

EVOIPneo passive for Mitel MiVoice MX-ONE trunk-side recording



Administration manual for system providers

10/16/2020

Product line neo, version 6.x

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

EVOIPneo

EVOLUTIONneo / XXL / eco

EVOflex (country-specific)

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

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1 General information

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2 Introduction

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



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

Recording solution Mitel MiVoice MX-ONE trunk-side recording

For version 6.6 or higher, the *neo* software offers a trunk-side recording solution. The passive sniffing of audio data on the *SIP* trunk of the Mitel MX-ONE PBX allows unencrypted recording of conversations of external participants and participants registered on the PBX. Only conversations made via the *SIP* trunk of the Mitel MX-ONE PBX are recorded.



A *SIP* trunk is limited to 500 concurrent recordings.

Direct monitoring of the Trunk Line Numbers (trunk ID) on the Mitel MX-ONE PBX provides call information from the *CSTA* protocol relevant for the recording decision and tagging.

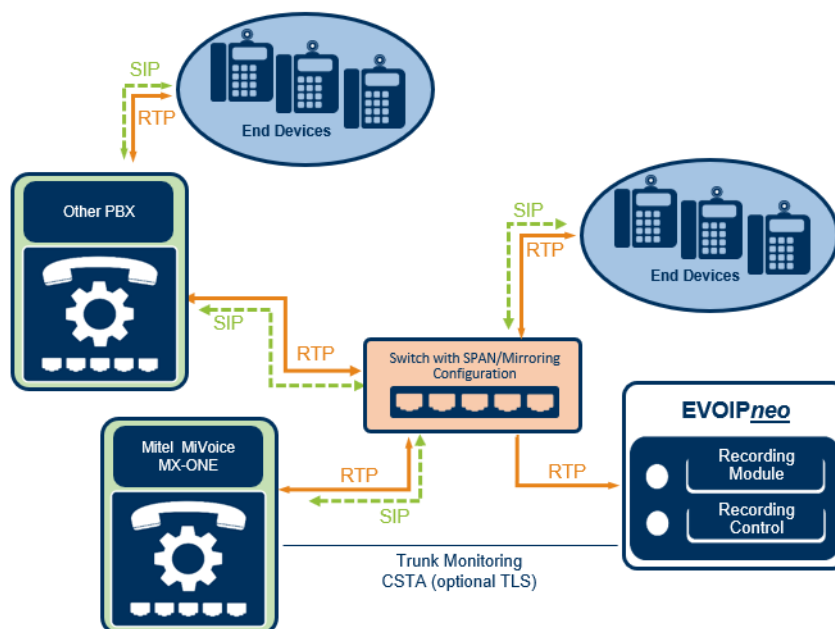


Fig. 1: Recording solution Mitel MiVoice MX-ONE trunk-side recording

3 System requirements



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



A list of the codecs supported in this recording solution can be found in 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.

3.1.1 Recorder

For the recording solution you can use the following systems:

- EVOLUTION_{neo} eco
- EVOLUTION_{neo}
- EVOLUTION_{neo} XXL



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

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
EVOIP ^{neo} Base license - active	1 license per recording server
EVOIP ^{neo} active for Mitel MiVoice MX-ONE (CSTA 3)	1 license per concurrent recording

Tab. 1: Licenses for recording server

Mitel MiVoice MX-ONE

License name	Number
CSTA license	1 license per end device
Intrusion	1 SIP extension per recording resource (third-party SIP license)

Tab. 2: Licenses

4.2 Information

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

- IP address of the recording server
- List of extensions to be recorded



When updating versions \leq ^{neo} 5.1, the CTI configuration parameter must be adjusted according to the new CSTA 3 connection. See CTIconnect module.

The HTTP web service link is no longer required; however an IP address to the PBX with the default port 8882 must be configured.

