional. This can happen if a trunk has failed for instance.
Comment	Here, you can describe the purpose of the interface, e. g. <i>PBX 1, phones 1-96</i> .

You can add hidden columns to the table in the main view via the icon  in the toolbar.

Toolbar TDM Hardware Others

The toolbar offers the following functions.

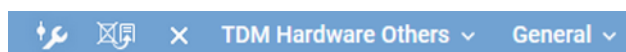





Fig. 60: Toolbar of the module TDM Hardware Others

	Administrate Channels	Opens a window which allows configuring channels
---	------------------------------	--

	<i>Replace</i>	If you have to exchange a recording card, you can transfer the configuration of the current recording card to the new one by clicking on this icon. For further information refer to the respective service manual of EVOLUTION- <i>neo</i> , EVOLUTION <i>neo</i> eco or EVOLUTION <i>neo</i> XXL.
	<i>Delete</i>	Deletes the selected configuration. The configuration can only be deleted if the hardware has been removed.
<i>TDM Hardware Others</i>	<i>Import Grammar</i>	Opens a window in which you can import grammars which have been adjusted to the customer's requirements.
	<i>Manage Unused Grammars</i>	Opens a window with a list of all grammars which are not used in a configuration. Unused grammars can be deleted.
<i>General</i>	<i>Print</i>	Prints the table of the main view.
	<i>Adjust Table</i>	Opens a window in which you can adjust the following settings for the main view: <ul style="list-style-type: none"> • <i>Displayed information</i> • <i>Order of the displayed columns</i> • <i>Number of rows per page</i>
	<i>Save Table Configuration</i>	Saves the current table configuration of the main view as default view of the user.
	<i>Search</i>	Opens the window of the search function. The search function allows searching systematically for sets of data which meet certain criteria.
	<i>Reset Search</i>	Resets all search filters so that all sets of data are displayed in the main view again.
	<i>General Help</i>	Opens the online help.
	<i>Module Help</i>	Opens the module-specific online help.



For detailed information on default functions such as *Print*, *Adjust table*, or *Help* refer to the user manual for administrators *System Configuration - General Information*.

Import grammar

Depending on the deployed PBX, conversation events are signaled differently.

A grammar recognizes and processes the events occurring during a call such as ringing, answering, consultation, hanging up. A grammar contains rules which are required to correctly translate PBX-specific call information and call states into a PBX-neutral format.

1. To import a new grammar, click on the menu item *Integration > Import Grammar* in the toolbar of the main view.

⇒ The window *Upload File* appears.

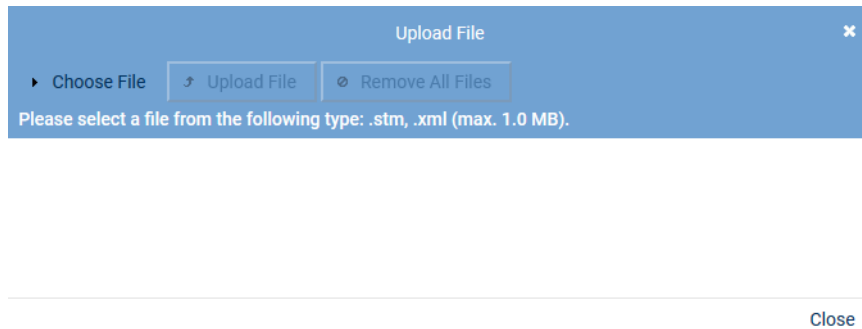


Fig. 61: Choose file

2. Click on the button *Choose File*.
3. Select the respective grammar of the file type *.stm* or *.xml* via the Explorer.
4. Click on the button *Open*.
 - ⇒ The selected file appears in the window *Upload File*.

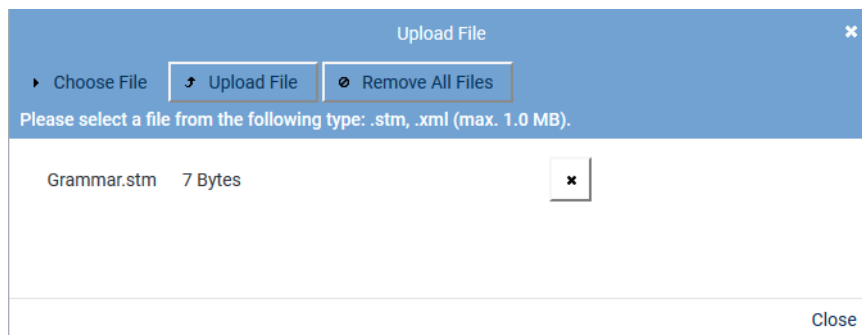



Fig. 62: Upload grammar

5. To remove a selected file from the list, click on the button  (*Remove file*) next to the respective file.
To upload the file, click on the button *Upload File*.
 - ⇒ The window closes and a notification appears in the main view that the file has been uploaded successfully.

Detail view

The following information in the detail view may differ depending on the deployed recording card.

SmartTAP NGX
×

<
Details
>

Server name	REC-01
Serial number	0458
Firmware version	5.9.1038
Board type	NGX
Board information	SmartTAP NGX
DSP type	DSP_5416
Signal channel disconnect	<input checked="" type="checkbox"/>
Creation interval for packages	<div style="display: flex; align-items: center;"> <input style="width: 50px; border: 1px solid #ccc;" type="text" value="0"/> <div style="margin-left: 5px;">Hour(s)</div> </div> <div style="display: flex; align-items: center;"> <input style="width: 50px; border: 1px solid #ccc;" type="text" value="10"/> <div style="margin-left: 5px;">Minute(s)</div> </div> <div style="display: flex; align-items: center;"> <input style="width: 50px; border: 1px solid #ccc;" type="text" value="0"/> <div style="margin-left: 5px;">Second(s)</div> </div>
Comment	<div style="border: 1px solid #ccc; height: 60px; width: 100%;"></div>

Save

Reset

Fig. 63: TDM Hardware Others - configure settings

<i>Server name</i>	Shows the name of the server in which the recording card has been inserted.
<i>Serial number</i>	Shows the serial number of the Basic Board of the MVT card.
<i>Firmware version</i>	Shows the version of the firmware.
<i>Board type</i>	Shows the type of the recording card.
<i>Board information</i>	Shows information about the recording card.
<i>DSP type</i>	Shows the type of the installed DSP module.


- For the connection interface, you can set the following parameters:

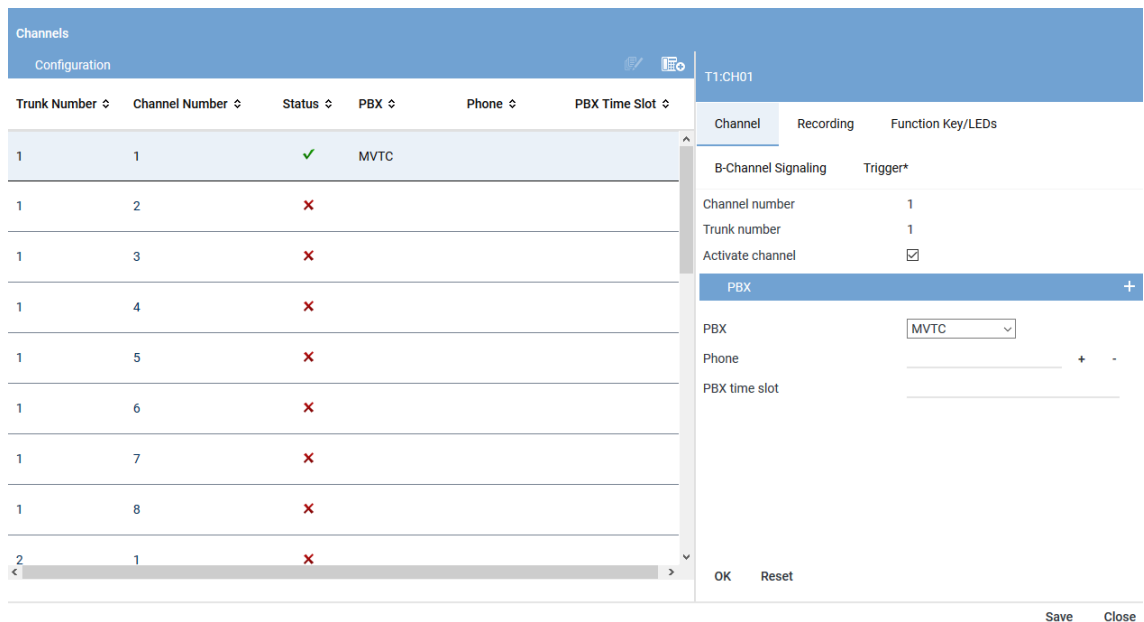
Parameter	Value/Description
<i>Signal channel disconnect</i>	<p>Some providers deactivate the line in ISDN multi-device connections if no call is made. In this case, a synchronization error message is issued. If this setting is activated, an alarm is set off in the event of a synchronization error message.</p> <p><input checked="" type="checkbox"/> = Alarm in case of synchronization errors has been activated.</p> <p><input type="checkbox"/> = Alarm in case of synchronization errors has not been activated.</p>
<i>Creation interval for packages</i>	Enter the interval after which the running recording is to be written into the database. The interval defines the moment when the recording can be replayed at the earliest. The parameter impacts the system load. The shorter the interval, the higher the CPU load.
<i>Comment</i>	Here, you can describe the purpose of the interface, e. g. <i>PBX 1, phones 1-24.</i>

Tab. 18: Configure connection interface parameters

- To save the settings, click on the button *Save*.
To discard the settings, click on the button *Reset*.

