

TDM recording others **EVOflex** (Universal PCM30 DT)



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:

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*.

This recording solution allows recording PCM30 trunks.

For the recording, cards of type DT 6409 are used. Depending on the configuration, 30 audio time slots (E1) can be administrated per trunk. One card supports the recording of two trunks. As a consequence, a maximum of 60 conversations can be recorded simultaneously per trunk.

Functional description for the recording solution *Universal PCM30 DT*

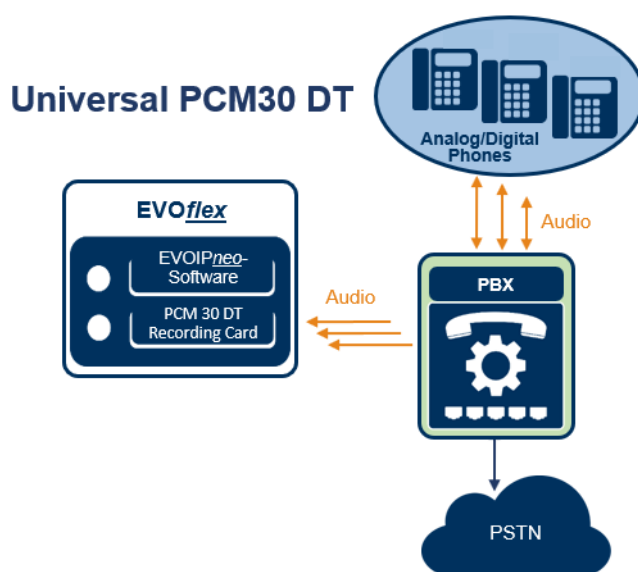


Fig. 1: Overview Universal PCM30 DT

The conversation data is sent digitally from the PBX via the **PCM30** interface to the recording card. When the recording server receives conversation data via the **PCM30** module, conversation detection is implemented via the **VOX** detection of the recording card. Since a **PCM30** trunk does not provide a D-channel protocol, neither the phone number nor the call direction can be detected in the **PCM30** data.

Alternatively, phones can be assigned to the **PCM30** time slots manually. By means of phone numbers which have been assigned that way, recordings can be allocated to the tenant and to the agents.

The following functions are supported:

- **DTMF** detection (optional)
- **AGC** (automatic gain control)
- Compression **G.711**, **G.726** and **G.729 Annex A** (post-compression)
- **VOX** detection
- Continuous recording

3 System requirements



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



A list of the supported PBXs and end devices as well as their supported versions can be found at ASC XCHANGE (<https://www.asc.de/partner>) in the current *neo Integration Overview*.

3.1 Hardware components



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



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

3.2 Software components

For the recording, you need the installation medium with the server software *neo* Suite which is installed on the ASC recording server.

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

License name	Number
Recording Server License for PCM30 connection	1 license per recording server
Recording Channel Licenses for PCM30	1 license per recording channel

Tab. 1: Licenses of ASC

Optional licenses

License name	Number
DTMF detection	1 license per recording channel
Algorithm license for G.729 data compression	1 license per recording channel
or	
Algorithm license for 4.8 kbit/s data compression	

Tab. 2: Optional licenses

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".

5

Overview install and configure product

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.
 - Configure phones
 - In the Phones module, the phones are assigned to a configured time slot.
 - Configure TDM Hardware Others
 - Configuration of the recording hardware, e. g. channels, DTMF detection, trigger.
 - Configure integration
 - Configure recording architecture
Link the integration to the previously created recording architecture.
 - Activate channels
Configuration of recording options
 - Configure add-on
 - The add-on is disabled by default.
An add-on is not supported in this recording solution.
 - 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:

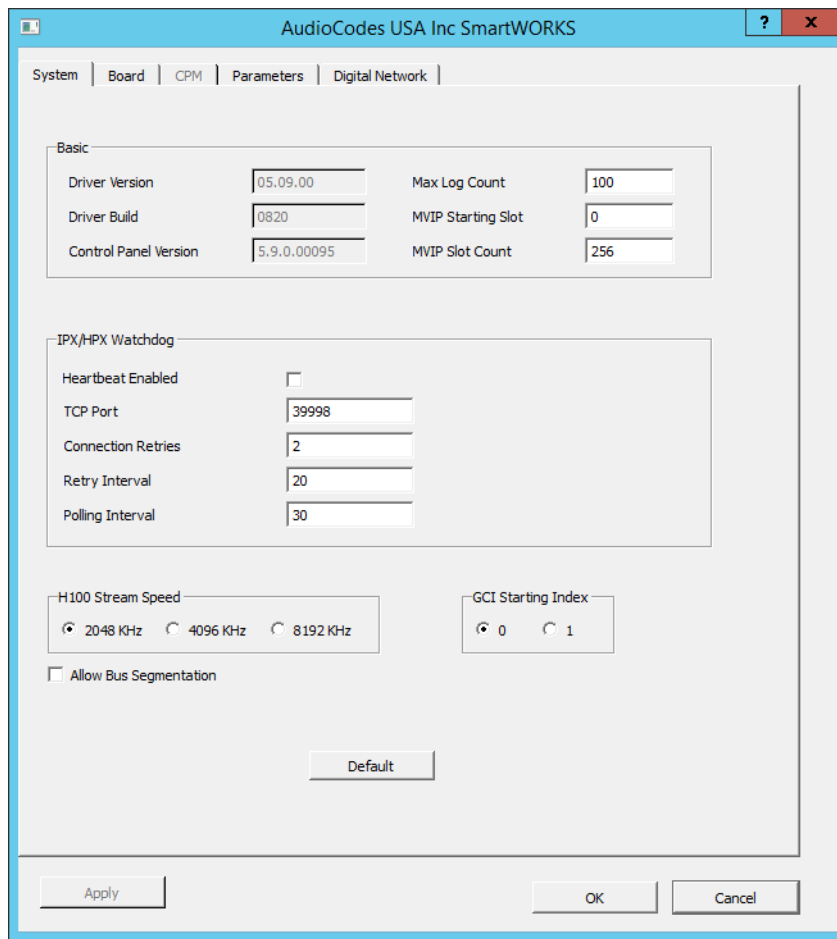


Fig. 3: SmartControl - tab System

5. Select the tab *Board*.

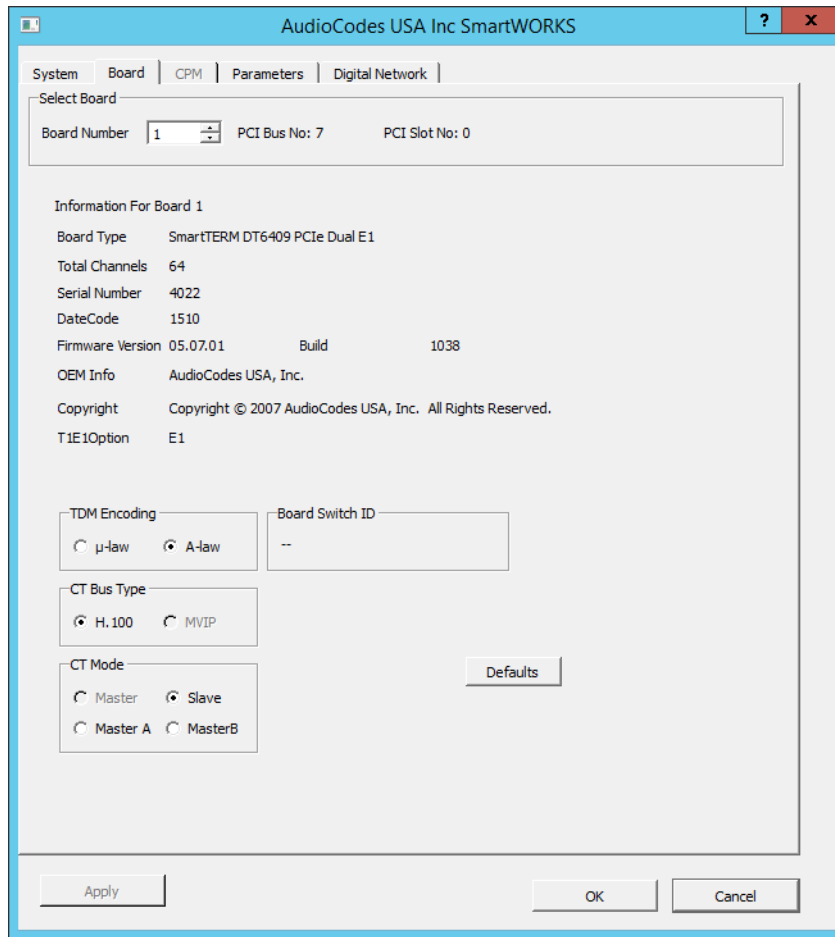


Fig. 4: SmartControl - tab Board

NOTICE! If you have installed several recording cards, you can change between the cards in the group field *Select Board* in the rotating field *Board Number*. The *Board Type* tells you which card you have selected. For the recording with Universal PCM30 DT, you have to select the board type *SmartTERM DTxxxx*.

6. In the group field *Select Board* in the rotating field *Board Number*, select the number of the **PCM30** recording card you would like to configure.
⇒ In *Board Type*, *SmartTERM DT6409 T1* appears.
7. In the group field *TDM Encoding*, activate the **PCM** data format (**G.711**).

A-law for Europe

μ-law for the US

Tab. 3: 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.

9. Select the tab *Digital Network*.

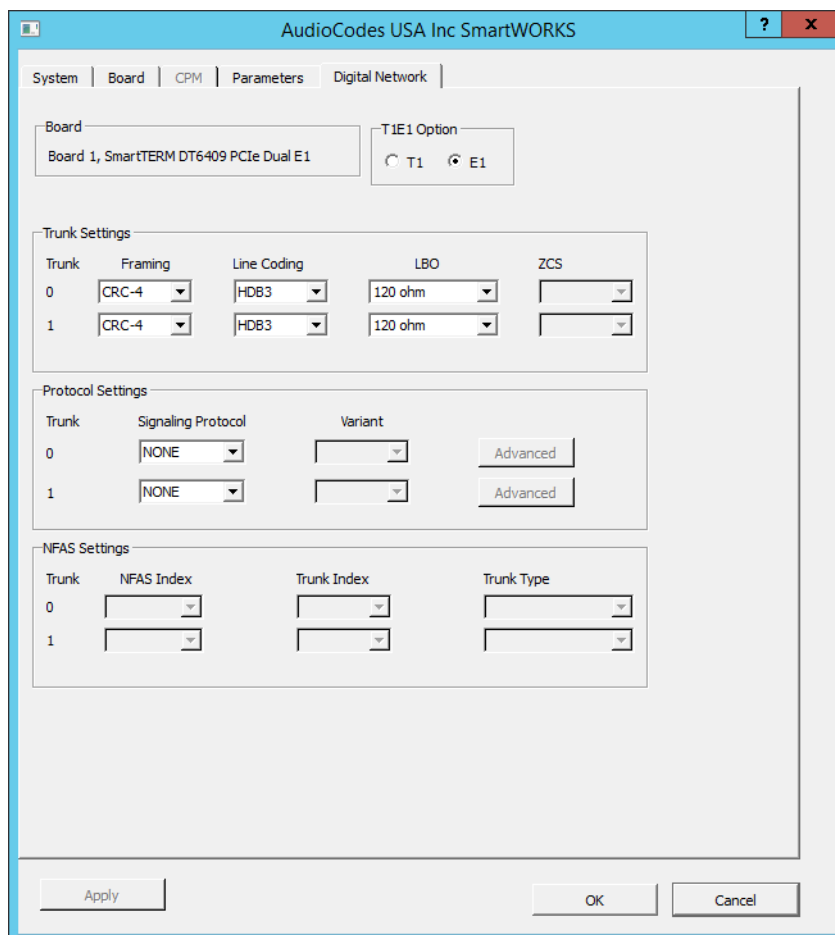


Fig. 5: Tab - Digital Network

T1/E1 options

1. Activate the option E1 for the [PCM30](#) interface.

T1 US-American standard for the management of 23 audio time slots.