5**Overview of how to install and configure the product**

The following steps have to be taken:

1. Install ASC software
2. Configure System Configuration
 - Create and activate recording architectures
 - The recording servers, recording types, and the integration types are assigned in the Recording Architectures module.
 - Configure servers
 - In the Servers module, the usage of the server is configured.
A server can be used for archiving, import, export, replay, data storage or for audio analysis.
 - Create PBX
 - A PBX configuration can either be created via the PBX module or via the configuration in the Integrations module.
 - Create, configure, and activate PBX integration
 - Configure recording architecture
Assignment of the previously created recording architecture
 - Configure CTI connection data
Configuration of CTI connection parameters and of the grammar
 - Configure monitor points
Set monitor points for the extensions to be recorded
 - Global recording settings
Configuration of the settings for all recording servers in the network
 - Configure recording servers
Configuration of the parameters of the recording server, e. g. IP address, RTP incoming port and extensions

6 Installation



Before installing the *neo* software, ensure that Microsoft Windows has been installed and configured according to our specifications.



For information about the installation and configuration of Microsoft Windows refer to the respective installation manual for system providers *Configuration Windows Server 2012 R2*, *Configuration Windows Server 2016* or *Configuration Windows Server 2019*.



For information about the installation of the *neo* software refer to the installation manual for system providers *Installation of the recording software of ASC*.

7 Configuration

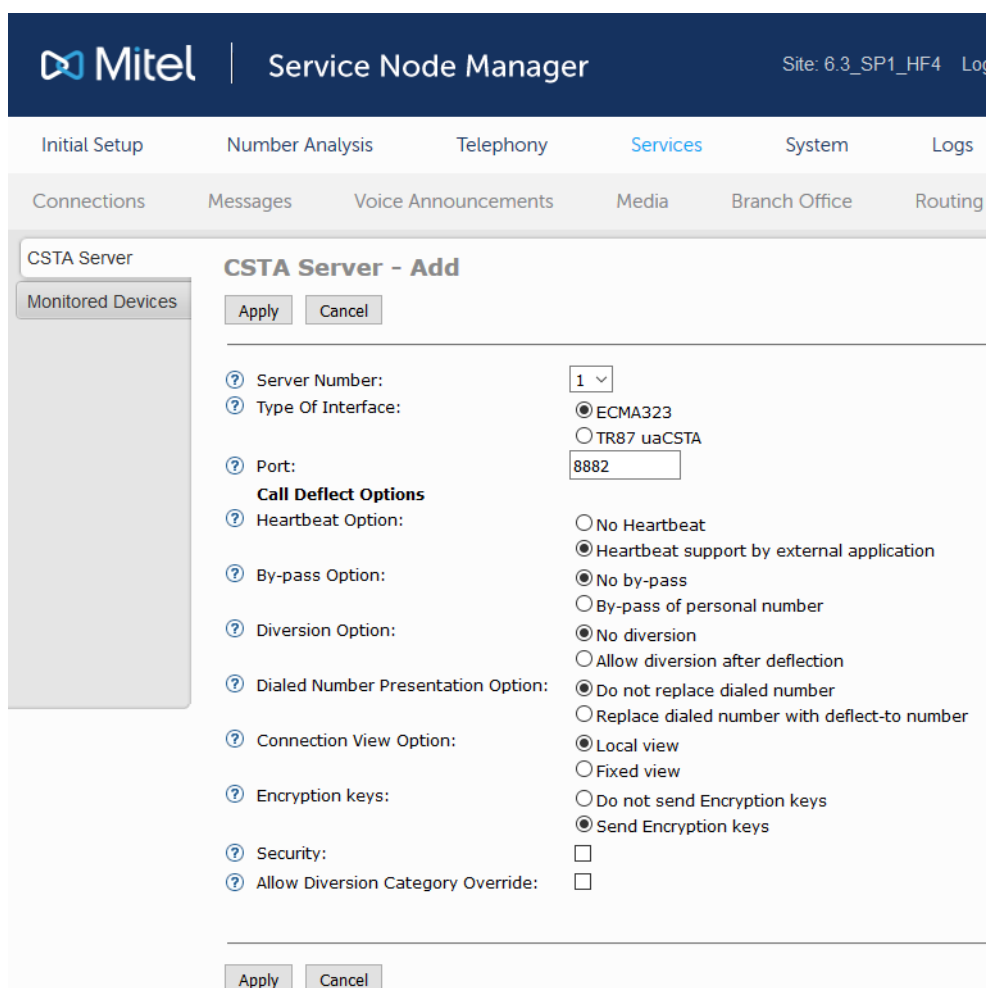
7.1 Configure Mitel MiVoice MX-ONE CSTA 3



A Mitel engineer configures the Mitel MiVoice MX-ONE PBX. The IP address of the recording server must be entered in the configuration file of the PBX so that the RTP data can be sent to the recording server.