Administrate channels

- Click on the icon  (*Administrate channels*) in the toolbar of the main view.
⇒ The window *Channels* appears.



Trunk Number	Channel Number	Status	PBX	Phone	PBX Time Slot
1	1	✓	MVTC		
1	2	✗			
1	3	✗			
1	4	✗			
1	5	✗			
1	6	✗			
1	7	✗			
1	8	✗			
2	1	✗			

Fig. 64: TDM Hardware Others - administrate channels

The following information is displayed:



Trunk Number	<p>MVT cards are available in 3 installation levels.</p> <ul style="list-style-type: none"> Installation level 1 = basic board for the first 4 or 8 channels - trunk number 1 Installation level 2 = 1st DSP module for additional 4 or 8 channels - trunk number 2 Installation level 3 = 2nd DSP module for additional 4 or 8 channels - trunk number 3
Channel Number	Shows the number of the channel on the Basic Board or the DSP module.
Status	<p>Shows whether the channel has been configured and can be recorded.</p> <p>✓ = Channel has been configured.</p> <p>✗ = Channel has not been configured.</p>
PBX	Shows the PBX on which this time slot is supposed to be recorded. Assignment depends on the cabling.
Phone	Shows the phone which has been assigned to the time slot which is to be recorded. Assignment depends on the cabling.
PBX Time Slot	Shows the time slot that the PBX is connected to. Adjustment is required for some CTI <u>connect</u> applications.

Toolbar Channel configuration

The toolbar offers the following functions.



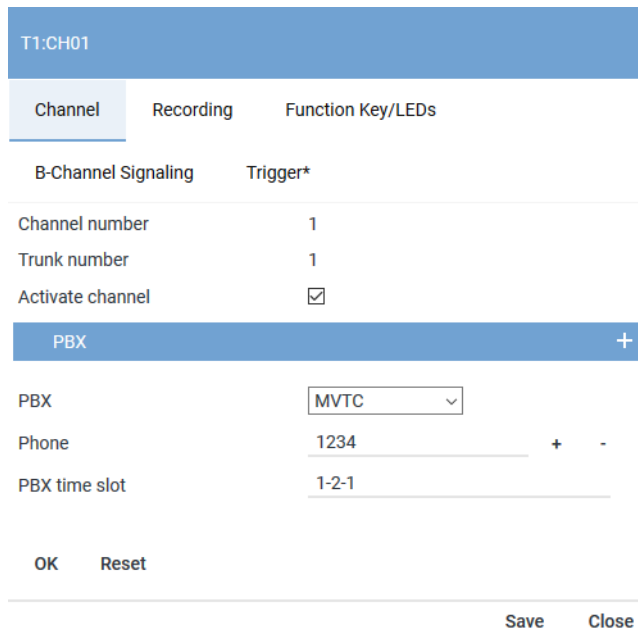
Fig. 65: Toolbar for channel configuration

	Edit	If you have selected several entries in the list, you can edit all selected entries at once.
	Create phones	Creates new phones on basis of the selected channels.

Configure channels

Tab channel

- Click on the entry of the channel you would like to configure.
⇒ In the detail view, the tab *Channel* appears.



T1-CH01

Channel	Recording	Function Key/LEDs
B-Channel Signaling	Trigger*	
Channel number	1	
Trunk number	1	
Activate channel	<input checked="" type="checkbox"/>	

PBX +

PBX: MVTC

Phone: 1234 + -

PBX time slot: 1-2-1

OK Reset Save Close

Fig. 66: TDM Hardware Others - configure channel

The following information is displayed:


Channel number	Shows the number of the channel on the Basic Board or of the DSP module. The channel number is counted up automatically.
Trunk number	Shows the number of the trunk line connected to this recording card. The trunk number is assigned automatically.

- Enter the following parameter:

Parameter	Value/Description
Activate channel	Activate the check box to use this channel. <input checked="" type="checkbox"/> = Channel has been activated.


Tab. 19: Activate channel

Group field PBX

Click on the icon  (*Create*) in the group field headline to create a PBX. For further information about creating a PBX see Create PBX.

- If the PBX has already been created, set the following parameters:

Parameter	Value/Description
PBX	Select the created PBX from the drop-down list.

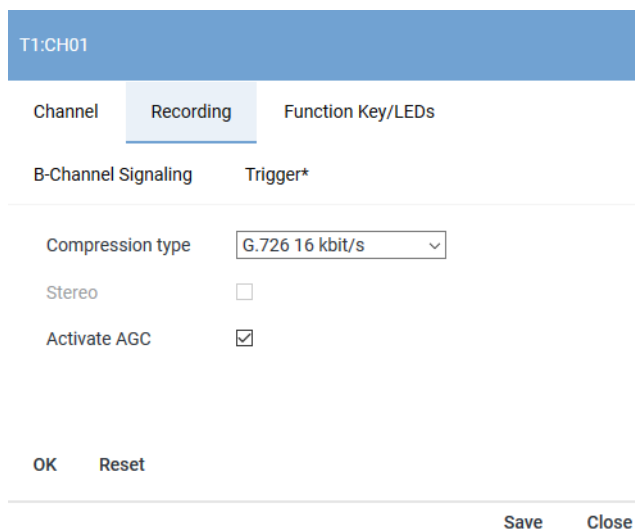
Parameter	Value/Description
<i>Phone</i>	<p>For MVTC recording, you can assign a previously defined phone to the time slot. Alternatively, the phones can be created automatically; the channels are then assigned automatically, too.</p> <p>Click on the button  behind the entry field to select a phone.</p> <p>In MVTC interface connections which have been configured with Call Control in SmartControl, an assignment of phones is not necessary. In this case, the number of the extension is transmitted in the protocol.</p>
<i>PBX time slot</i>	<p>Enter the time slot that the PBX is connected to. Enter the information about the PBX time slot in the following order connected by hyphens: PBX-ID-BoardNummer-ShelfNummer, e. g. 1-2-1.</p> <p>This assignment is only necessary for CTI<u>connect</u> applications.</p>

Tab. 20: Select PBX

- Click on the button *OK*.

Tab Recording

- Select the tab *Recording*.
⇒ The following details appear in the detail view:



T1:CH01

Channel Recording Function Key/LEDs

B-Channel Signaling Trigger*

Compression type G.726 16 kbit/s

Stereo ☐

Activate AGC ☒

OK Reset

Save Close

Fig. 67: TDM Hardware Others - recording settings

- Enter the following parameters:

Parameter	Value/Description
<i>Compression type</i>	<p>Select the compression type from the drop-down list.</p> <p>The following compressions are available:</p> <ul style="list-style-type: none"> G.711 A-law - European telephony standard (uncompressed 64 kbit/s) G.711 μ-law - US-American telephony standard (uncompressed 64 kbit/s) G.726 ADPCM compressing for 16/24/32/40 kbit/s
<i>Stereo</i>	<p>Defines whether the calls are recorded in mono (mixed in one stream) or in stereo (in two streams). For the stereo function twice as many channel licenses are required.</p>

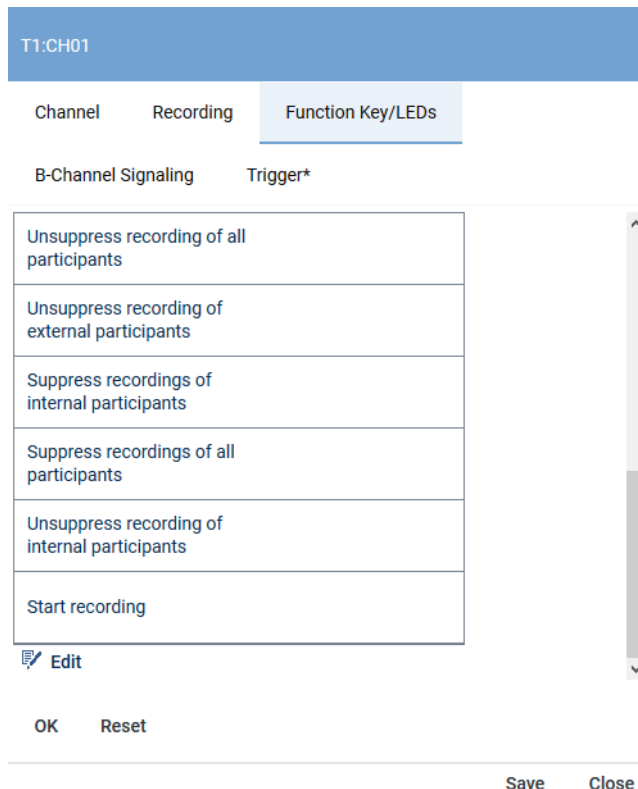
Parameter	Value/Description
<i>Activate AGC</i>	Activates automatic gain control (AGC) to improve recording quality.

Tab. 21: Configure recording settings

- Click on the button **OK**.