E1 European standard for the management of 30 audio time slots.

Tab. 4: T1/E1 options

Trunk settings

1. Configure the trunk settings as follows:

Framing	Line coding	LBO	Description
CRC-4	HDB3	120 ohm	Default setting for E1 with CRC-4 check. Terminate the trunk with 120 Ω.
	AMI	120 ohm	Usually not used; contact your telecommunication engineer to learn which coding is used.
Basic G.704	HDB3	120 ohm	Default setting for E1 without CRC-4 check Terminate the trunk with 120 Ω.
	AMI	120 ohm	Usually not used; contact your telecommunication engineer to learn which coding is used.

Tab. 5: Trunk settings E1 (Europe)

Protocol settings

1. Configure the protocol settings as follows:

Signaling protocol	Description
NONE	PCM30 without D-channel

Tab. 6: Protocol settings (Europe)

- Click on the button *Apply* to apply the changes.
- 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.

- 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.

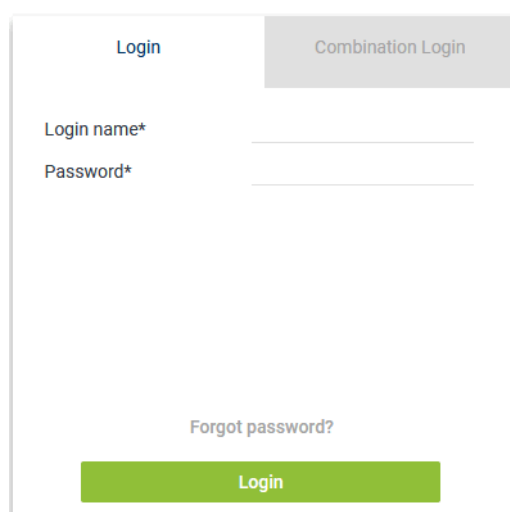


Fig. 6: System Configuration - web interface

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>
	<p>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.</p> <p>If the default password has already been changed before a software update to a <i>neo</i> version ≥ 6.3, the changed password remains.</p>

neo version ≥ 6.3

Default password: A\$c123

Tab. 7: Login data - system provider

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

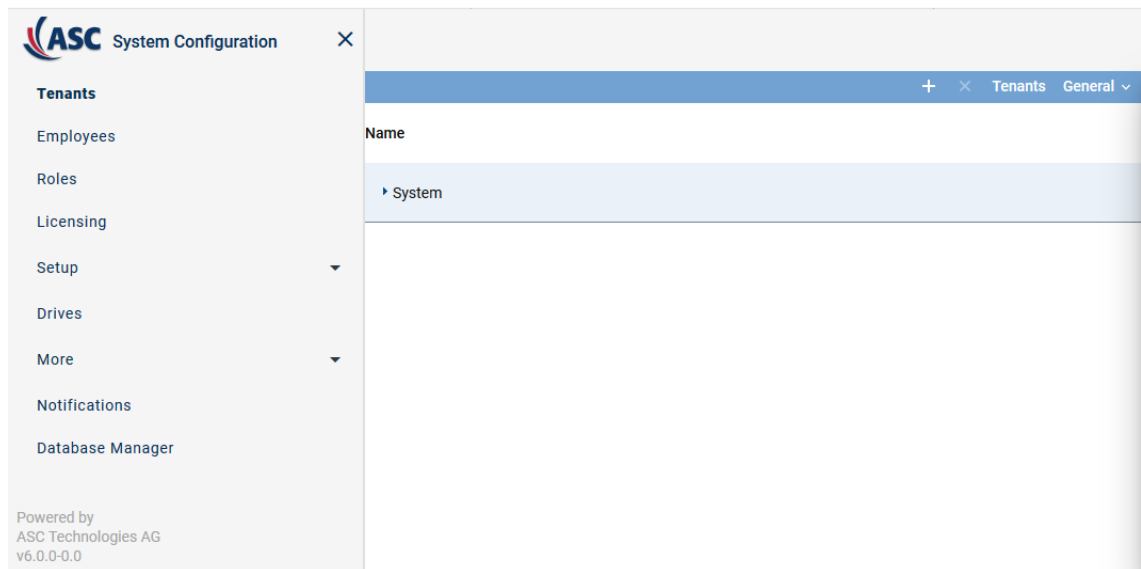


Fig. 7: System Configuration - main view:

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:

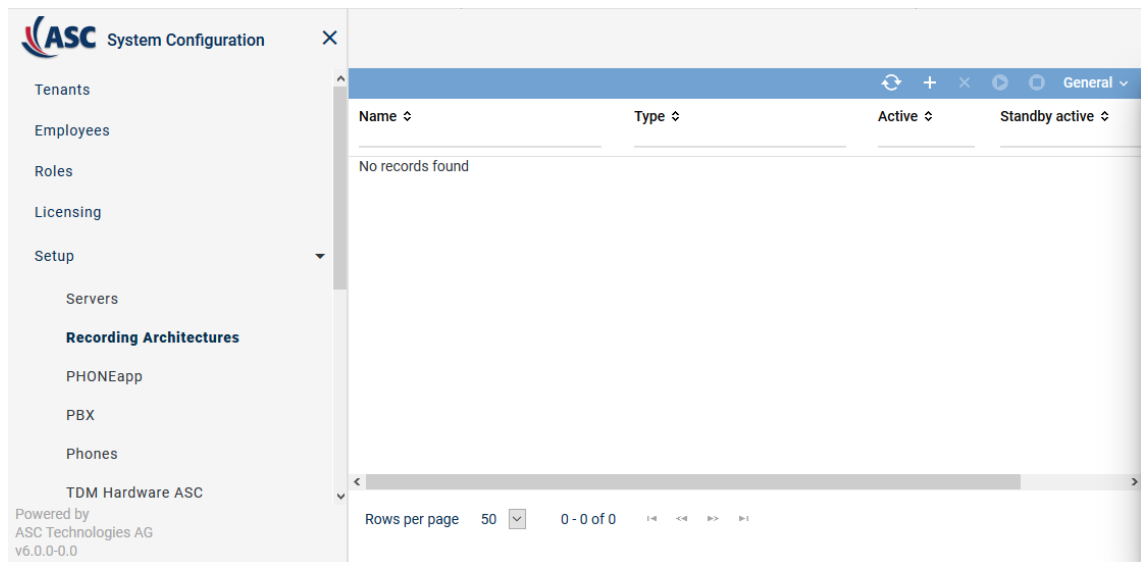




Fig. 8: Recording architectures - main view

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. <div> ✓ = Recording architecture is active and ready to be used for recording. It can be deactivated by clicking on the icon  (<i>Deactivate</i>) in the toolbar. ✗ = Recording architecture is not active. It can be activated by clicking on the icon  (<i>Activate</i>) in the toolbar. </div>
Standby Active	Shows whether the standby server is active for one or several recording components in the recording architecture. <div> ✓ = At least 1 standby server is active. ✗ = No standby server is active or no standby server has been defined. </div>
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.

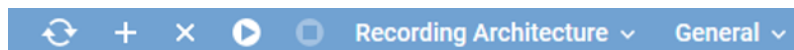







Fig. 9: Toolbar Recording Architectures module

	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.

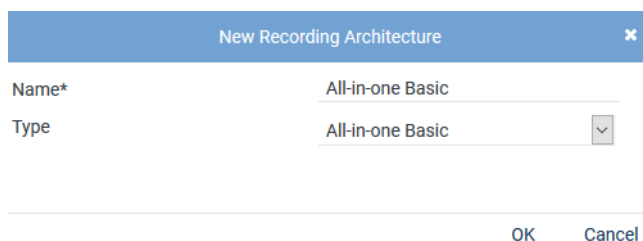
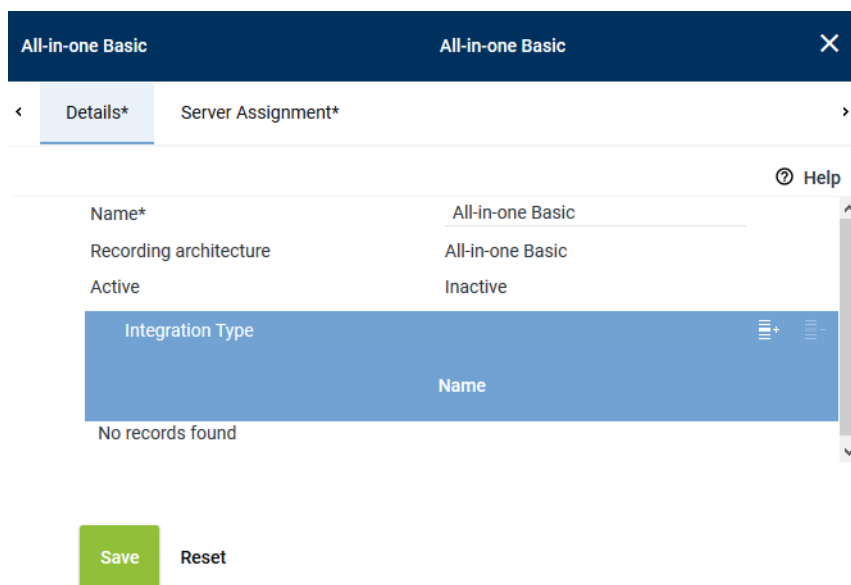


Fig. 10: Create recording architecture - All-in-one Basic Recording

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.




The screenshot shows a configuration window titled 'All-in-one Basic'. It has two tabs: 'Details*' (selected) and 'Server Assignment*'. The 'Details*' tab contains the following fields:

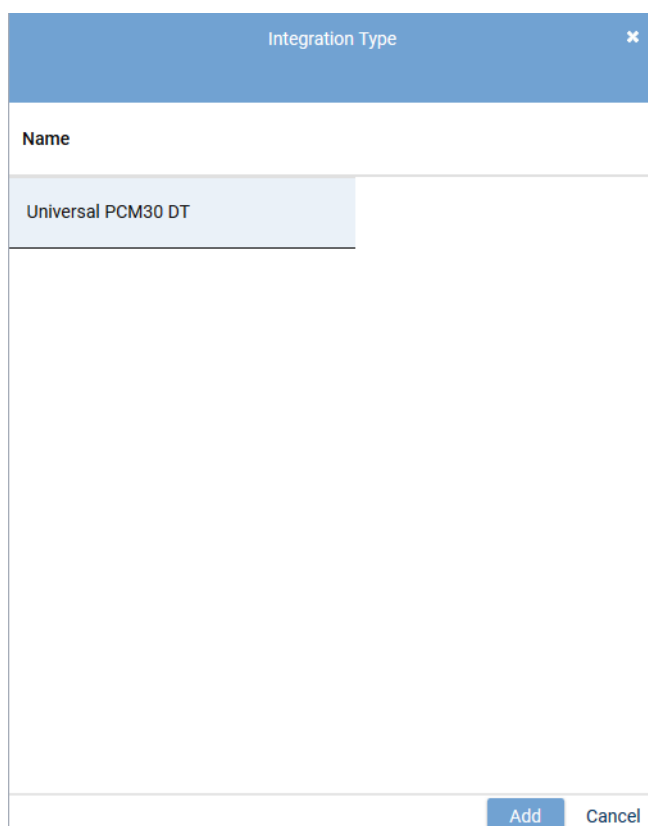
- Name***: All-in-one Basic
- Recording architecture**: All-in-one Basic
- Active**: Inactive

Below these fields is a table titled 'Integration Type' with a 'Name' column. The table is currently empty, showing 'No records found'. At the bottom of the window are two buttons: 'Save' (green) and 'Reset' (grey).