7.1.1 Configure CSTA server

1. Log in to the *Provisioning Manager*.
2. Select the tab *System*.
3. Below, select the menu item *Subsystem*.
4. Select the respective subsystem.
⇒ The *Service Node Manager* opens.
5. Select the tab *Services*.
6. Below, select the menu item *CSTA Server* in the menu bar.
7. Select the menu item *CSTA Server* in the navigation bar.



The screenshot shows the Mitel Service Node Manager interface. The top navigation bar includes 'Initial Setup', 'Number Analysis', 'Telephony', 'Services' (selected), 'System', and 'Logs'. Below this, a secondary navigation bar shows 'Connections', 'Messages', 'Voice Announcements', 'Media', 'Branch Office', and 'Routing'. The main content area is titled 'CSTA Server - Add' and contains the following configuration options:

- Server Number:** 1 (dropdown)
- Type Of Interface:** ☒ ECMA323, ☐ TR87 uaCSTA
- Port:** 8882 (text input)
- Call Deflect Options:**
 - Heartbeat Option:** ☐ No Heartbeat, ☒ Heartbeat support by external application
 - By-pass Option:** ☒ No by-pass, ☐ By-pass of personal number
 - Diversion Option:** ☒ No diversion, ☐ Allow diversion after deflection
 - Dialed Number Presentation Option:** ☒ Do not replace dialed number, ☐ Replace dialed number with deflect-to number
 - Connection View Option:** ☒ Local view, ☐ Fixed view
 - Encryption keys:** ☐ Do not send Encryption keys, ☒ Send Encryption keys
 - Security:** ☐
 - Allow Diversion Category Override:** ☐

Buttons for 'Apply' and 'Cancel' are located at the top and bottom of the configuration area.

Fig. 2: Configure CSTA server

8. Click on the button *Add*.
9. Select the following options:

Type of Interface	ECMA323
Port	Enter the port you would like to use for the communication, for TCP 8882, for TLS 8883.
Heartbeat Option	Heartbeat support by external application Not obligatory but recommended.
By-pass Option	No by-pass
Diversion Option	No diversion
Dialed Number Presentation Option	Do not replace dialed number
Connection View Option	Local view
Encryption keys	Send Encryption keys
Security	<p>Activate this option if the connection via TLS is supposed to be used. Unencrypted by default.</p> <p>NOTICE! If the option <i>Encryption keys</i> has been activated and the option <i>Security</i> deactivated at the same time, the <i>encryption keys</i> are transferred without encryption. This is a security gap as potential attackers could intercept these keys and use them to decrypt the encrypted streams of audio data.</p>

10. Click on the button *Apply* to save the settings.



Different codecs of RX-TX in one [SIP](#) conversation are not supported.

7.1.2

Check functionality

Check license status

1. Log in to the respective phone as administrator via the web interface to check the license status.

The following login data is valid by default:

Username	admin
Password	22222

2. Select the menu item *License Status* in the navigation bar to check whether the license is valid.

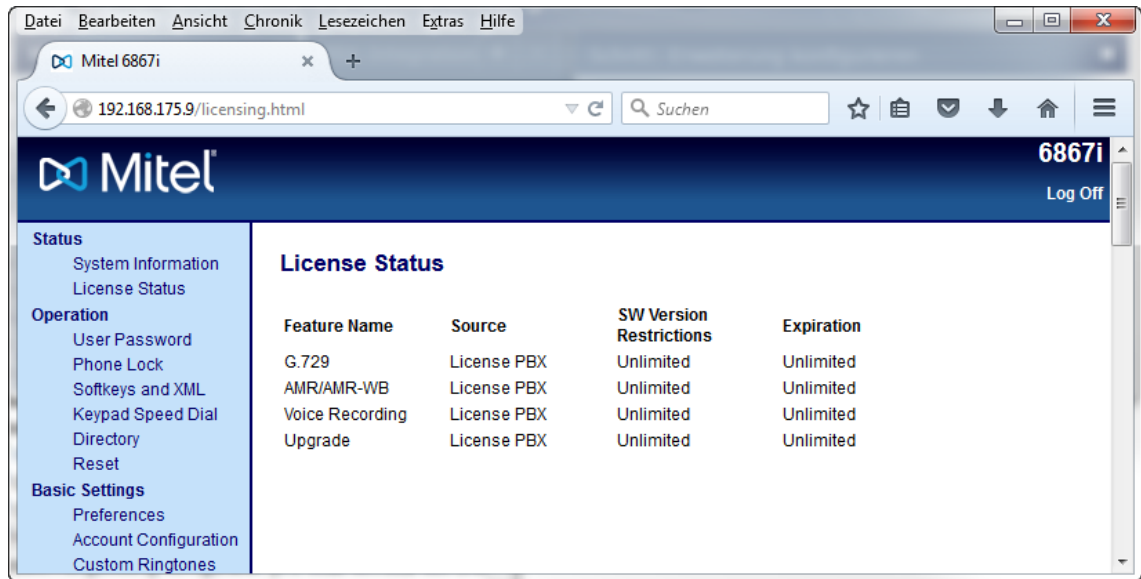


Fig. 3: Check license status

Check server, path and port

1. Select the menu item *Advanced Settings > Configuration Server* in the navigation bar to check the settings of the server, the path and the port.