Tab Function Key/LEDs

- Select the tab *Function Key/LEDs*.
⇒ The following details appear in the detail view:




T1:CH01

Channel Recording **Function Key/LEDs**

B-Channel Signaling Trigger*

Unsuppress recording of all participants
Unsuppress recording of external participants
Suppress recordings of internal participants
Suppress recordings of all participants
Unsuppress recording of internal participants
Start recording

 Edit

OK Reset

Save Close

Fig. 68: TDM Hardware Others - Function Key/LEDs

- The following information is displayed:

Parameter	Value/Description
<i>Start recording</i>	Shows the key or LED of the phone which allows the user to start the recording.
<i>Stop recording</i>	Shows the key or LED of the phone which allows the user to stop the recording.
<i>Delete recording</i>	Shows the key or LED of the phone which allows the user to delete the recording.
<i>Keep recording</i>	Shows the key or LED of the phone which allows the user to keep the recording.
<i>Suppress recording of all participants</i>	Shows the key or LED of the phone which allows the user to suppress the audio recording of all participants of a running conversation, e. g. to cut out online banking passwords.
<i>Suppress recording of external participants</i>	Shows the key or LED of the phone which allows the user to suppress the audio recording of external participants of a running conversation, e. g. to cut out online banking passwords.

Parameter	Value/Description
<i>Suppress recording of internal participants</i>	Shows the key or LED of the phone which allows the user to suppress the audio recording of internal participants of a running conversation, e. g. to cut out online banking passwords.
<i>Unsuppress recording of all participants</i>	Shows the key or LED of the phone which allows the user to cancel the suppression of the recording of all participants of the running conversation.
<i>Unsuppress recording of external participants</i>	Shows the key or LED of the phone which allows the user to cancel the suppression of the recording of external participants of the running conversation.
<i>Unsuppress recording of internal participants</i>	Shows the key or LED of the phone which allows the user to cancel the suppression of the recording of internal participants of the running conversation.

Tab. 22: Configure recording settings

3. Select the respective function.
4. Click on the button *Edit*.
⇒ The window *Edit* appears.

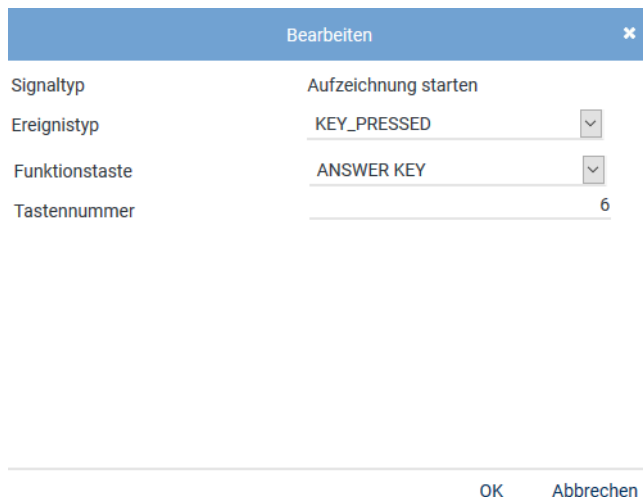


Fig. 69: Edit function keys

5. Enter the following parameters:

Parameter	Value/Description
<i>Signal type</i>	Shows the function which is being edited.
<i>Event type</i>	<p>From the drop-down list, select the event which is supposed to trigger the function.</p> <p>The following events are available:</p> <ul style="list-style-type: none"> • KEY_PRESSED • KEY_RELEASED • Light off • Light on • Light flashing • Light fast flashing • Light very fast flashing • Light quick flash

Parameter	Value/Description
	<ul style="list-style-type: none"> • Light wink • Light medium wink • Light slow wink
<i>Function key/LED</i>	Select the key's/LED's function or meaning from the drop-down list.
<i>Key number</i>	Enter the key number of the phone.

Tab. 23: Edit function keys

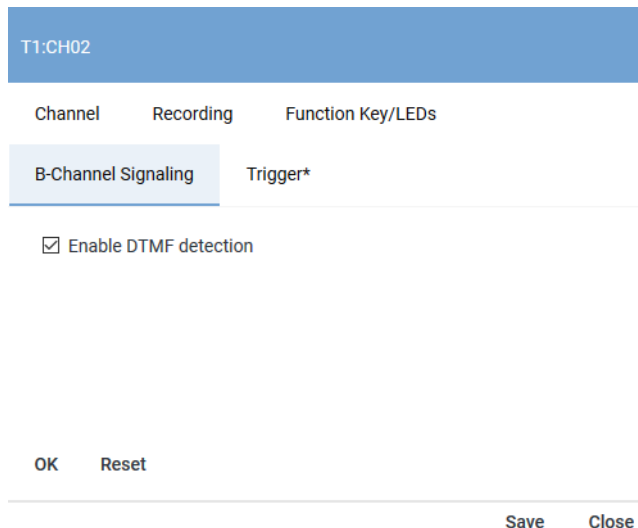
6. Click on the button **OK**.

NOTICE! Additional information about the definition of keys and LEDs can be found in the administration manual *ASC XSCDM*.

Tabs *B-Channel Signaling*

1. Select the tab *B-Channel Signaling*.

⇒ The following setting options appear in the detail view:



The screenshot shows a configuration window for T1:CH02. It has three tabs: Channel, Recording, and Function Key/LEDs. The Function Key/LEDs tab is active, showing a sub-tab B-Channel Signaling. Below the tabs, there is a checkbox labeled "Enable DTMF detection" which is checked. At the bottom, there are buttons for OK, Reset, Save, and Close.

Fig. 70: TDM Hardware Others - configure B-channel signaling

2. Enter the following parameter:

Parameter	Value/Description
<i>Enable DTMF detection</i>	<p>Activate the check box if you would like to tag the numbers sent via DTMF to the call.</p> <p>This option is license-dependent.</p> <p>Fields DTMF sequence</p> <p>Each receives DTMF character (including the recognized phone number) is added to the field DTMF sequence. As soon as a control code e. g. for start/stop, keep/delete, mute/unmute is recognized, it is removed.</p> <p>Tagging for phone number:</p> <p>The first DTMF characters of a recording are recognized as phone number. Phone number assignment is completed when there are more than 10 seconds between receiving two DTMF characters. The predefined timeout of 10 seconds can be adjusted in the file <i>C:\Program Files (x86)\ASC\ASC Product Suite\data\Recording-</i></p>

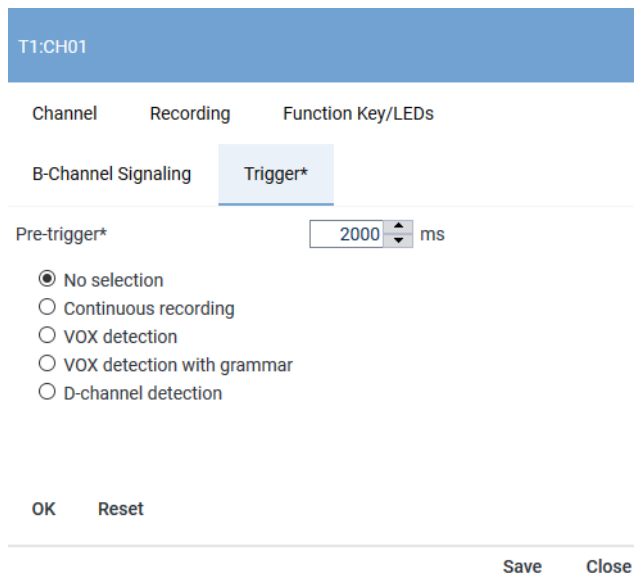
Parameter	Value/Description
	<i>Control\ASC.RecordingControl.ini</i> in the section <i>[RC]</i> via the parameter <i>dtmfTimeout=10000</i> (the time period 10000 is indicated in milliseconds).

Tab. 24: Configure B-channel signaling

- Click on the button **OK**.

Tab Trigger

- Select the tab *Trigger*.
⇒ The following setting options appear in the detail view:



T1:CH01

Channel Recording Function Key/LEDs

B-Channel Signaling **Trigger***

Pre-trigger* 2000 ms

☒ No selection
☐ Continuous recording
☐ VOX detection
☐ VOX detection with grammar
☐ D-channel detection

OK Reset

Save Close

Fig. 71: TDM Hardware Others - configure trigger

- Enter the following parameters:

Parameter	Value/Description
<i>Pre-trigger</i>	Select the pre-trigger which is to be added to the recording before a trigger start. This implies that no audio from a previous call is recorded in the following call even if the calls are coming in immediately after each other.
<i>No selection</i>	If you do not select a trigger, the recordings can only be started or stopped via CTIconnect .
<i>Continuous recording</i>	When selecting this trigger, the recording server records continuously. The recordings do not have to be started or stopped explicitly. To limit the amount of data per recording, the recordings are stopped at 00:00 every 24 hours and started again without time loss by default.
<i>VOX detection</i>	When selecting this trigger, the recording is started and stopped on basis of the calculated level in the audio channel. For further information about the configuration, see chapter "VOX detection", p. 70 .
<i>D-channel detection</i>	When selecting this trigger, the recording is controlled on basis of the D-channel signaling. For this, you can have ASC adjust a grammar to the phone-specific signaling of the call events. For further information about the configuration, see chapter "D-channel detection", p. 72 .

Tab. 25: Configure trigger

- Select the option for the respective trigger:

- For the triggers *No selection* and *Continuous recording* no configuration is required.
- For the triggers *VOX detection* and *D-channel detection*, see [chapter "VOX detection", p. 70](#) and [chapter "D-channel detection", p. 72](#).
- Click on the button *OK*.
- Click on the button *Save* to save the settings before selecting another channel to be configured.

VOX detection

When selecting the trigger **VOX detection**, only the audio data is recorded. Additional data is not delivered with this filter.