Fig. 11: 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.



The dialog box titled "Integration Type" has a close button (X) in the top right corner. Below the title bar is a section labeled "Name". Under this label, there is a list box containing the text "Universal PCM30 DT". At the bottom of the dialog, there are two buttons: "Add" and "Cancel".

Fig. 12: 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 PCM30 DT* 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.

All-in-one Basic

All-in-one Basic

×

Details*

Server Assignment*

Server*

REC-01

+

-

Used in activated architecture

No

Recording type

☐ VoIP/Video
☐ TDM
☐ Screen
☐ Chat

Save

Reset

Fig. 13: Recording Architecture - tab Server Assignment

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

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

Rows per page 20 ▾

1 - 8 of 8






Add

Cancel

Fig. 14: Recording Architecture - assign server

- 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.

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

Recording type

☐ VoIP/Video

☒ TDM

☐ Screen

☐ Chat

Save Reset

Fig. 15: 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 toolbar 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. 16: 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:

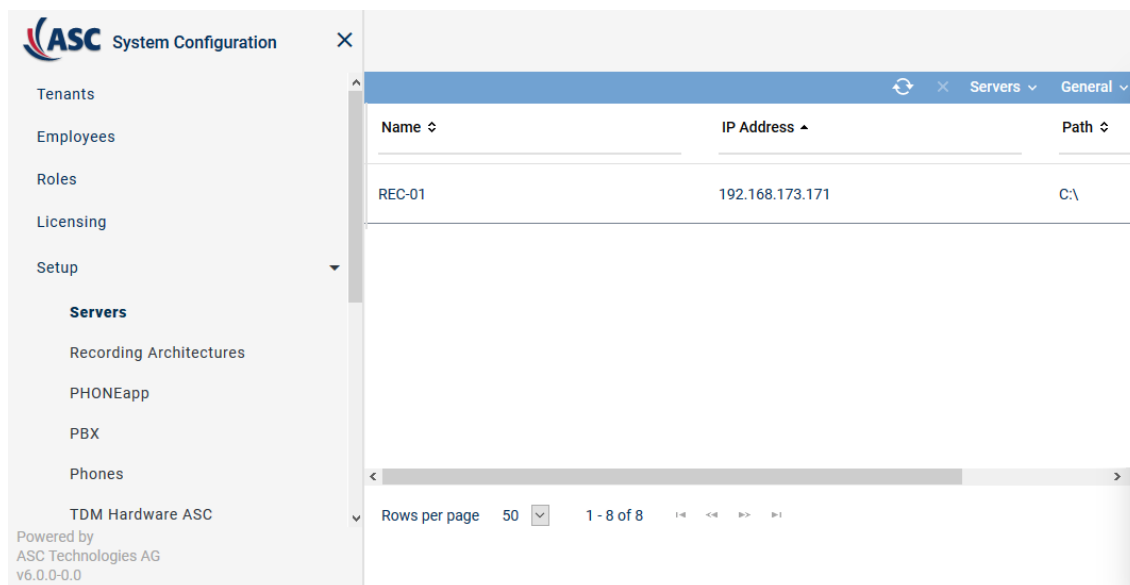


Fig. 17: Servers - main view

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. 18: 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. 22.
	<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. 38.
	<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

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

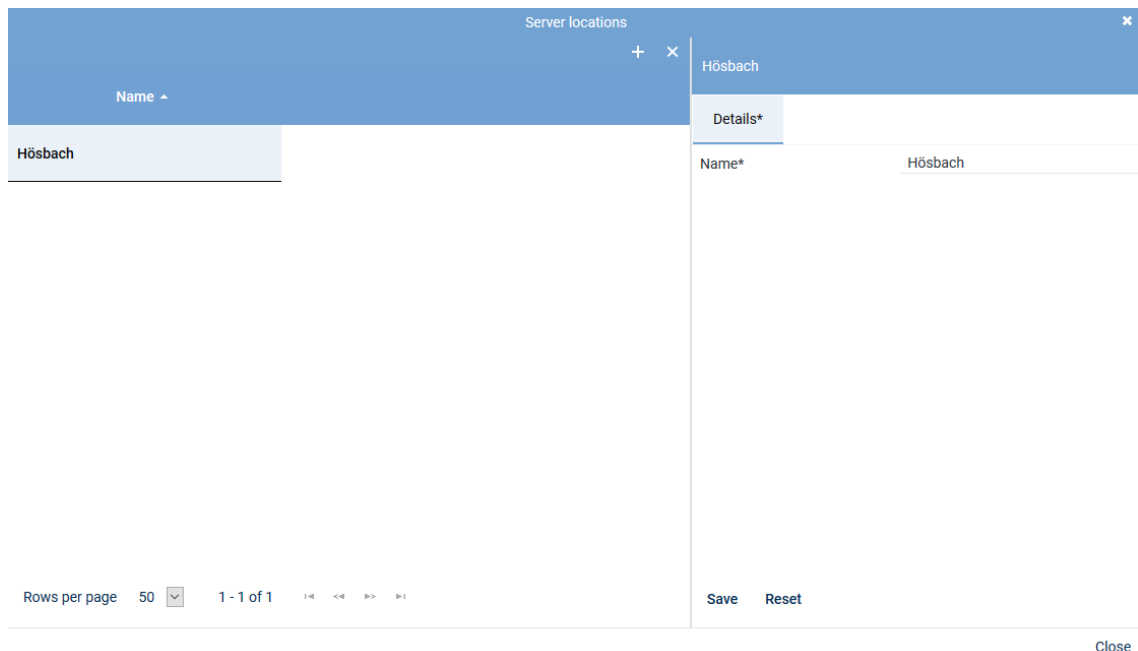



Fig. 19: Add server locations

- Click on the icon  (*Create*) in the toolbar of the window *Server Locations*.
- Enter the name of the location on the right side in the tab *Details*.
- To save the entry, click on the button *Save*.
To discard the entry, click on the button *Reset*.
- 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.

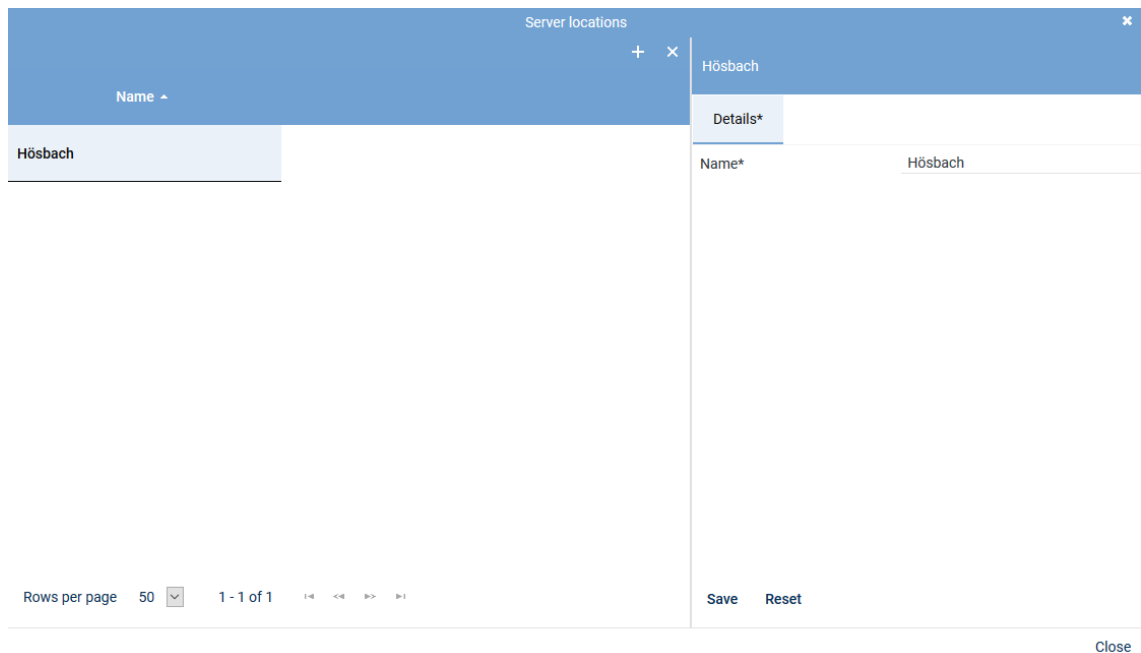



Fig. 20: Delete server location

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.

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

? Help

Name	REC-01
Configured IP address	192.168.173.171
IP address*	192.168.173.171 <input type="button" value="v"/>
Server location	Hörsbach <input type="button" value="v"/>

Fig. 21: Servers - tab Details

- From the drop-down list, select the IP address which is supposed to be used as default address of the server in the system.
- 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.

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

API Server	▶
Audio Analysis	▶
Recording Control/Key Management	▶
Data Processing	▶
Replay	▶
Virtualization	▶

Fig. 22: Servers - tab Usage

Group field API Server

API Server

☒ API server

API server name* API Server 1

Storage expansions

Path	Server



No records found

☒ Replay via phone

Fig. 23: 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	<p>Tick the check box to start the API server.</p> <p><input checked="" type="checkbox"/> = Function has been activated. You have to complete the entry field <i>API server</i>.</p> <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. 34.</p>
API server name	<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>
List Storage expansions	<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. 26. 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>

Parameter	Value/Description
<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. <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. 33. 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.

Storage Expansion for Replay				
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. 24: 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* + -

☐ Emotion detection

Stream audio data from* + -

Fig. 25: Group field Audio Analysis

Parameters	Value/Description
<i>Audio analysis</i>	<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 +.
<i>Emotion detection</i>	<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> <p><input type="checkbox"/> = Function has not been activated.</p>

Tab. 8: Configure audio analysis

Group field Recording Control/Key Management

Recording Control/Key Management ▼

☒ Recording control/Monitoring

Recording architecture ▼

☒ neo key management

Fig. 26: 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 <u>CLIENT</u><i>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 <code>ASC_KEY_MANAGEMENT</code> is available.</p>

Parameters	Value/Description
	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> .

Tab. 9: 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. 27: 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  (Add), you can add the target server, see chapter "Add target server to a list", p. 30. By clicking on the icon  (Remove), 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>

Parameter	Value/Description
<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> <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. 30. 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 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>	<p>Activate the check box <i>Archiving</i> if you would like to use the server for archiving purposes.</p>
<i>Export</i>	<p>Activate the check box <i>Export</i> to allow the export from this server.</p>
<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. 10: Configure data storage

Add target server to a list

1. In the toolbar of the list *Target Server*, click on the icon  (Add).
2. 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

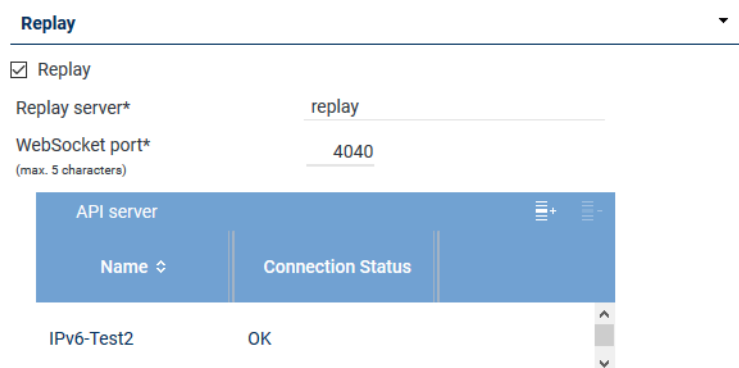
Fig. 28: Select server



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

3. 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* replay

WebSocket port* 4040
(max. 5 characters)

Name	Connection Status
IPv6-Test2	OK

Fig. 29: Group field Replay

Parameter	Value/Description
Replay	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.