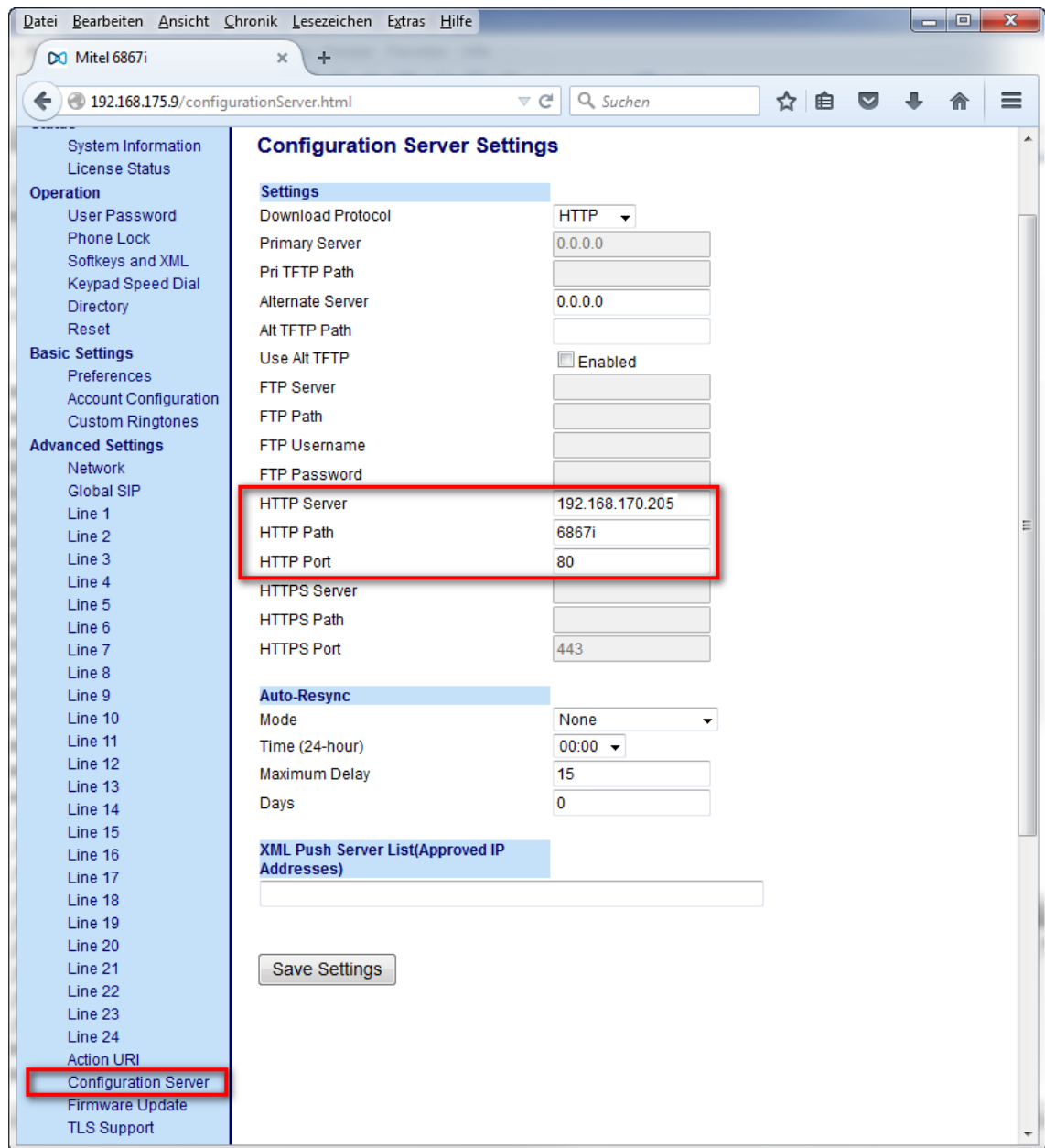


Fig. 4: Check server, path and port

2. Click on the button *Save Settings* to save the entries.

7.2 System Configuration



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

7.2.1 Start application

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

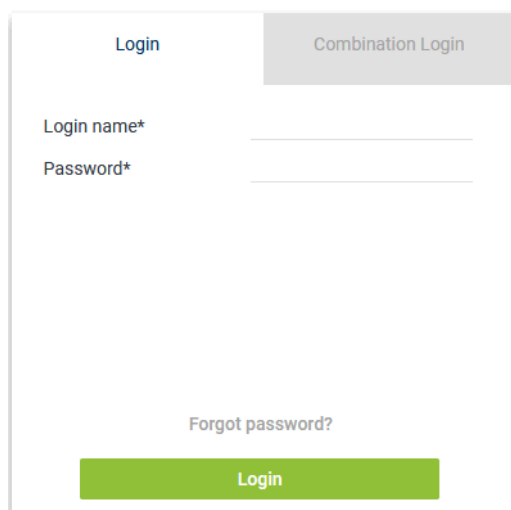
1. To start the application directly on the server, double-click on the shortcut System Configuration.

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

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

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

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



The login interface features two tabs: 'Login' (active) and 'Combination Login'. Under the 'Login' tab, there are two input fields labeled 'Login name*' and 'Password*'. Below these fields is a link for 'Forgot password?'. At the bottom, there is a green 'Login' button.

Fig. 5: System Configuration - web interface

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

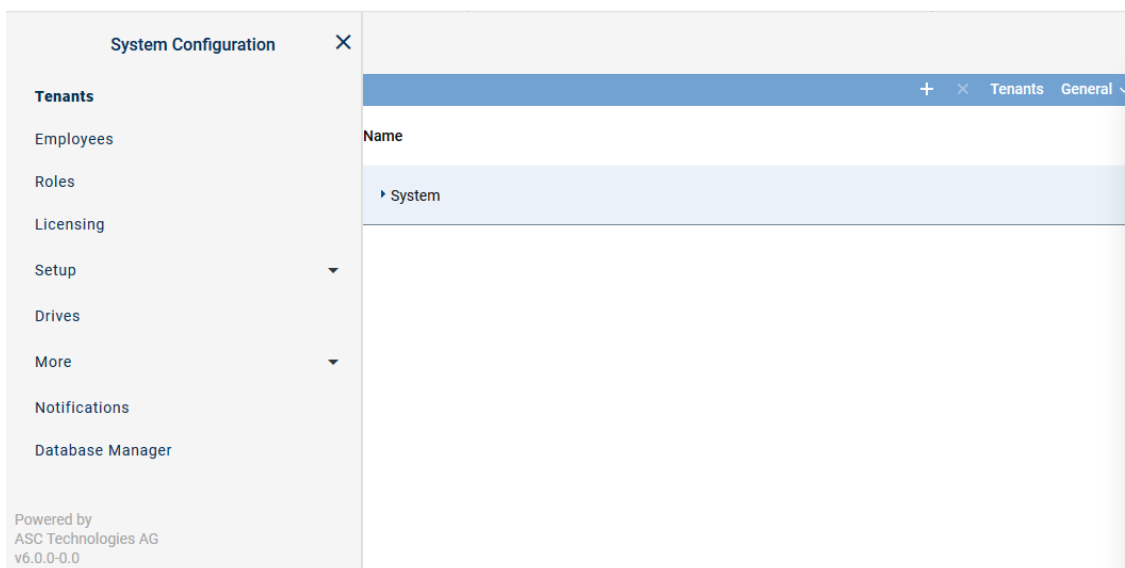
Login data for the administrator of the system provider:

User name:	<i>system-admin</i>
<i>neo</i> version < 6.3	
Default password:	1
	If the default password 1 has never been changed before a software update to a <i>neo</i> version ≥ 6.3, the password must be changed upon the next login or by entering it again. If the default password has already been changed before a software update to a <i>neo</i> version ≥ 6.3, the changed password remains.
<i>neo</i> version ≥ 6.3	
Default password:	A\$c123

Tab. 3: Login data - system provider

2. Log in to the web interface.

⇒ The main window System Configuration appears.