The following parameters appear for the configuration:

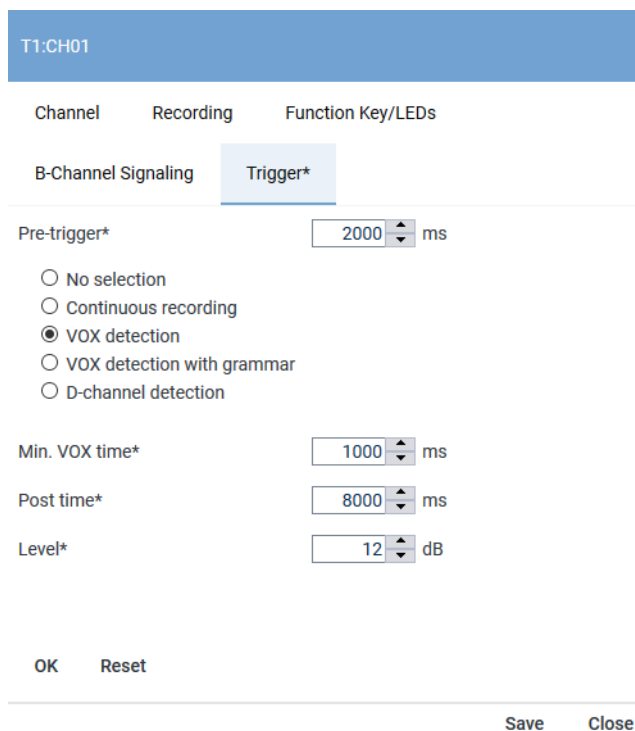


Fig. 72: Configure VOX detection

- Enter the following parameters:

Parameter	Value/Description
<i>Pre-trigger</i>	Enter the pre-trigger. The pre-trigger for VOX detection should always be one second longer than the minimum call duration, since it is possible that the trigger starts later and the beginning of the call would not be recorded then.
<i>Min. VOX time</i>	Enter the period of time a level has to be maintained at least for a start trigger to be initiated for a recording.
<i>Post time</i>	Enter the period of time no level has to be detected for a recording to be finished.
<i>Level</i>	Enter the level in dB which has to be exceeded for a call to be detected.

Tab. 26: Configure VOX detection

- Click on the button *OK*.
- Click on the button *Save*.

VOX detection with grammar

When selecting the trigger **VOX** detection with grammar, the recording is controlled via VOX. Additional data is delivered via the grammar and added to the call.

The following parameters appear for the configuration:

T1:CH01

Channel
Recording
Function Key/LEDs

B-Channel Signaling
Trigger*

Pre-trigger* 2000 ms

☐ No selection
☐ Continuous recording
☐ VOX detection
☒ VOX detection with grammar
☐ D-channel detection

Min. VOX time* 1000 ms

Post time* 8000 ms

Level* 12 dB

Grammar type NORTEL_MERIDIAN1

Grammar name Default ▼

Grammar version 1.00.02 ▼

OK
Reset

Save
Close

Fig. 73: Configure VOX detection and grammar

1. Enter the following parameters:

Parameter	Value/Description
<i>Pre-trigger</i>	Enter the pre-trigger. The pre-trigger for VOX detection should always be one second longer than the minimum call duration, since it is possible that the trigger starts later and the beginning of the call would not be recorded then.
<i>Min. VOX time</i>	Enter the period of time a level has to be maintained at least for a start trigger to be initiated for a recording.
<i>Post time</i>	Enter the period of time no level has to be detected for a recording to be finished.
<i>Level</i>	Enter the level in dB which has to be exceeded for a call to be detected.
<i>Grammar type</i>	The grammar type which has been configured in the application SmartControl is displayed automatically.
<i>Grammar name</i>	From the drop-down list, select the name of the grammar which is supposed to be used. If you have imported a customized grammar, it will be displayed in the drop-down list, too.
<i>Grammar version</i>	Select the version of the grammar from the drop-down list.

Tab. 27: Configure VOX detection and grammar

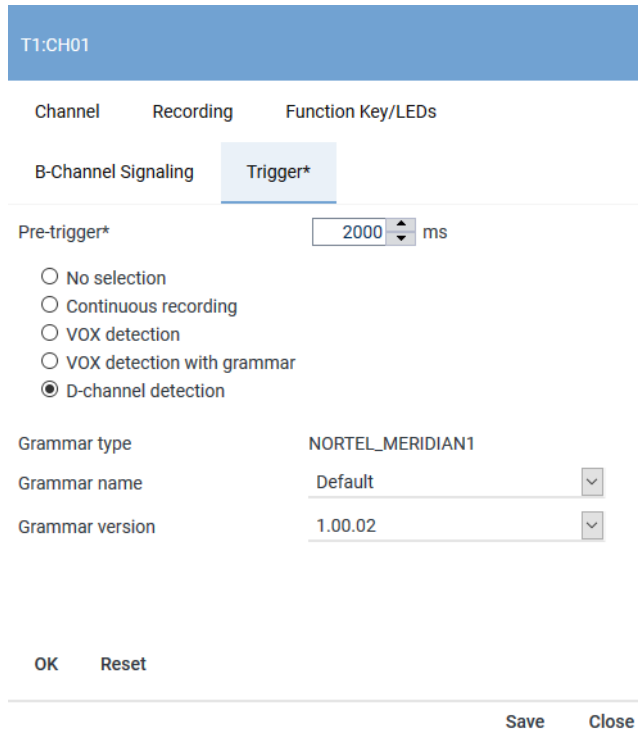
2. Click on the button **OK**.

- Click on the button **Save**.

D-channel detection

When selecting the trigger D-channel detection, the recording is controlled via the grammar and the corresponding additional data is added to the recording.

The following parameters appear for the configuration:



The screenshot shows a configuration window for channel T1:CH01. It has three tabs: Channel, Recording, and Function Key/LEDs. The 'Trigger*' sub-tab is active under the Recording section. The 'Pre-trigger*' is set to 2000 ms. There are five radio button options: 'No selection', 'Continuous recording', 'VOX detection', 'VOX detection with grammar', and 'D-channel detection' (which is selected). Below these are three dropdown menus: 'Grammar type' (set to NORTEL_MERIDIAN1), 'Grammar name' (set to Default), and 'Grammar version' (set to 1.00.02). At the bottom are 'OK' and 'Reset' buttons, and at the very bottom are 'Save' and 'Close' buttons.

Fig. 74: Configure D-channel detection

- Enter the following parameters:

Parameter	Value/Description
<i>Pre-trigger</i>	Select the pre-trigger which is to be added to the recording before a trigger start. This implies that no audio from a previous call is recorded in the following call even if the calls are coming in immediately after each other.
<i>Grammar type</i>	The grammar type which has been configured in the application SmartControl is displayed automatically.
<i>Grammar name</i>	From the drop-down list, select the name of the grammar which is supposed to be used. If you have imported a customized grammar, it will be displayed in the drop-down list, too.
<i>Grammar version</i>	Select the version of the grammar from the drop-down list.

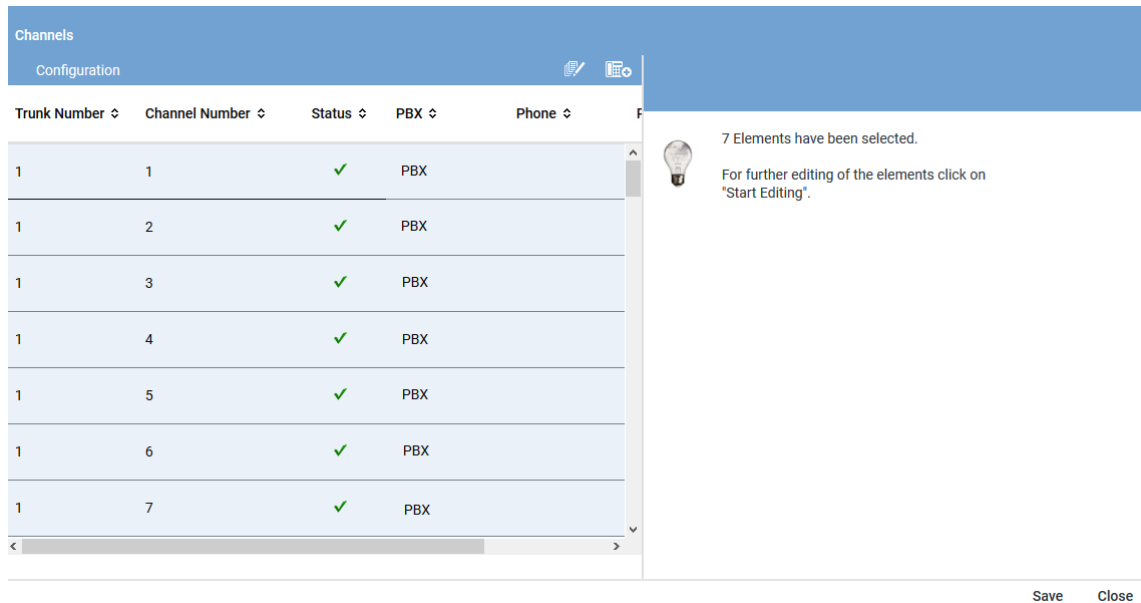
Tab. 28: Configure D-channel detection

- Click on the button **OK**.
- Click on the button **Save** to finish the configuration for this channel.

Configure several channels at once

- To configure several connected channels at the same time, mark the first and the last of the respective channels in the list while holding the [Shift] key down.

2. To configure several individual entries in the list at the same time, mark the respective channels while holding the [Ctrl] key down.
 ⇒ In the detail view, the number of the selected channels appears.