Parameter	Value/Description
	<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>
<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</i> (maximum of 5 characters)	Enter the port via which the data to be replayed in POWERplay Web are supposed to be transmitted.
<i>List</i> <i>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. 31. By clicking on the icon  (<i>Remove</i>), you can remove selected API servers from the list.

Tab. 11: 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.
1. To assign an **API** server, click on the icon  (*Add*) in the toolbar of the list *API Server*.
 2. Select the server from the list on which the **API** service is running.



Fig. 30: Select server



Only those servers are available on which the **API** service has been installed and activated. See [chapter "Group field API Server", p. 25](#).

3. 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

Virtualization 

☐ VM support

Fig. 31: 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. 12: 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.

1. 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.

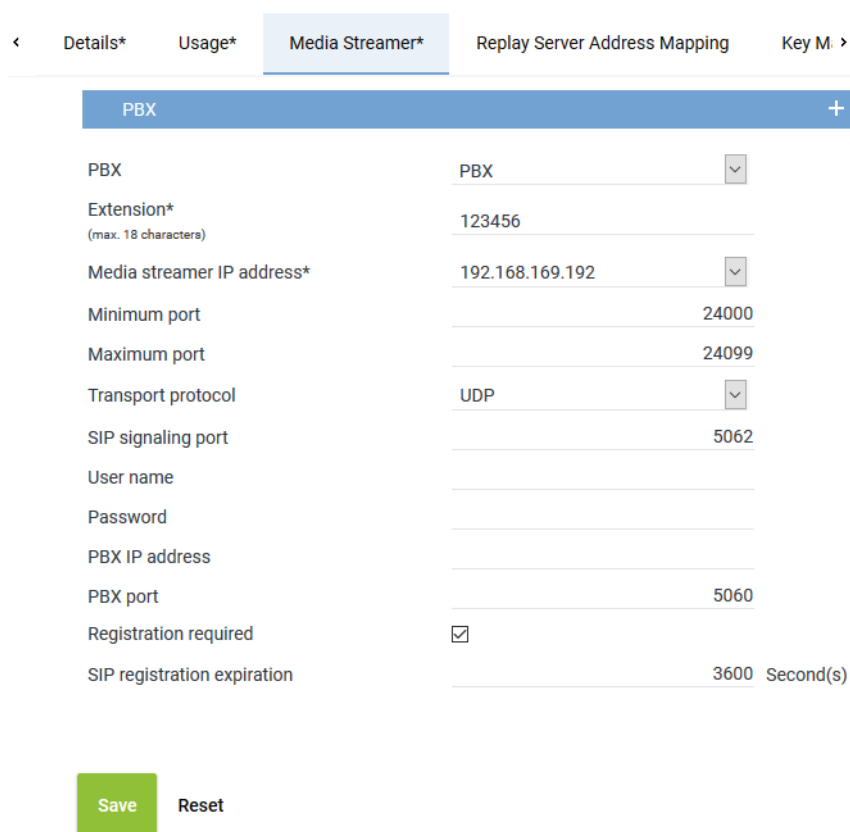
Tab Media Streamer

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*.



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

PBX +

PBX	PBX	
Extension* (max. 18 characters)	123456	
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. 32: 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. 39.</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>

<i>Media streamer IP address</i>	<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>	<p>Enter the maximum port which is supposed to be used for the audio data exchange.</p> <p>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.</p>
<i>Transport protocol</i>	<p>Select the transport protocol type you would like to use for the SIP communication from the drop-down list.</p> <p>TCP = unencrypted UDP = unencrypted TLS = encrypted</p> <p>If an external analog gateway has been integrated, select UDP in the drop-down list.</p>
<i>SIP signaling port</i>	<p>Enter the port for the SIP communication.</p> <p>Port for data exchange: 5062</p>
<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>	<p>Enter the IP address of the SIP registrar of the PBX.</p> <p>If an external analog gateway has been integrated, enter the IP address 169.254.254.101.</p>
<i>PBX port</i>	<p>Enter the port of the SIP registrar of the PBX.</p> <p>If an external analog gateway has been integrated, enter the value 5060.</p>
<i>Registration required</i>	<p>Select whether the SIP extension has to be registered with the SIP registrar of the PBX.</p> <p><input checked="" type="checkbox"/> = SIP extension has to be registered. <input type="checkbox"/> = SIP extension does not have to be registered.</p> <p>If an external analog gateway has been integrated, deactivate the check box Registration required.</p>
<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*.

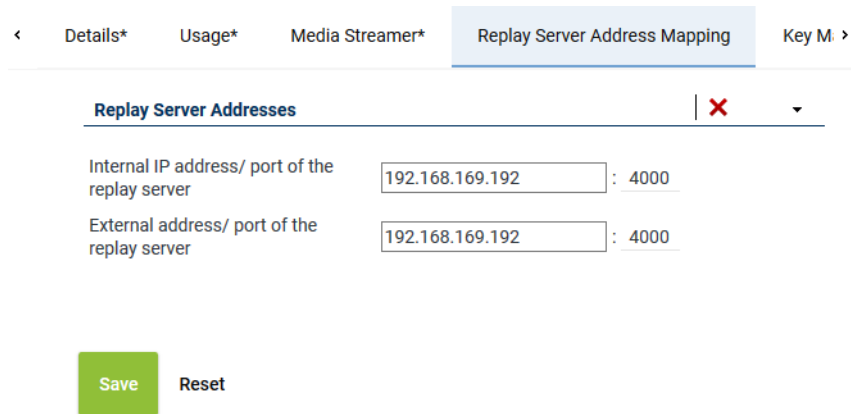


Fig. 33: Servers Module - tab Replay Server Address Mapping

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. 34: 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.

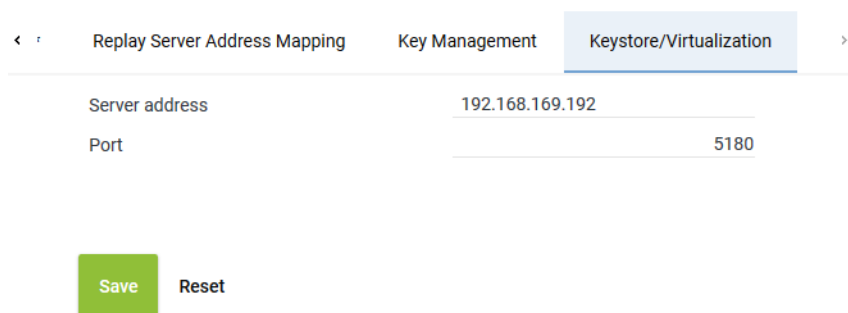
In this tab, you can configure the connection data for the service *DongleMan* for the neo key management and for the authentication of the VM.



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. 35: 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.

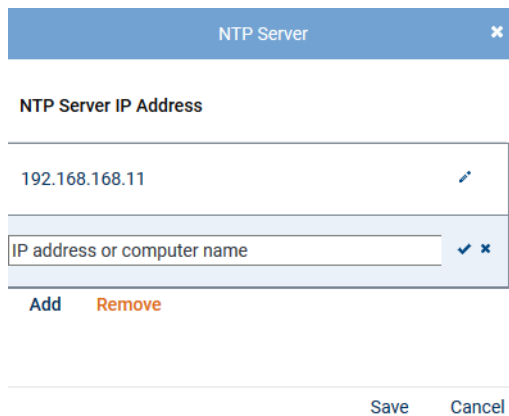





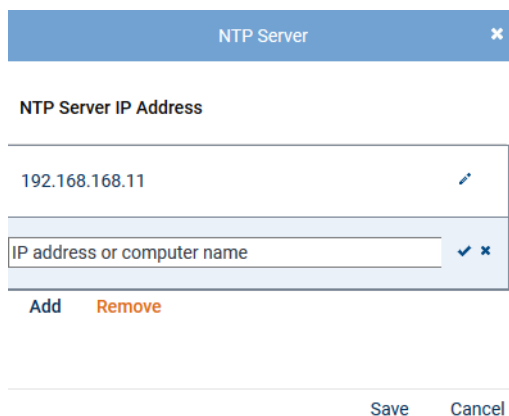
Fig. 36: Add NTP server

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

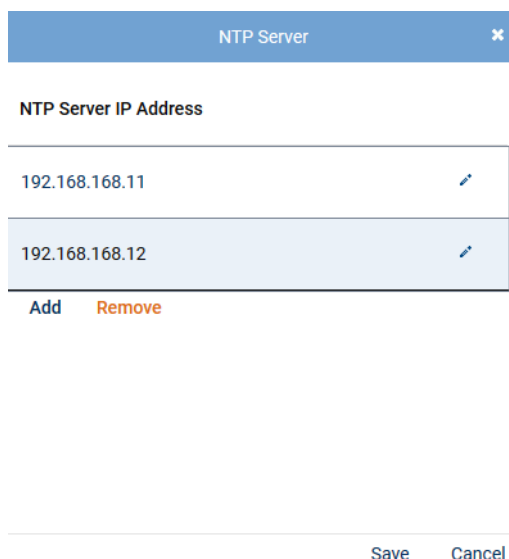
Save Cancel

Fig. 37: 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. 38: 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:

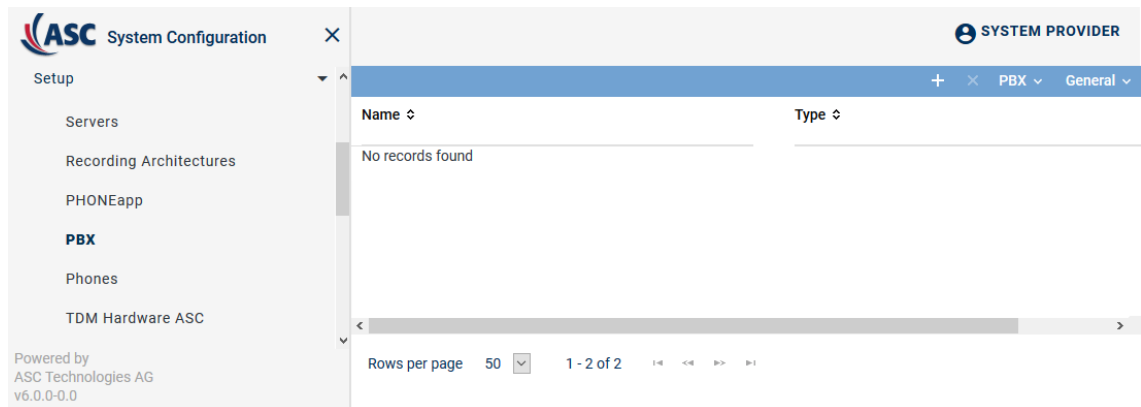




Fig. 39: Create new PBX

Toolbar of the PBX module

The toolbar offers the following functions.



Fig. 40: 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.