The main view of the System Configuration window. On the left is a sidebar menu with options: Tenants, Employees, Roles, Licensing, Setup (expanded), Drives, More (expanded), Notifications, and Database Manager. The main area shows a 'Name' field with a dropdown menu currently displaying 'System'. At the bottom left of the sidebar, it says 'Powered by ASC Technologies AG v6.0.0-0.0'.

Fig. 6: System Configuration - main view:

7.2.2 Configure recording solution All-in-one Basic

7.2.2.1 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:

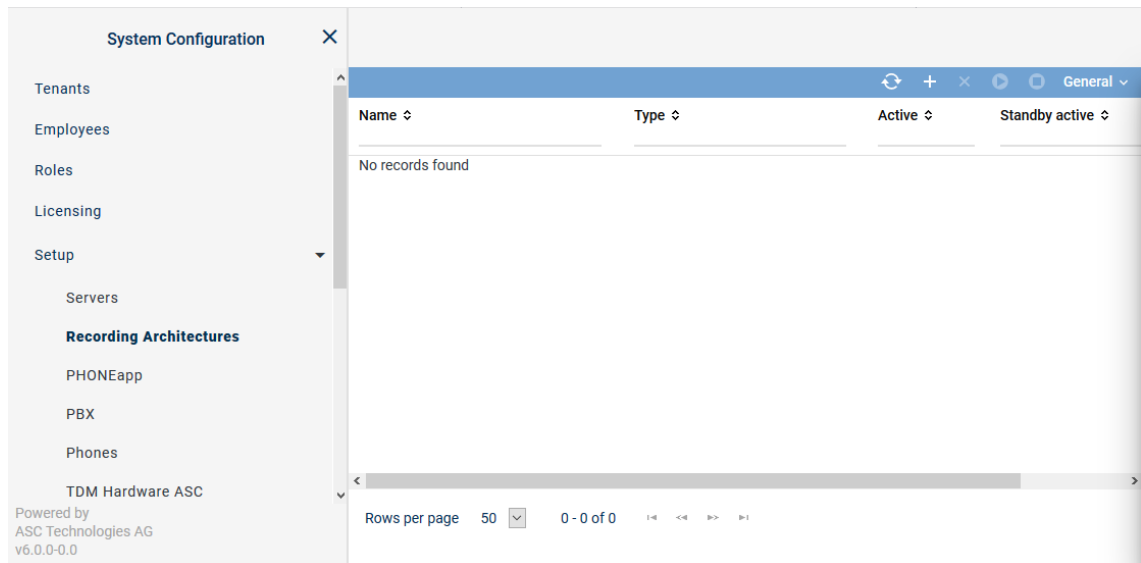


Fig. 7: Recording architectures - main view

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*.

7.2.2.1.1 Toolbar of the Recording Architectures module

The toolbar offers the following functions.



Fig. 8: Toolbar Recording Architectures module

	<i>Refresh</i>	Refreshes the main view.
	<i>Search</i>	Opens the window of the search function. The search function allows searching systematically for sets of data which meet certain criteria. The icon  is displayed whenever the search has been adjusted by means of a filter.
	<i>Reset search</i>	Resets all search filters so that the main view displays all data sets again.
	<i>Create</i>	Creates a new recording architecture.
	<i>Delete</i>	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 Architectures</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>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*.