Trunk Number	Channel Number	Status	PBX	Phone
1	1	✓	PBX	
1	2	✓	PBX	
1	3	✓	PBX	
1	4	✓	PBX	
1	5	✓	PBX	
1	6	✓	PBX	
1	7	✓	PBX	


7 Elements have been selected.
For further editing of the elements click on "Start Editing".

Save Close

Fig. 75: Multiple editing of channels



The settings you adjust in the multiple editing are applied for the selected channels regardless of the previous configuration of the channel's parameter. If you have configured the channels one by one, the configuration is overwritten for the selected parameter only. If you do not activate the check box, the original setting remains for this parameter. That way you can configure only one certain parameter for several channels, for instance, without overwriting the other parameters.

3. Click on the icon  (*Edit*) in the toolbar.
 ⇒ The following window appears:

Multiple Editing ✕

Details

Function Key/LEDs

☒ Configure activation
 Activate channel ☐
 PBX Please select... ▼
☒ Configure compression type
 Compression type G.726 16 kbit/s ▼
 Stereo ☐
☒ Configure AGC
 Activate AGC ☐
☒ Configure B-channel signaling
☐ Enable DTMF detection
☒ Configure trigger
☐ Configure pre-trigger
 Pre-trigger 2000 ms
☐ Configure detection type
☒ No selection
☐ Continuous recording
☐ VOX detection
☐ VOX detection with grammar
☐ D-channel detection

OK

Cancel

Fig. 76: Multiple editing of the recording settings

- Set the respective parameters according to the channel configuration, see [chapter "Configure channels", p. 64](#).
- Switch to the tab *Function Key/LEDs* to configure the function keys for several channels.

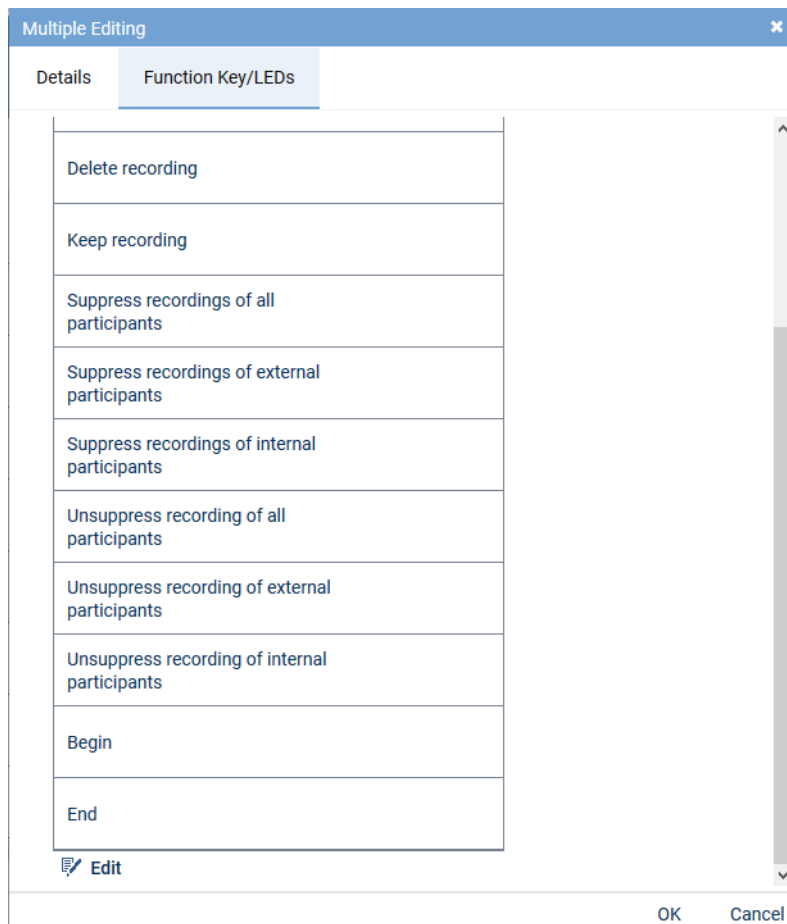




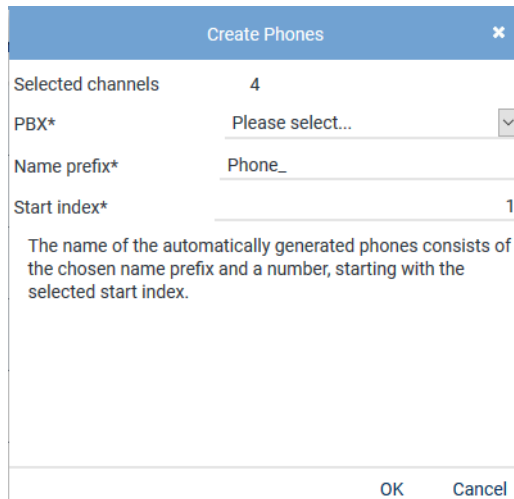
Fig. 77: Multiple editing of the function keys

6. Click on the button **OK** to apply the configuration and close the window.

Create phones automatically

In the module TDM Hardware Others, you can automatically create phones via the channel configuration. During this process, the phones are assigned to the channels consecutively.

1. Select the menu item TDM Hardware Others in the navigation bar.
2. In the main view, select the board to which you would like to assign the channels.
3. Click on the icon  (*Administrate channels*).
⇒ The window *Channels* appears.
4. Mark the 1st and the last of the respective channels while holding the [Ctrl] key down.
5. Click on the icon  (*Create phones*) in the toolbar.
⇒ The window *Create Phones* appears.



The dialog box 'Create Phones' contains the following fields:

- Selected channels:** 4
- PBX*:** Please select... (dropdown menu)
- Name prefix*:** Phone_ (text input)
- Start index*:** 1 (text input)

Below the fields, a note states: 'The name of the automatically generated phones consists of the chosen name prefix and a number, starting with the selected start index.'

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

Fig. 78: Create phones

6. Enter the following parameters:

Parameter	Value/Description
<i>Selected channels</i>	Shows the number of the selected channels.
<i>PBX</i>	From the drop-down list, select the previously created PBX that the phone is supposed to be assigned to.
<i>Name prefix</i>	Enter a part of a name for all phones, e g. <i>Phone_</i> .
<i>Start index</i>	Enter the start value the numbering of the phones is supposed to start with.

Tab. 29: Create phone



The name of the created phones consists of the selected name prefix and a number starting with the selected start index.

7. Click on the button *OK* to apply the configuration and close the window.

Save configuration



Please consider that the saving function interrupts a running recording so that the changes can be applied.

1. Click on the button *Save* to apply the configuration.
2. Click on the button *Close* to finish this configuration step and close the window.

6.2.2.1.7 Configure additional data

In the Additional Data module, you can configure the additional data which is delivered for a conversation with a protocol.

For selection fields to appear in the drop-down list, they have to be configured in the Additional Data module.

1. Select the menu item *Setup > Additional Data* in the navigation bar.

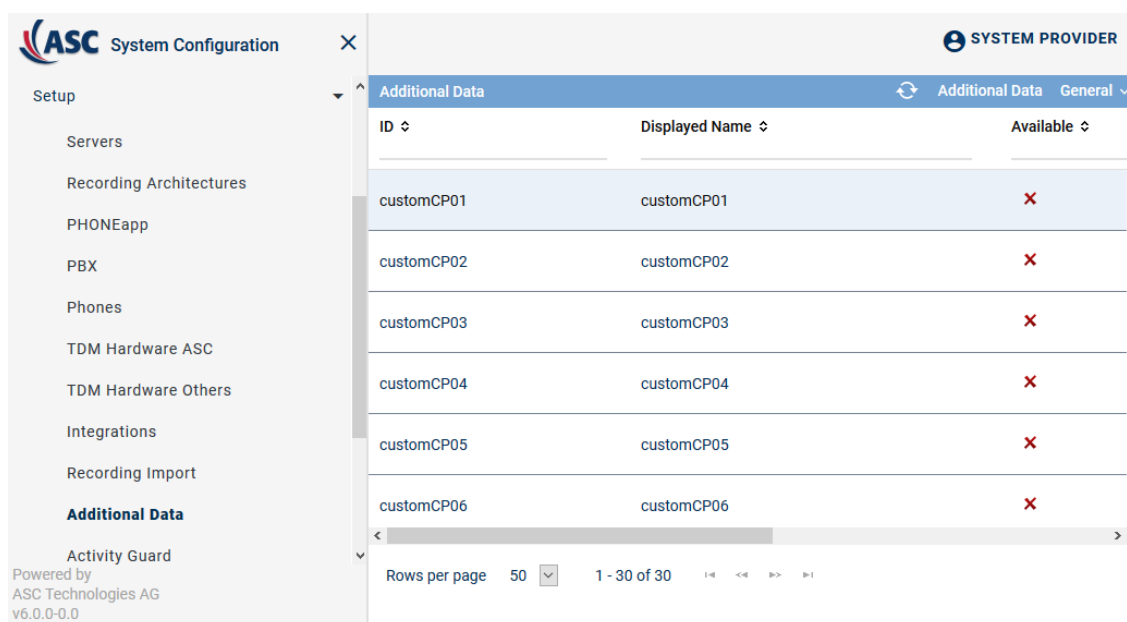


Fig. 79: Additional Data module main view

2. Select a set of data.
 - ⇒ The detail view displays the information you can configure.

Change display name







Change Display Name		
Language	Content	
ar_SA	customCP01	
bg_BG	customCP01	
de_DE	Universal Call ID	
en_GB	customCP01	
en_US	Universal Call ID	 

Fig. 80: Configure additional data

1. To change the display name, click on the pen in the line of the language you would like to change.
2. Enter a display name and click on the check mark at the end of the line to confirm the entry.