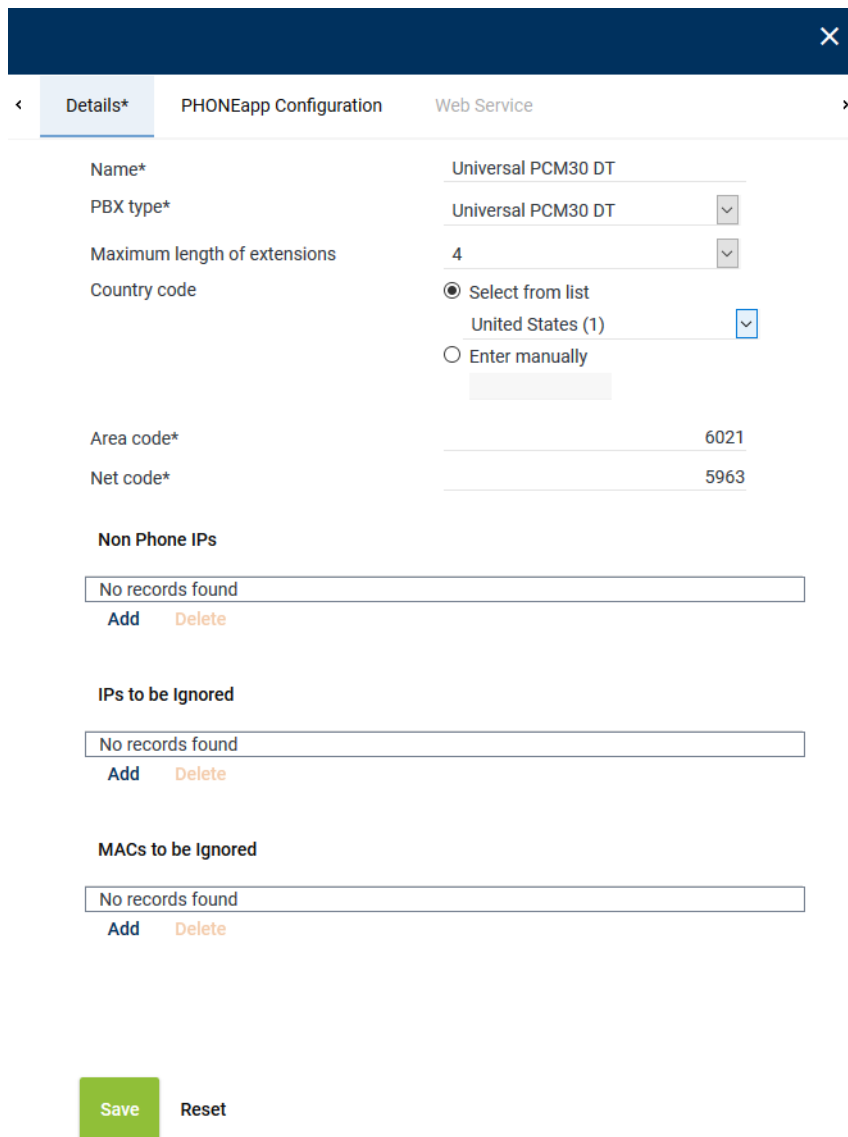


Fig. 41: Create new PBX - tab Details

2. 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. 13: 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*.

- In the main view, select the PBX for which you would like to create the phones.
- 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:

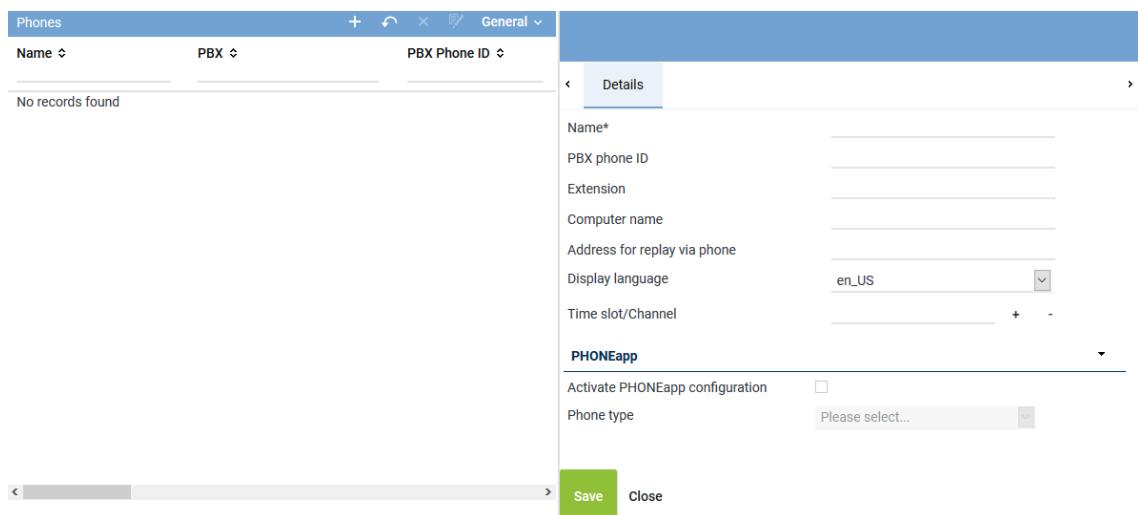


Fig. 42: Phone configuration

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. 43: 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.

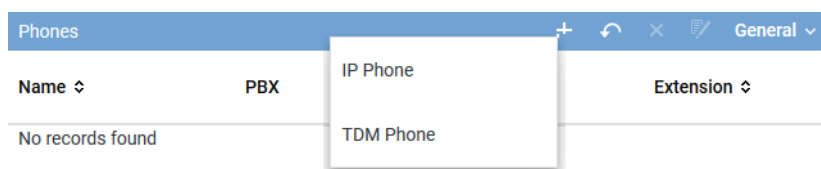


Fig. 44: Create phones Select phone type

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

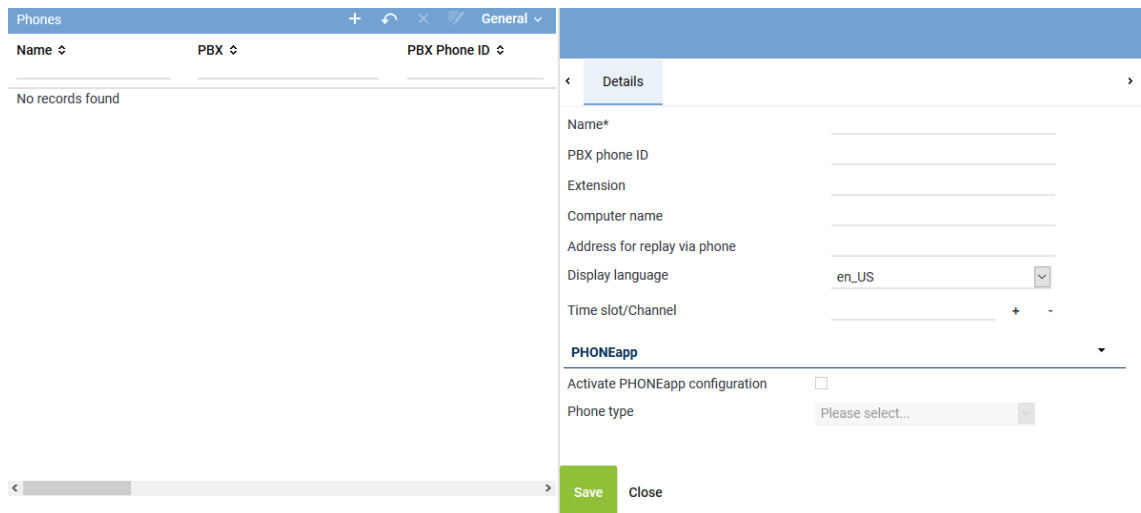


Fig. 45: Create phone

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>	The PBX phone ID is 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 this 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. NOTICE! In case of TDM recordings, use either the extension or the complete phone number as address type. For further information about this function refer to the administration manual <i>Configuration Replay via phone</i> .
<i>Display language</i>	This parameter is only relevant for the PHONE ^{app} .
<i>Phone type</i>	This parameter is only relevant for the PHONE ^{app} .
<i>Time slot/Channel</i>	Map the phone to a configured time slot. If the respective time slot has not been configured yet, the mapping can be carried out via the module TDM Hardware ASC, too. For analog or PCM30 interfaces the mapping of the phone to a time slot should be configured. In PRI recording, the time slots are mapped dynamically; that is why mapping is not necessary.

Tab. 14: 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 PHONEapp module

Parameter	Description
<i>Phone type</i>	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* 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.

Administrate Unused Extensions

Extension

Belongs to an active phone

Used in Recording

6001

Yes

123456

No

testipv6

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

Close

Rows per page

50

1 - 3 of 3

Last filtered on 10/12/2018 7:53:05 AM ; Number of records 3

Fig. 46: 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.

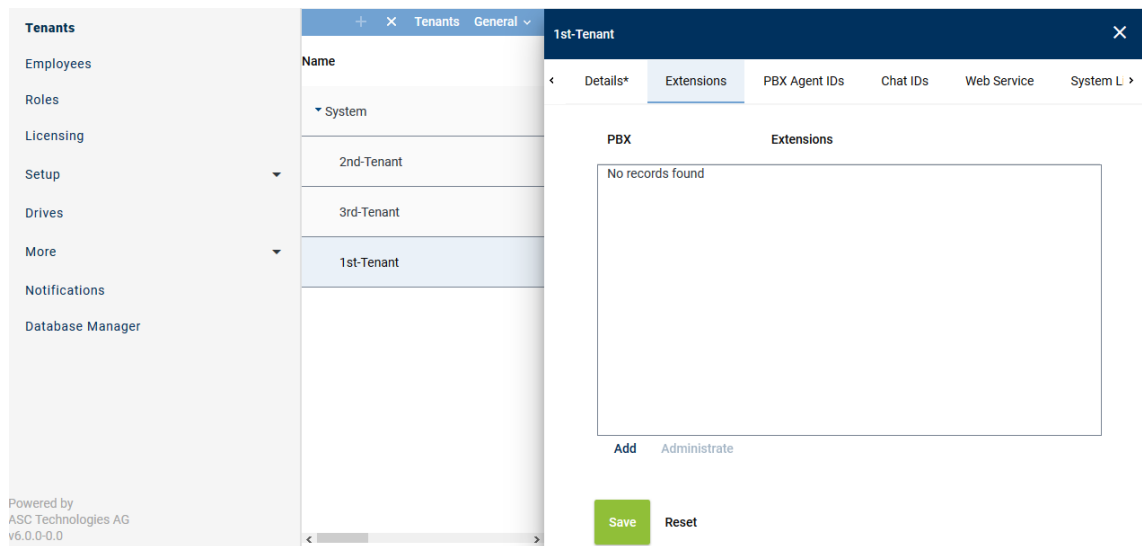


Fig. 47: Tenants - main view - tab Extensions

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:

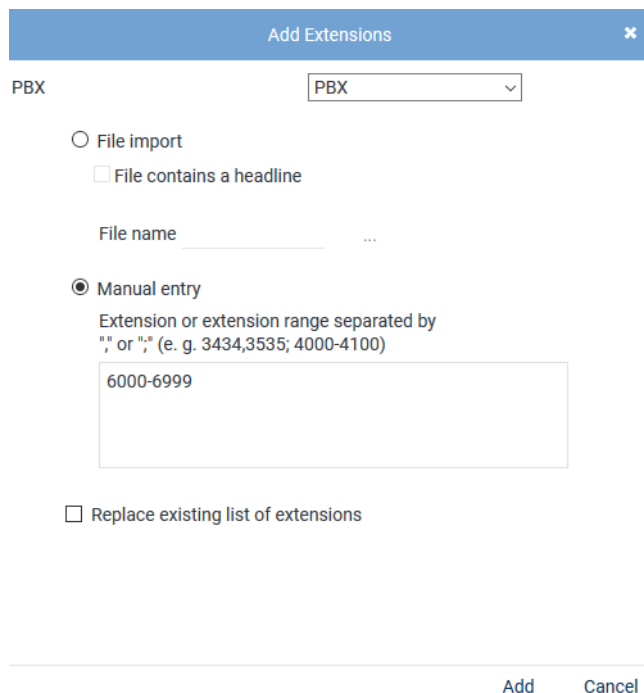




Fig. 48: Assign extensions to tenants

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

<i>File import</i>	Select this option to import extensions from an existing CSV file and add them to the table of extensions.
<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 extensions or extension ranges manually.</p> <p>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.</p> <p>You can separate the different extensions and extension ranges by the delimiters indicated in the screenshot.</p> <p>NOTICE! Wildcards cannot be used!</p>
<i>Replace existing list of extensions</i>	<p>Activate the check box to replace the list of extensions.</p> <p><input checked="" type="checkbox"/> = Function has been activated; the entry replaces the extensions of the selected PBX.</p> <p><input type="checkbox"/> = Function has not been activated; the configured extensions of all PBXs are kept and the new extensions are added to the selected PBX.</p>

- Click on the button *Add*.
 - ⇒ The extensions are added in the table of extensions.
- 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 extensions now appear in the detail view.
- Click on the button *Save* in the detail view to save the entries.