Availability

Availability	
Available	<input checked="" type="checkbox"/>
Editable	<input checked="" type="checkbox"/>
External recording control	<input checked="" type="checkbox"/>

Save
Reset

Fig. 81: Additional data - configure availability

1. To make the data field available to the entire system, activate the check box of the option *Available*.
2. To make the data field in the search and replay applications editable later on, activate the check box of the option *Editable*.
3. To be able to use the data field for external recording control, activate the check box of the option *External recording control*. This option is only available if recording control has been activated in the *Servers module* in the tab *Usage*.
4. Click on the button *Save* to save the settings.



For further information about the configuration of the additional data refer to the administration manual *Additional Data module*.



Additional data which is not delivered along with the protocol are not available for further use.

6.2.2.1.8 Create integration for All-in-one Basic

In the Integrations module, the PBX-related recording settings are configured.

You first have to create and activate a recording architecture to be able to create a integration and to assign it here.

Depending on the recording solution, you additionally have to configure IP addresses, ports, protocols, sniffer cards, CTI connection data, phones, monitor points, and, where required, add-ons.

1. In the navigation bar, select the menu item *Setup > Integrations*.
⇒ The following window appears:

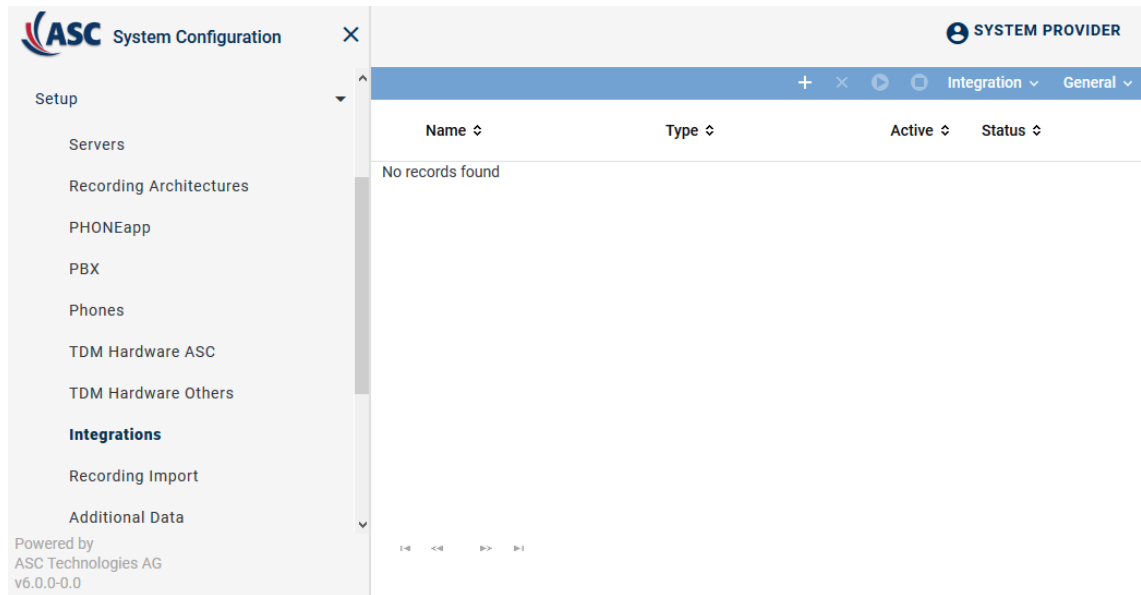




Fig. 82: Integrations - main view

In the table in the main view, the following information is displayed:





Name	Name of the integration
Type	Type of the integration
Active	Shows whether the integration has been activated and is used for the recording. <div> ✓ = Integration is active, can be deactivated in the toolbar via the icon . ✗ = Integration is not active, can be activated in the toolbar via the icon . </div>
Status	Shows whether the configuration has been carried out completely. <div> ✓ = Configuration is complete. ✗ = Configuration is incomplete. </div>

Toolbar of the Integrations module

The toolbar offers the following functions.



Fig. 83: Toolbar Integrations module

	Create	Opens the detail view so that you can create a new integration.
	Delete	Deletes the selected integration. The integration can only be deleted if it has been deactivated.
	Activate	Activates the selected integration. The integration can only be activated if it has been configured completely.
	Deactivate	Deactivates the selected integration. This stops running recordings.
Integration	Import Grammar	By clicking on this menu item, you can import a customized grammar which you can then configure in the configuration step for the CTI connection data.
General	General Help	Opens the online help.
	Module Help	Opens the module-specific online help.


Administrate grammars

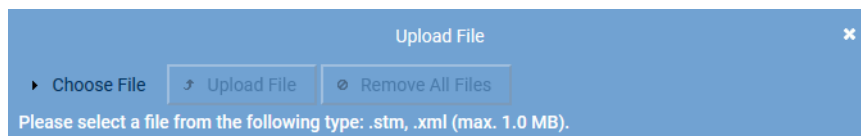
Depending on the deployed PBX, the conversation events are signaled differently.

A grammar recognizes and processes the events occurring during a call such as ringing, answering, consultation, hanging up.

In the Integrations module, you can import a customized grammar which you can then configure in the configuration step for the CTI connection data.

Import grammar

1. To import a new grammar, click on the icon  (*Import grammar*) in the toolbar of the main view.
⇒ The window *Upload File* appears.
2. To import a new grammar, click on the menu item *TDM Hardware Others > Import Grammar* in the toolbar of the main view.
⇒ The window *Upload File* appears.



Close

Fig. 84: Choose file

3. Click on the button *Choose File*.
4. Select the respective grammar of the file type *.stm* or *.xml* via the Explorer.
5. Click on the button *Open*.
⇒ The selected file appears in the window *Upload File*.

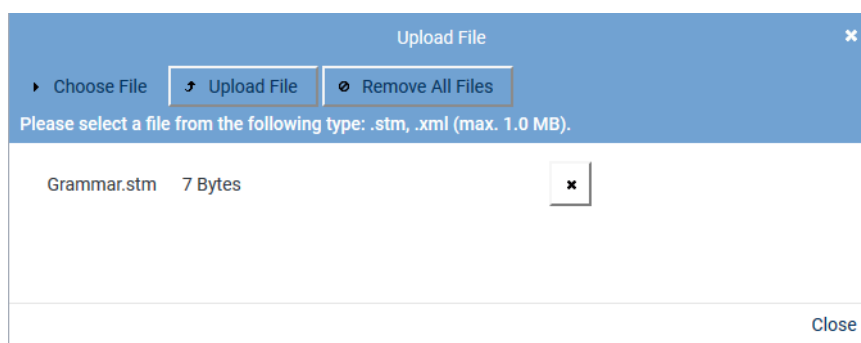




Fig. 85: Upload grammar

6. To remove a selected file from the list, click on the button  (*Remove file*) next to the respective file.
To upload the file, click on the button *Upload File*.
⇒ The window closes and a notification appears in the main view that the file has been uploaded successfully.

Delete grammars

1. To delete grammars which are not used, click on the icon  (*Manage unused grammars*) in the toolbar of the main view.

⇒ The window *Manage Unused Grammars* appears.


Manage Unused Grammars	
Grammar Name ⇅	Grammar Version ⇅
DefaultV2_NortelMeridian_OnlyLastLine	2.00.00
Default	1.00.02
DefaultR3_Dummy_NORTEL_MERIDIAN1_cmISO	3.00.02
DefaultV2_NortelMeridian	2.00.00
DefaultV2_NortelMeridian_Connect	2.00.00
DefaultV2_NortelMeridian_InConnect	2.00.00
Delete Close	

Fig. 86: Delete grammars

2. Select the grammar you would like to delete. To select several grammars at the once, click on the respective entries while holding the [Ctrl] key down.
3. Click on the button *Delete*.

⇒ The security prompt to delete an element appears.
4. To really delete the selected grammars, confirm the security prompt.

Assign integration type

1. Click on the icon  (*Create*) in the toolbar of the main view to create a new integration.

⇒ In the detail view, the tab *Integration Type* appears.

New Integration

Integration Type

Recording Architecture

Name*

MVTC

Integration type*

Universal MVTC

PBX

+

PBX*

MVTC

+

-

Cancel

Back

Next

Fig. 87: Create integration type

2. Enter the following parameters:

Parameter	Value
<i>Name</i>	In the entry field, enter a descriptive name for the integration. This name is used as the identifier of this integration in the system.
Integration type	Select the entry <i>Universal MVTC</i> from the drop-down list <i>Integration type</i> .

Tab. 30: Create integration type

- To assign the PBX, click on the button **+** behind the field *PBX*.
⇒ The window *PBX* appears.



Fig. 88: Integrations - select PBX

- Select the respective *PBX* from the list of available PBXs.
- Click on the button *Add*.

Assign recording architecture for All-in-one Basic

- In the detail view on the bottom right, click on the button *Next*.
⇒ The tab *Recording Architecture* appears.



Fig. 89: Assign recording architecture - All-in-one Basic


- Select the respective recording architecture from the drop-down list *Recording architecture*.



Only activated recording architectures in which the appropriate integration type has been configured appear in the drop-down list.