Remove extensions

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

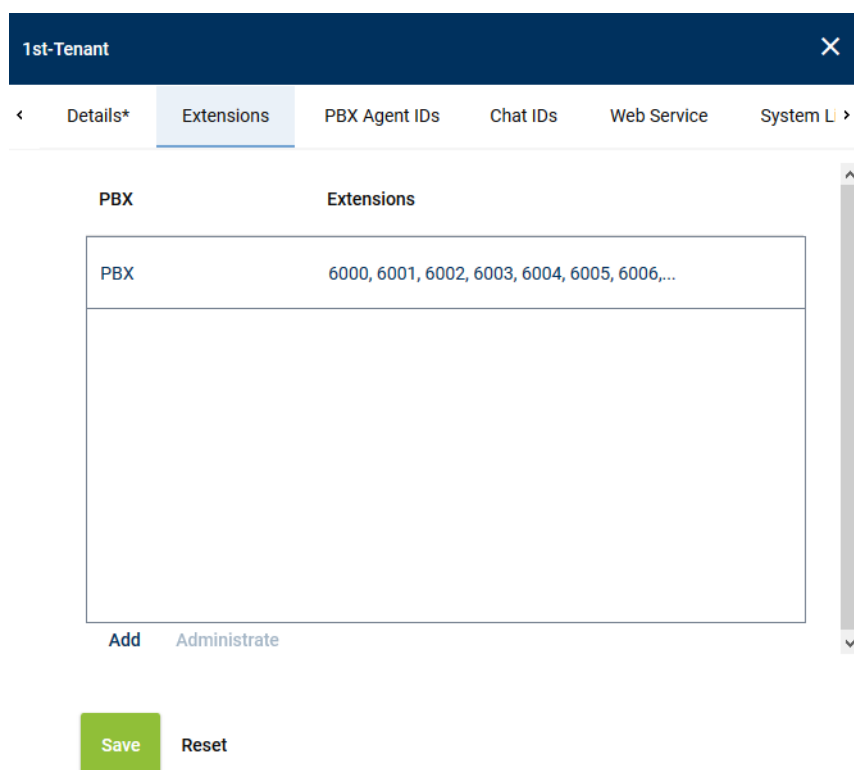


Fig. 49: Remove extensions

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. 50: 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.

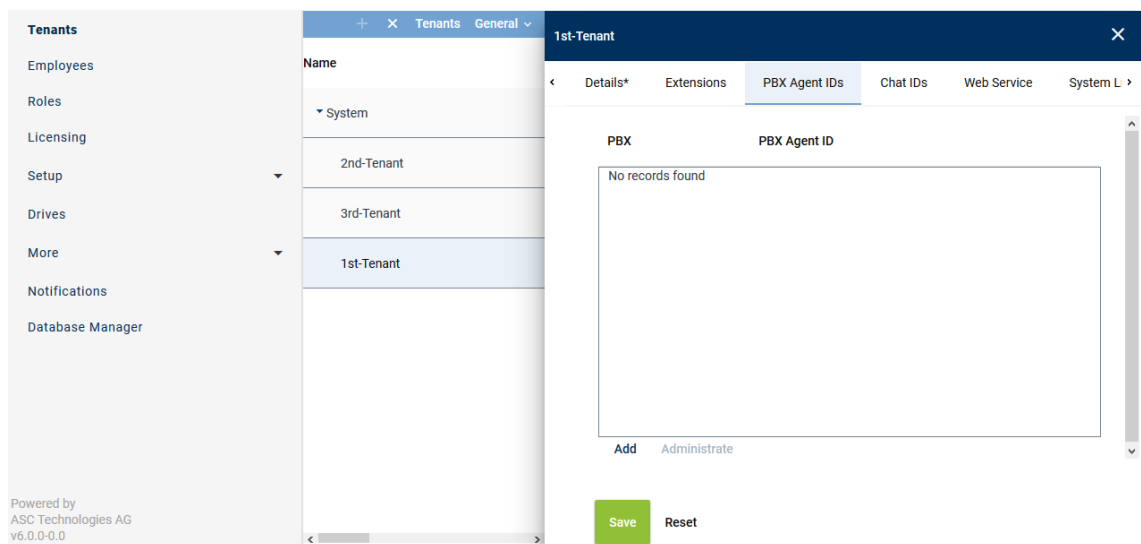


Fig. 51: Tenants - main view - tab PBX Agent ID

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:

Add PBX Agent IDs
✕

PBX

PBX ▾

☐ File import

☐ File contains a headline

File name ...

☒ Manual entry

PBX Agent IDs separated by ";" or ":"

427agent1,427agent2

☐ Replace existing list of PBX Agent IDs

Add
Cancel

Fig. 52: 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>	<p>Select this option to import the PBX Agent IDs from an existing CSV file and add them to the table of PBX Agent IDs.</p>
	<p><i>File contains a headline</i></p> <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 CVS 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>

5. Click on the button *Add*.
⇒ The PBX Agent IDs are added to the table of PBX Agent IDs.
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 PBX Agent IDs now appear in the detail view.
8. Click on the button *Save* in the detail view to save the entries.

Remove PBX Agent ID

1. In the list, select the **PBX** for which you would like to remove the assigned PBX Agent IDs.
2. Click the button *Administrate*.
3. 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.

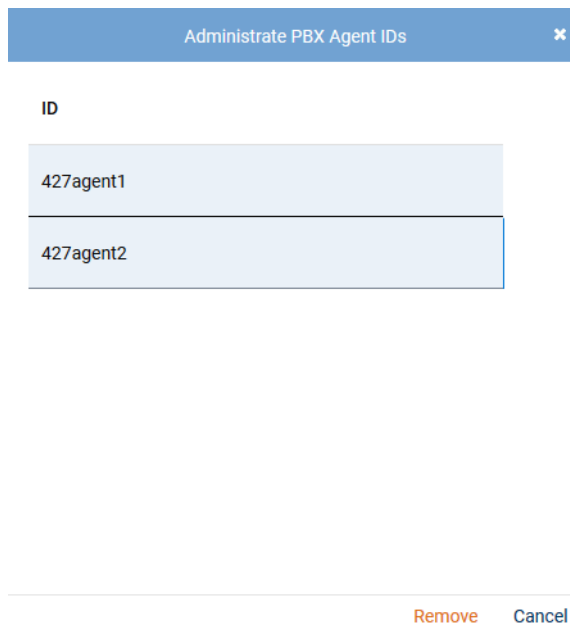


Fig. 53: Select PBX Agent IDs

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.

- *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.



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:

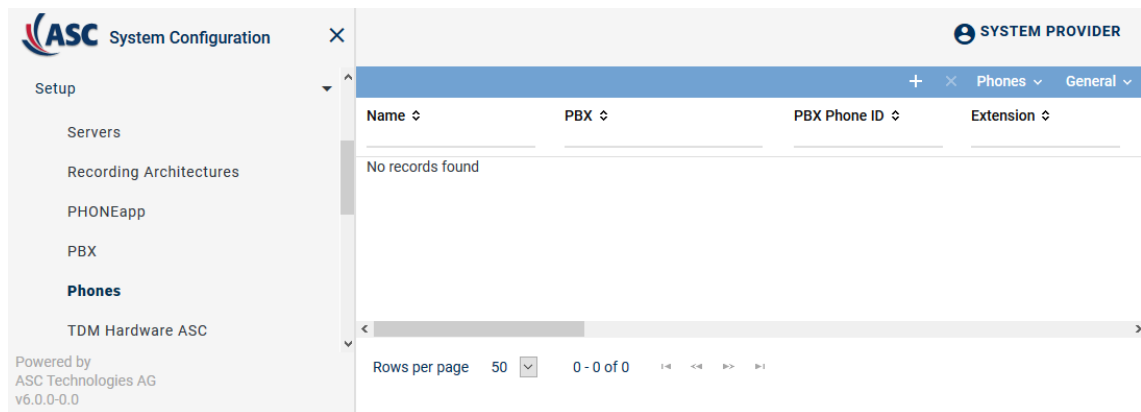


Fig. 54: Phones - main view

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 PHONEapp configuration has been activated.
<i>Display Language</i>	Shows the selected display language.

Toolbar of the Phones module

The toolbar offers the following functions.




Fig. 55: Toolbar

	<i>Create</i>	Create a new phone. Available are <ul style="list-style-type: none"> • IP phone • TDM phone
	<i>Delete</i>	Deletes the selected phone upon confirming the security prompt.
<i>Phones</i>	<i>Import</i>	Opens a window in which you can select an XSLT file to be imported.
	<i>Edit</i>	Allows multiple editing of existing phones.
<i>General</i>	<i>Print</i>	Opens a list of existing phones along with the option to print it.
	<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"> • Displayed information • Order of the displayed columns • Number of rows per page
<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.

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.

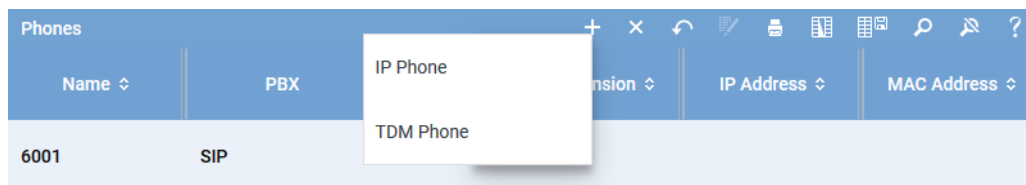


Fig. 56: Create phone

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

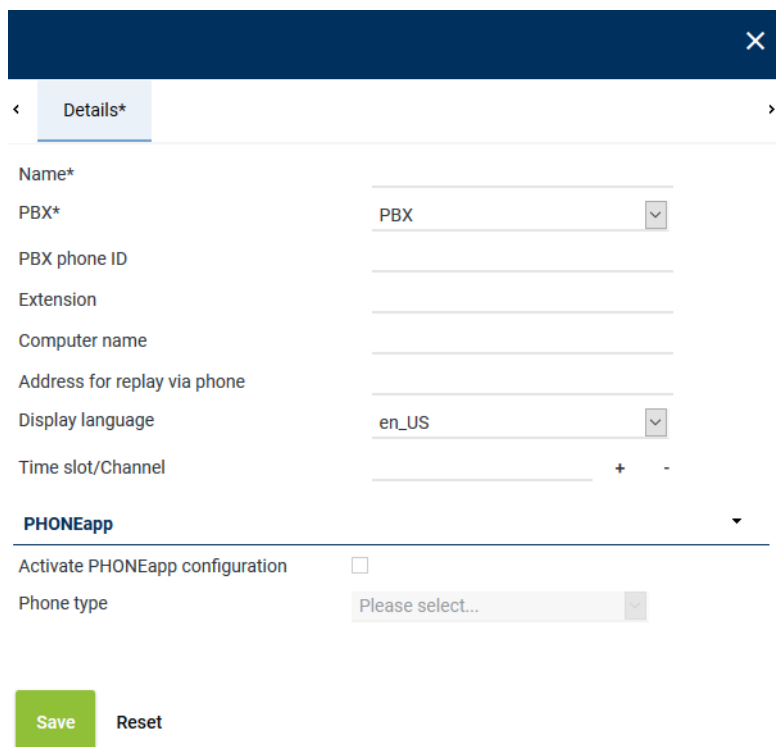


Fig. 57: Create phone

3. Enter the following parameters:

Parameter	Value/Description
<i>Name</i>	This name is used as the identifier of the phone in the system.
<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>	The PBX phone ID is not used in this recording solution.
<i>Extension</i>	Enter the extension of the phone. Alternatively, the extension can have a descriptive name which will then be displayed in the players (e. g. Emergency call 1, Dispatcher 2).
<i>Computer name</i>	Optional mapping of the computer for SCREEN ^{rec} or CLIENT- <u>command</u> . This option cannot be used in this 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>Phone type</i>	This parameter is only relevant for the PHONE ^{app} .
<i>Time Slot/Channel</i>	Statically map the phone to a configured time slot. If the respective time slot has not been configured yet, the mapping can be carried out via the module TDM Hardware Others, too. It is necessary to assign the phone to a time slot in order to display the recorded extension during replay.

Tab. 15: 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
<i>Phone type</i>	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.



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. 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.

- To really delete the selected phone, confirm the security prompt.

6.2.2.1.6 Configure TDM Hardware Others

The “PCM30 DT” recording cards which have been configured in the application SmartControl have to be configured for recording in the module TDM Hardware Others.



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 the icon  (*Replace*). For further information refer to the respective service manual of EVOLUTION_{neo}, EVOLUTION_{neo} eco or EVOLUTION_{neo} XXL.

- Select the menu item *Setup > TDM Hardware Others* in the navigation bar.

⇒ The following window appears:

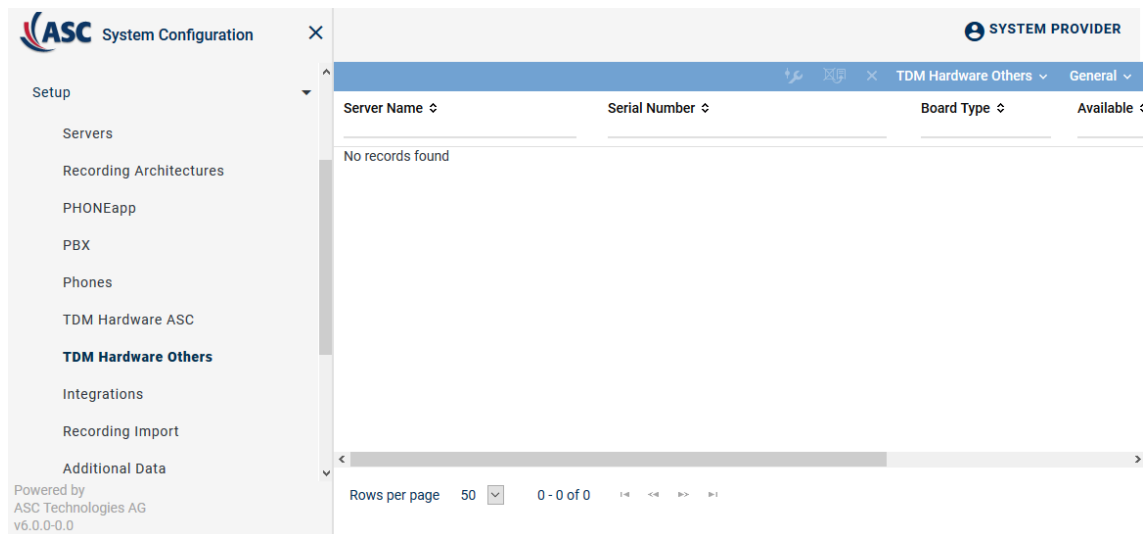







Fig. 58: TDM Hardware Others - main view

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. *PBX 1, phones 1-96*.

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

Detail view

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

SmartTERM DT6409TE Dual E1

×

Details

Server name

REC-01

Serial number

4047

Firmware version

3.11.1024

Board type

PCM30 DT

Board information

SmartTERM DT6409TE Dual E1

DSP type

DSP_5409

Signal channel disconnect

☒

Creation interval for packages

0

Hour(s)

10

Minute(s)

0

Second(s)

Comment

Save

Reset

Fig. 59: TDM Hardware Others - configure settings

Server name	Shows the name of the server in which the recording card has been inserted.
Serial number	Shows the serial number of the DT card.
Firmware version	Shows the version of the firmware.
Board type	Shows the type of the recording card.
Board information	Shows information about the recording card.
DSP type	Shows the type of the installed DSP module.

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


Parameter	Value/Description
Signal channel disconnect	<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>

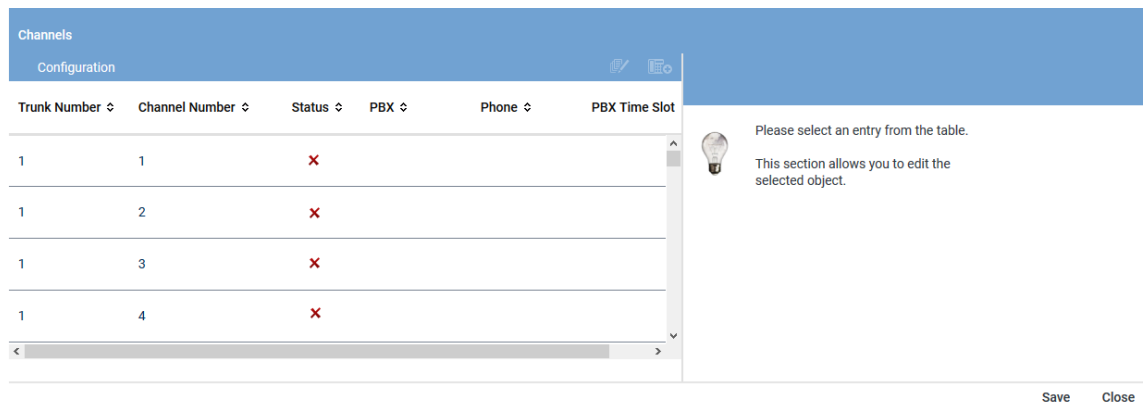
Parameter	Value/Description
<i>Creation interval for packages</i>	Enter the interval after which the running recording is to be written into the database. The interval defines the moment when the recording can be replayed at the earliest. The parameter impacts the system load. The shorter the interval, the higher the CPU load.
<i>Comment</i>	Here, you can describe the purpose of the interface, e. g. <i>PBX 1, phones 1-96</i> .

Tab. 16: 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	X			
1	2	X			
1	3	X			
1	4	X			

Fig. 60: TDM Hardware Others - administrate channels

The following information is displayed:

<i>Trunk Number</i>	Shows the card's respective trunk.
<i>Channel Number</i>	Shows the number of the channel on the respective trunk.
<i>Status</i>	Shows whether the channel has been configured and can be recorded. = Channel has been configured. = Channel has not been configured.
<i>PBX</i>	Shows the PBX on which this time slot is supposed to be recorded. Assignment depends on the cabling.
<i>Phone</i>	Shows the phone which has been assigned to the time slot which is to be recorded. Assignment depends on the cabling.
<i>PBX Time Slot</i>	Shows the time slot that the PBX is connected to. Adjustment is required for some CTI <u>connect</u> applications.

Tab. 17: Administrate 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	B-Channel Signaling	Trigger*
Channel number		1	
Trunk number		1	
Activate channel		<input checked="" type="checkbox"/>	

PBX
+

PBX

PCM 30 DT

Phone

+
-

PBX time slot

OK
Reset

Save
Close

Fig. 61: TDM Hardware Others - configure channel

The following information is displayed:

<i>Channel number</i>	Shows the number of the channel on the PCM30 trunk. The channel number is counted up automatically.
<i>Trunk number</i>	Shows the number of the PCM30 trunk line on the recording card. The trunk number is assigned automatically.

2. Enter the following parameter:

Parameter	Value/Description
<i>Activate channel</i>	Activate the check box to use this channel. = Channel has been activated.

Tab. 18: 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 [chapter "Create PBX", p. 39](#).

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

Parameter	Value/Description
<i>PBX</i>	Select the created PBX from the drop-down list.
<i>Phone</i>	Click on the button + behind the entry field to select a phone.
<i>PBX time slot</i>	Enter the time slot that the PBX is connected to. This assignment is only necessary for CTI connect applications.

Tab. 19: Select PBX

2. Click on the button OK.

Tab **Recording**

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

T1:CH01

Channel	Recording	B-Channel Signaling	Trigger*
<div style="display: flex; justify-content: space-between;"> <div> <p>Compression type G.711 A-Law 64 kbit/s ▾</p> <p>Stereo <input type="checkbox"/></p> <p>Activate AGC <input checked="" type="checkbox"/></p> </div> <div style="text-align: right;"> <p>OK Reset</p> </div> </div>			

[Save](#) [Close](#)

Fig. 62: TDM Hardware Others - recording settings

2. Enter the following parameters:

Parameter	Value/Description
Compression type	Select the compression type from the drop-down list. The following compressions are available: <ul style="list-style-type: none"> G.711 A-law - European telephony standard (uncompressed 64 kbit/s) Audio data recorded with G.711 can be compressed subsequently on the data drive with G.729A. G.711 μ-law - US-American telephony standard (uncompressed 64 kbit/s) G.726 ADPCM compressing for 16/24/32/40 kbit/s
Stereo	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.
Activate AGC	Activates automatic gain control (AGC) to improve recording quality.

Tab. 20: Configure recording settings

3. Click on the button *OK*.

Tab B-Channel Signaling

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

⇒ The following setting options appear in the detail view:

T1:CH01

Channel
Recording
B-Channel Signaling
Trigger*

☒ Enable DTMF detection

OK
Reset

Save
Close

Fig. 63: 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-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).</p>

Tab. 21: Configure B-channel signaling

3. Click on the button *OK*.

Tab Trigger

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

T1:CH01

Channel
Recording
B-Channel Signaling
Trigger*

Pre-trigger* 2000 ms

☒ No selection
☐ Continuous recording
☐ VOX detection

OK
Reset

Save
Close

Fig. 64: TDM Hardware Others - configure trigger

2. 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 CTI ^{connect} .
<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. 62 .

Tab. 22: Configure trigger

3. Select the option for the respective trigger:
4. For the triggers *No selection* and *Continuous recording* no configuration is required.
5. For the trigger *VOX detection*, see [chapter "VOX detection", p. 62](#).
6. Click on the button OK.
7. Click on the button Save to save the settings before selecting another channel to be configured.