3. Click on the button **Save**.
⇒ The integration now appears in the main view.

Configuration steps

1. To complete the configuration of the integration, click on the icon  in front of the name of the new integration.
⇒ The following configuration steps appear:







MVTC		Universal MVTC	X	
Step	Configuration			
Configure recording architecture	✓ 			
Activate channels	✗ 			
Configure add-on	✓ 			
Configure miscellaneous settings	✓ 			

Fig. 90: Configuration steps of the integration

Configure recording architecture

The section *Configure recording architecture* has already been configured in previous steps.

1. Click on the button  (*Edit configuration step*) in the line *Configure recording architecture* in the main view to show the configuration.
⇒ In the detail view, the configuration step appears with the information of the assigned recording architecture.

Step: Configure Recording Architecture
✕

Details *

Recording architecture*
All-in-one Basic

▼


Save
Cancel

Fig. 91: Configuration step - Configure Recording Architecture

2. Click on the button **Save** to save changes and to finish the configuration step.
3. Click on the button **Cancel** to cancel the configuration step without applying changes.

Activate channels

The section *Activate channels* has already been configured in previous steps. Only those channels are displayed here, which have already been configured in the module TDM Hardware Others. If required, you can activate or deactivate the channels here again which have already been configured.

1. In the main view in the line *Activate channels*, click on the button  (*Edit configuration step*).
⇒ The window *Step: Activate Channels* appears with the list of configured channels.

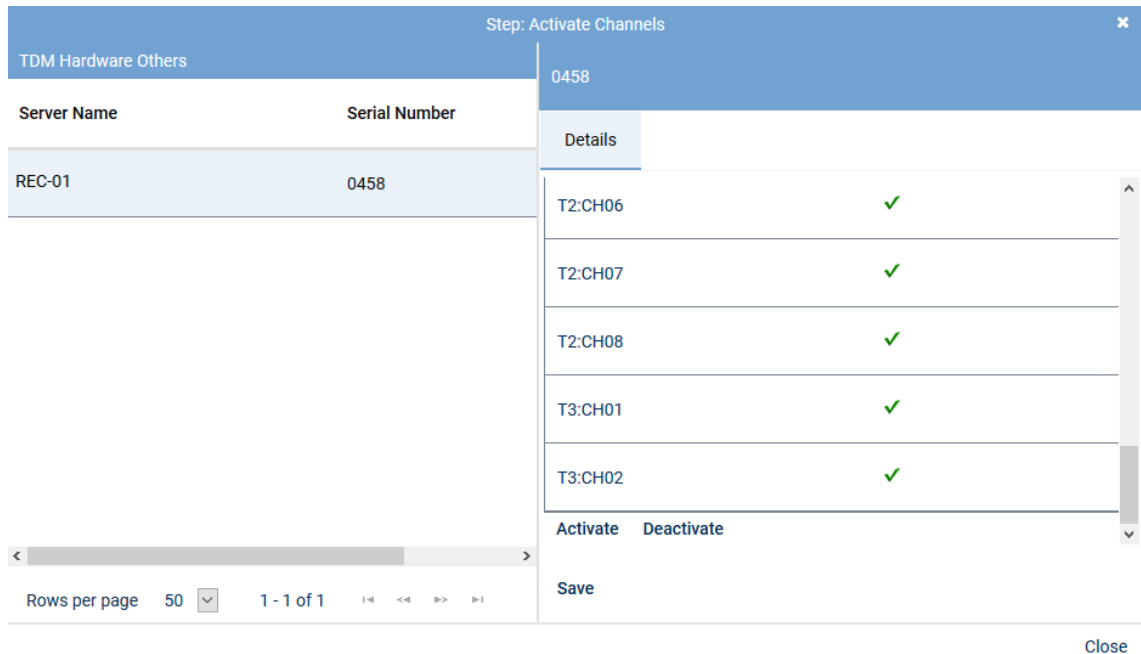


Fig. 92: Configuration step - activate channels

2. Select the respective channels and click on the button *Activate* or *Deactivate*.
3. Click on the button *Save* to apply the configuration.
4. Click on the button *Close* to finish this configuration step and close the window.

Configure add-on



The use of the add-on in the integration is optional. The status of this configuration step has been set to *No selection* by default and is considered to be completely configured that way. You can activate and use the integration without an add-on, too.

If you use an application with add-on, you can select the required grammar in the corresponding version in this configuration step. Additionally, you can configure the connection data and the additional data.



The additional data delivered by an application with add-on supplement the additional data which is delivered by the CTIconnect module of the integration.

Configure add-on for Sparkassen FI ISP (optional)

The add-on refers to the usage of CTIconnect for Sparkassen FI ISP in the DACH region and only has to be configured if the add-on is used.



The add-on cannot be used in a failover architecture. The application Sparkassen FI ISP cannot connect to more than one IP address.

The integration runs in combination with a PBX and the recording server. The service CTIconnect for Sparkassen FI ISP receives the additional data from the PBX and sends them to the recording server. In addition, the recording decision which is initiated by the user on the end device is processed via CTIconnect for Sparkassen FI ISP and sent to the recording server.

Sparkassen FI Interaktive Service Plattform

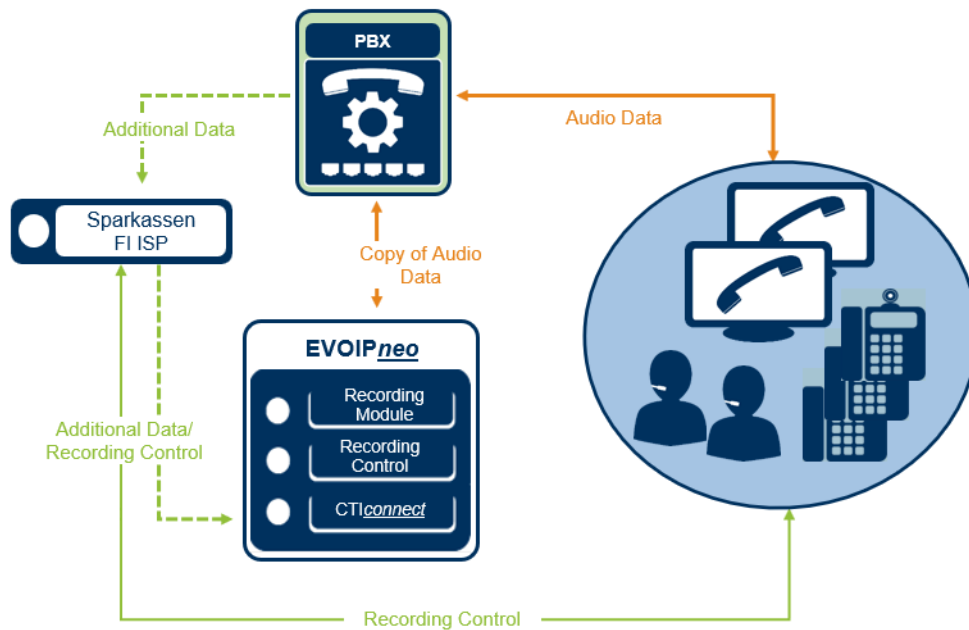



Fig. 93: Overview of Sparkassen FI ISP

Configure add-on in the integration

1. To configure the add-on, click on the button  (*Edit configuration step*) in the main view in the line *Configure add-on*.
2. Select the add-on *Sparkassen FI ISP* in the detail view.

Step: Configure Add-on
✕

Details *

Select add-on

☐ None

☒ Sparkassen FI ISP

CTIconnect Module

Type	CTIconnect passive	
Grammar name*	ISP Sparkassen FI	▼
Grammar version*	1.00.05	▼

Connection Data ▼

Listener port*	3468
----------------	------

Additional Data ▼

ID des Call Centers	Call Center ID	▼
ID des Calls aus Genesys	Universal Call ID	▼
Anmeldename des Kunden	User name	▼
Name des Kunden	Customer name	▼
Personennummer des Kunden	Customer ID	▼

Arbitrary assignment
+

<input style="width: 90%;" type="text"/>	Please select...	▼	⊖
<input style="width: 90%;" type="text"/>	Please select...	▼	⊖
<input style="width: 90%;" type="text"/>	Please select...	▼	⊖

Save Cancel

Fig. 94: Configure add-on for Sparkassen FI ISP

Group field CTIconnect Module

1. Enter the following parameters for the grammar:

Parameter	Value/Description
Type	Is filled automatically.
Grammar name	Select the name of the grammar from the drop-down list.
Grammar version	Select the current version of the grammar from the drop-down list.

Tab. 31: Configure CTIconnect module



For recording control by means of the add-on of Sparkassen FI ISP, a grammar version of 1.00.05 or higher is required. If the grammar in the respective version is not available yet, you can import it. See [chapter "Import grammar", p. 60](#).

Group field Connection Data

Set the following parameter in the group field *Connection Data*; the IP address for the PBX does not have to be entered, since the PBX connects to our recording server:

Parameter	Value/Description
<i>Listener Port</i>	Enter the port that the add-on connects to, e. g. 3468.

Tab. 32: Configure connection data

Group field Additional Data



This add-on is used exclusively in the DACH region; for this reason the additional data is only available in German, too. The names of the fields refer to the assignment of the strings which are delivered by the interface.

Select the database fields for the additional data. The following additional data has been selected by default:

- *ID of the call center*
- *ID of the call from Genesys*
- *Login name of the customer*
- *Name of the customer*
- *Employee number of the customer*

Arbitrary assignment

In the section *Arbitrary assignment*, you can configure the additional data which is additionally delivered by the PBX or by an add-on but which is not listed yet. Upon assigning the delivered additional data, it appears in the search and replay applications.



The names of the column headlines which are supposed to appear in the players must be configured and made available in the Additional Data module first.