VOX detection

When selecting the trigger **VOX** detection, the following parameters appear:

T1:CH01

Channel
Recording
B-Channel Signaling
Trigger*

Pre-trigger* 2000 ms

☐ No selection
☐ Continuous recording
☒ VOX detection

Min. VOX time* 1000 ms

Post time* 8000 ms

Level* 12 dB

OK
Reset

Save Close

Fig. 65: Configure VOX detection

1. Enter the following parameters:

Parameter	Value/Description
Pre-trigger	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.
Min. VOX time	Enter the period of time a level has to be maintained at least for a start trigger to be initiated for a recording.
Post time	Enter the period of time no level has to be detected for a recording to be finished.
Level	Enter the level in dB which has to be exceeded for a call to be detected.

Tab. 23: Configure VOX detection

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

Configure several channels at once

1. 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.

Channels					
Configuration					
Trunk Number ↕	Channel Number ↕	Status ↕	PBX ↕	Phone ▲	PBX Time Slot ↕
1	10	✓	PCM 30 DT	Phone_1	
1	11	✓	PCM 30 DT	Phone_2	
1	12	✓	PCM 30 DT	Phone_3	
1	13	✓	PCM 30 DT	Phone_4	

Fig. 66: 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.

- Click on the icon  (*Start editing*) in the toolbar.

⇒ The following window appears:

Multiple Editing ✕

Details

☒ 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

☐ D-channel detection

OK



Cancel

Fig. 67: Multiple editing of the recording settings

4. Set the respective parameters according to the channel configuration, see [chapter "Configure channels", p. 58](#).
5. 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.

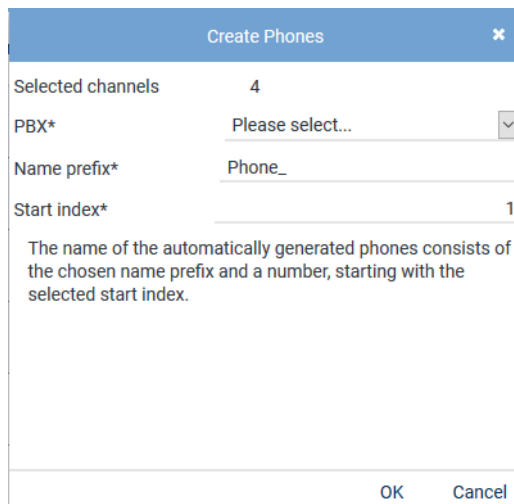


Fig. 68: Create phones

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. 24: 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.

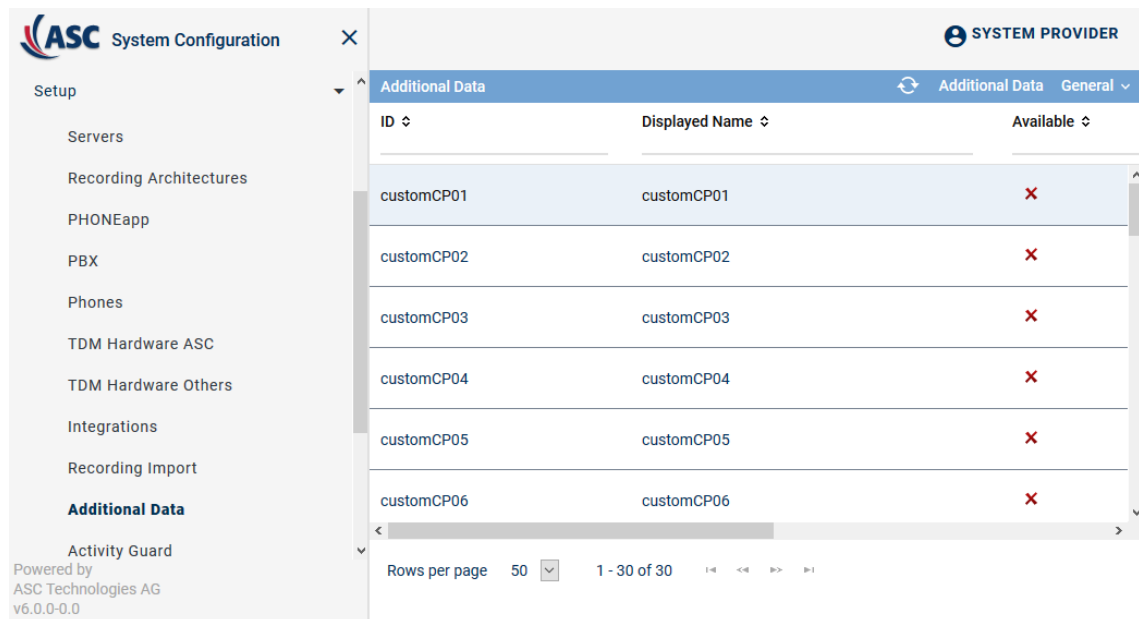


Fig. 69: Additional Data module main view

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. 70: 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. 71: 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:

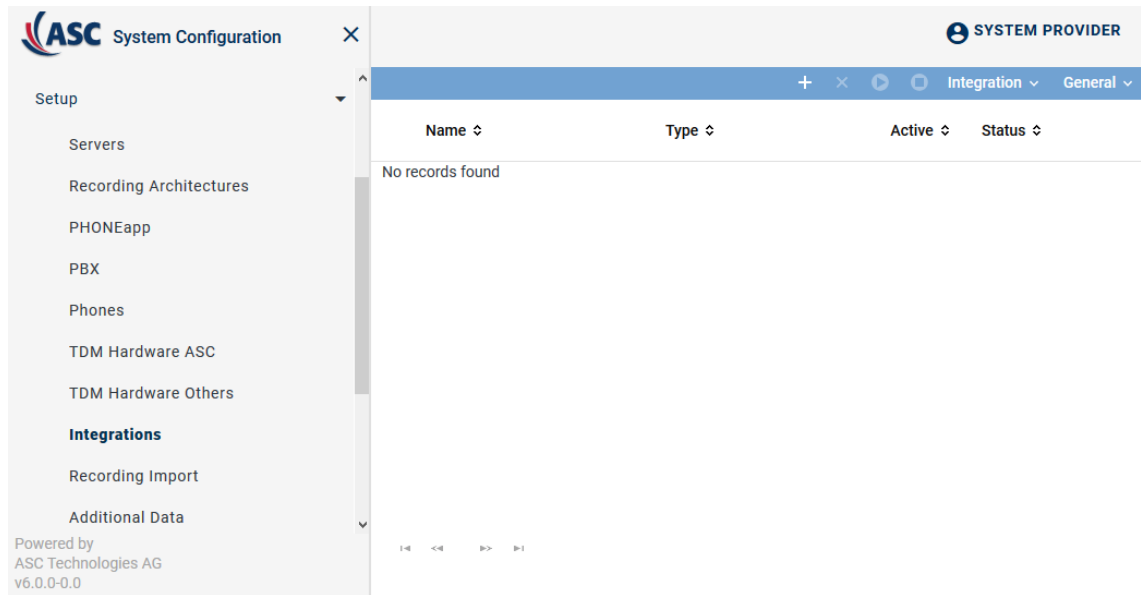




Fig. 72: Integrations - main view

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.

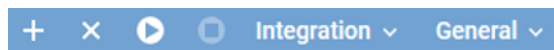






Fig. 73: Toolbar Integrations module

	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

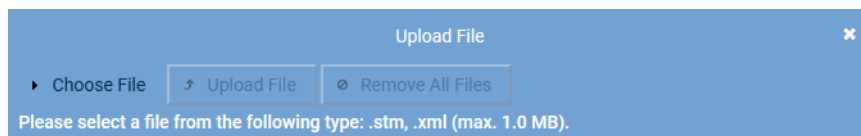
Depending on the deployed PBX, the conversation events are signaled differently.

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. 74: 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*.

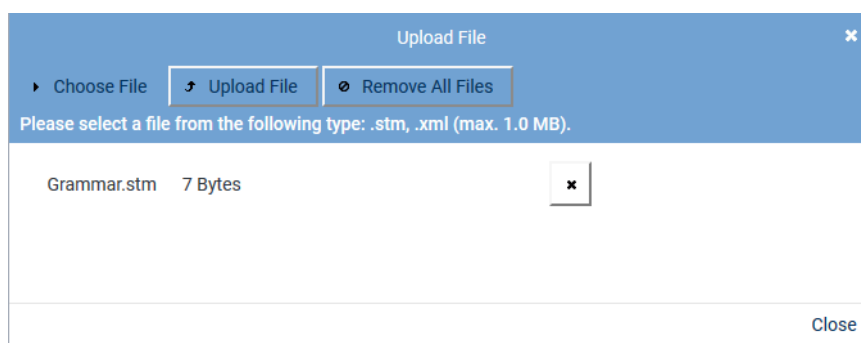




Fig. 75: Upload grammar

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. 76: 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*

PCM30 DT

Integration type*

Universal PCM30 DT

PBX

+

PBX*

+


-

Cancel

Back

Next

Fig. 77: Create integration type

2. Enter the following parameters:
3. To assign the PBX, click on the button  behind the field *PBX*.

⇒ The window *PBX* appears.



Name ↕	Type ↕
PCM30 DT	Universal PCM30 DT

Rows per page 20 1 - 1 of 1

Add Cancel

Fig. 78: Integrations - select PBX

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

Assign recording architecture for All-in-one Basic

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



New Integration

Integration Type Recording Architecture

Recording Architecture

Recording architecture* All-in-one Basic

Save Cancel Back Next

Fig. 79: Assign recording architecture - All-in-one Basic


2. 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:






PCM 30 DT		Universal PCM30 DT	X	
Step		Configuration		
Configure recording architecture		✓		
Activate channels		X		
Configure general settings		✓		

Fig. 80: 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. 81: 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.

Step: Activate Channels

TDM Hardware Others

Server Name	Serial Number
REC-01	0458

0458

Details

T2:CH06	✓
T2:CH07	✓
T2:CH08	✓
T3:CH01	✓
T3:CH02	✓

Activate

Deactivate

Save


Rows per page 50 1 - 1 of 1

Close

Fig. 82: Configuration step - activate channels

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

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.

Step: Miscellaneous Settings

Details

Dispatcher

Please select...

Save

Cancel

Fig. 83: 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*.









+ ×   Integration ▾ General ▾			
Name ↕	Type ↕	Active ↕	Status ↕
 PCM 30 DT	Universal PCM30 DT		

Fig. 84: Integration configured

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 ↕
 PCM 30 DT	Universal PCM30 DT		




Fig. 85: 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 ↕
 PCM 30 DT	Universal PCM30 DT		

Fig. 86: 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.

AMI

AMI code is a ternary coding technique to transmit digital signals.

API

Application Programming Interface

API server

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

CPU

Central Processing Unit

CRC

CRC stands for cyclic redundancy check and is an error-detecting code in telecommunications.

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.704

G.704 is an ITU-T standard for synchronous transmission of information.

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.

HDB3

HDB3 is a ternary coding technique to transmit digital signals. HDB3 is a modification of the AMI code.

IP

Internet Protocol, basic protocol for Internet communication

LBO

Line Build Out/Line termination

LCR

Last Conversation Repeat

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)

PCM30

Pulse code modulation, modulation type for digital transmission of phone calls standardized according to ITU G.703. The interface defines a trunk of 32 time slots which allow transmitting 30 digital audio channels encoded according to ITU G.711 in one direction. Time slot 0 and time slot 16 are used for synchronization and signaling purposes. (Source: Wikipedia 12th June 2018)

PRI

Primary Rate Interface An interface which allows to transmit 30 telephone conversations bidirectionally in 2 PCM30 channels. PRI interfaces are controlled via a D-channel protocol which is transmitted in time slot 16. Examples for this are EDSS1, DASS2, DPNSS, QSIG.

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

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

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.