For further information about the configuration of the additional data refer to the administration manual *Additional Data module*.



The drop-down list only contains those additional data that you have configured and made available in the Additional Data module. The display name then appears in the column headlines in the players.

For more information about the configuration of additional data refer to the administration manual for system providers *Additional Data module*

1. In the group field headline *Additional Data*, click on the arrow ► to expand the group field and to assign the additional data to the data fields of the search and replay applications.

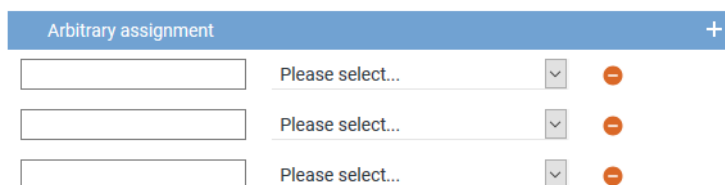



Fig. 95: Arbitrary assignment of the additional data

The following additional data are always available:

- *Start time*
- *End time*
- *Duration*
- *Calling Party Phone Number*
- *Called Party Phone Number*

- *Conversation Direction*
- 2. In the entry field on the left, enter the description of the additional data type from the protocol. Observe the same spelling as it is used in the protocol. The information which is read out of the protocol is displayed in the columns in the players.
- 3. From the drop-down list, select the respective display name that you have configured in the Additional Data module. Only those display names are displayed for which the option *Available* has been activated in the Additional Data module.
- 4. To add a new assignment, click on the icon  (*Create*) in the toolbar of the table.
 - ⇒ An additional row appears to assign another additional data type.
- 5. Click on the button *Save* in the detail view to save the entries and finish this configuration step.

The add-on provides additional data that can be tagged in customer-specific additional data fields (customCP fields). By means of these additional data fields, the respective recording behavior can be reached by means of the recording planner, e. g. recording start beginning with tagging or threat call scenario.




To allow users to control the recording by means of keys, you must configure the recording profile accordingly in the Recording Planner module.



For information about the Recording Planner module refer to the administration manual for tenants *Recording Planner*.

Configure miscellaneous settings

1. Click on the button  (*Edit configuration step*) in the line *Configure recording servers* in the main view.
 - ⇒ The window *Step: Miscellaneous Settings* appears.

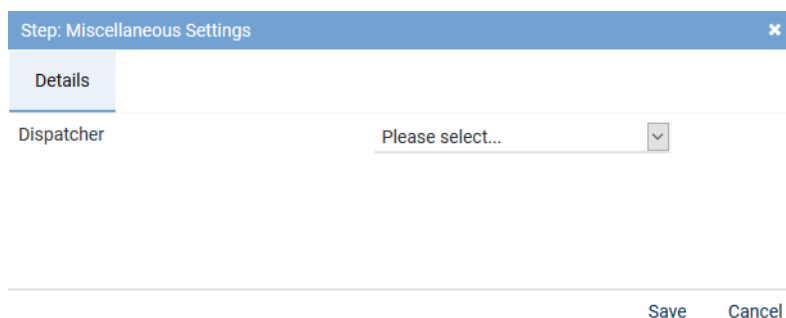


Fig. 96: Configure miscellaneous settings

2. Enter the following parameter:


Parameters	Description
<i>Dispatcher</i>	From the drop-down list, select the previously created additional data field that the participant information is supposed to be connected with.



Only those entries appear in the drop-down list which have been configured in the application System Configuration in the Additional Data module. For further information refer to the administration manual *Additional Data module*.



Activate integration

The integration can only be activated after the configuration is complete.

If not all configuration steps have been carried out completely, the icon  (*Incomplete*) will appear in the main view, in the line of the created integration, in the column *Status*.

If the configuration has been carried out completely, the icon ✓ (*Complete*) will appear in the line of the respective step, in the column *Configuration*.

If all settings are complete, the icon ✓ (OK) will appear in the main view, in the line of the created integration, in the column *Status*.

1. Mark the integration in the main view, so that the icon  (*Activate*) becomes active in the toolbar.
2. To activate the integration, click on the icon  (*Activate*).
⇒ In the column *Active*, the icon ✓ (*Active*) appears.




+ ×   Integration ▾ General ▾			
Name ⇅	Type ⇅	Active ⇅	Status ⇅
 MVTC	Universal MVTC	✓	✓



Fig. 97: Integration activated



If you take advantage of the grace period and there is no valid license file in the system after its expiration, all integrations are deactivated. After uploading a valid license file, you have to activate the integrations again.

Deactivate/Delete integration

To be able to delete an integration, it has to be deactivated.

1. To deactivate the integration, click on the icon  (*Deactivate*) in the toolbar.
⇒ In the column *Active*, the icon ✗ (*Inactive*) appears.
⇒ The icon  (*Delete*) becomes active in the toolbar.





+ ×   Integration ▾ General ▾			
Name ⇅	Type ⇅	Active ⇅	Status ⇅
 MVTC	Universal MVTC	✗	✓

Fig. 98: Integration deactivated

2. Click on the icon  (*Delete*) and confirm the security prompt to delete the integration.

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Glossary

μ-law

PCM digitization method for analog audio signals according to ITU G.711. In the process, analog voice signals are converted into digital signals by means of a logarithmic quantization characteristic. The μ-law algorithm is used in the US while the A-law algorithm is the standard in Europe.

ADPCM

Digital audio compressing according to ITU G.726 for 16/24/32/40 kbit/s

AGC

Automatic Gain Control, incoming signal are elevated to a certain level to facilitate processing the signal chain.

A-law

PCM digitization method for analog audio signals according to ITU G.711. In the process, analog voice signals are converted into digital signals by means of a logarithmic quantization characteristic. The A-law algorithm is used in Europe while the μ-law algorithm is the standard in the US.

API

Application Programming Interface

API server

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

BRI

Basic Rate Interface; a basic interface of the Integrated Service Digital Network (ISDN). A basic interface provides two bearer channels (B-channels) at 64 kbit/s each and one data channel (D-channel) at 16 kbit/s.

CPU

Central Processing Unit

CSV

Comma-separated values is a file format which stores tabular data in plain text form.

DSP

The digital signal processor processes digital signals such as audio and video signals.

DTMF

Dialed Dual Tone Multi Frequency keys represent dialing signals on the analog connecting cable of the telephone. This is a method to transmit the phone number to the telephone network or to a PBX.

DXT

Digital Exchange for TETRA (TETRA = Terrestrial Trunked Radio)

G.711

Standardized method of the ITU (International Telecommunication Union) to digitize analog audio signals via pulse code modulation (PCM). G.711 defines 2 different algorithms μ -law and A-law.

G.726

The method is based on adaptive differential pulse code modulation (ADPCM). The codec supports bit rates of 16, 24, 32, and 40 kbit/s. G.726 reaches a mean opinion score (MOS) of about 4.2 for the 40 kbit/s version and about 3.85 for the 32 kbit/s version.

G.729 Annex A

Codec for the compressing of language into digital signals with low complexity, fixed point arithmetic and a data rate of 8 kbit/s.

HI-Z

High Impedance - Z

IP

Internet Protocol, basic protocol for Internet communication

ISDN

Integrated Services Digital Network; international standard for a digital telecommunication network

LCR

Last Conversation Repeat

MVT card

Multi-vendor tap card

MVTC

Multi Vendor Tap Card; recording card for digital extensions and ISDN-S0 trunks

NTP

Network Time Protocol NTP is a standard for the synchronization of clocks in computer systems via packet-based communication networks. NTP uses the connectionless transport protocol UDP. It has been developed with the objective to guarantee reliable time verification across networks with variable packet runtime. (Source: Wikipedia 12th June 2018)

PBX

Private Branch Exchange

PCM

Pulse Code Modulation is an uncompressed pulse modulation method which transforms a time- and value-continuous analog signal into a time- and value-discrete digital signal. It is used in audio technology, for example in the context of the G.711 standard and in video technology for digital video signals in compliance with the ITU-R BT 601 standard. (Source: Wikipedia 12th June 2018)

SIP

Session Initiation Protocol

SSI

Short Subscriber Identity

TCP

Transmission Control Protocol, controlled connection establishment, secure data transmission, controlled connection termination

TCS

TETRA Connectivity Server

TDM

Time Division Multiplexing is an umbrella term for time-slot-oriented interfaces, ITU G.703 defined. The term is used ASC-wide representative for conventional telephony.

TLS

Transport Layer Security; previously known as Secure Sockets Layer (SSL), is a hybrid encryption protocol for safe data transmission in the Internet. Since version 3.0, the SSL protocol is developed under the new name TLS.

UDP

User Datagram Protocol UDP is a minimal, connectionless network protocol which belongs to the core members of the Internet protocol suite. Its purpose is to make sure that data transmitted via the Internet reach the designated application. There is no destination check.

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)

VM

Virtual machine

VoIP

Voice over IP

VOX

Voice Operated Transmission is a method which defines the activity of a conversation based on the level in the transmission channel. A call is detected as soon as a minimum signal level (VOX level) is exceeded. When the signal falls below this level for a configured period of time, the call is finished.

XSLT

XSL Transformation, short XSLT, is a programming language to transform XML documents. XSLT is based on the logical tree structure of an XML document and serves to define transformation rules. XSLT programs, so-called XSLT style sheets, are designed according to the

XML standard rules. (Source: Wikipedia 22nd March 2017) The style sheets are read in by dedicated software, the XSLT processors, which transform one or several XML documents into the respective output format based on these instructions.