7.2.2.1.2 Create recording architecture All-in-one Basic

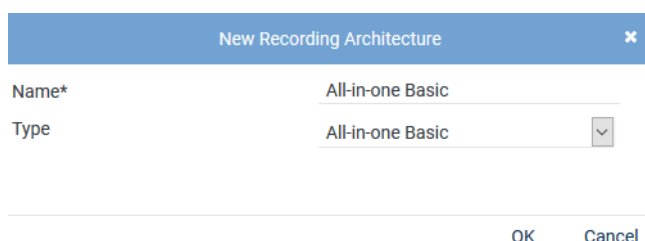
If the entire *neo* software has been installed on one server, you must create a recording architecture of the type *All-in-one Basic Recording*.



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*.

1. To create a new recording architecture, click on the icon  (*Create*) in the toolbar of the main view.

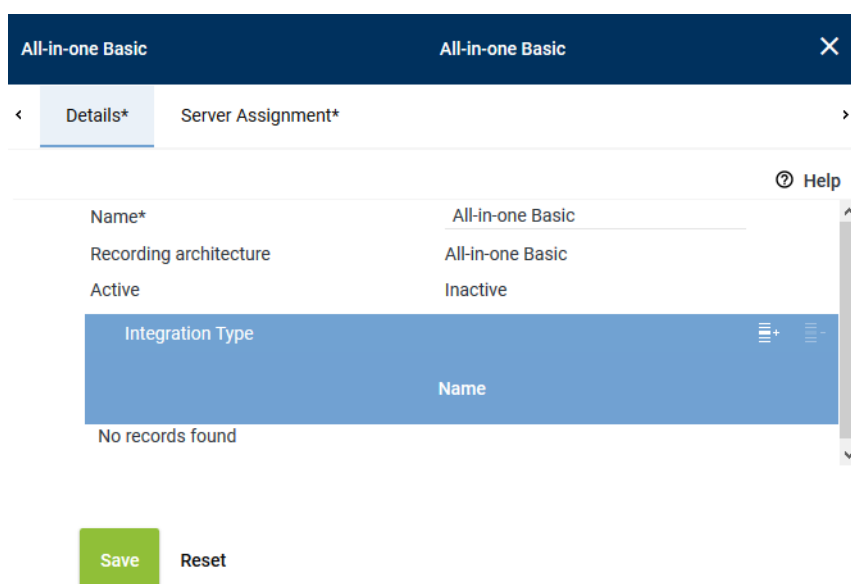
⇒ The window *New Recording Architecture* appears.



The dialog box titled "New Recording Architecture" has a close button (X) in the top right corner. It contains two input fields: "Name*" with the text "All-in-one Basic" and "Type" with a dropdown menu showing "All-in-one Basic". At the bottom right, there are "OK" and "Cancel" buttons.

Fig. 9: 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.

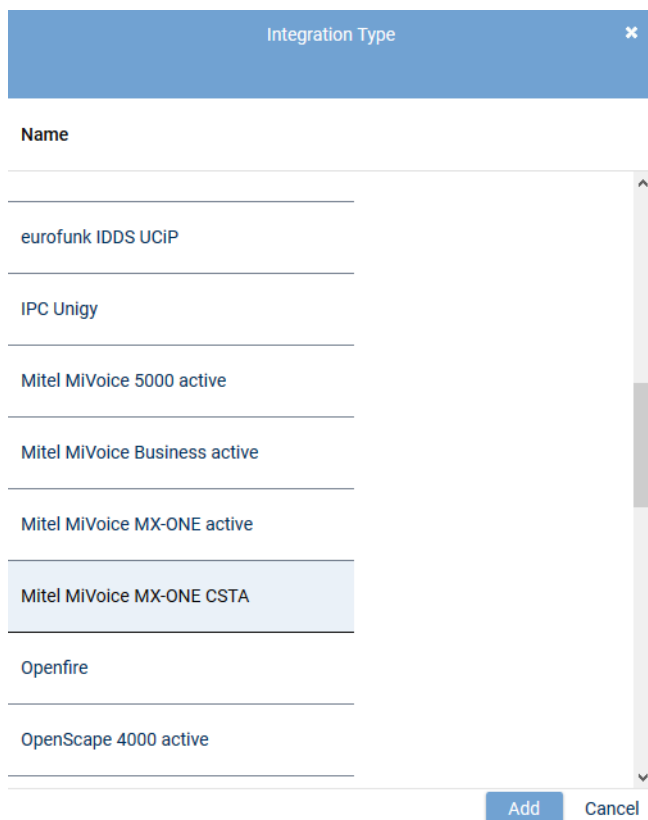


The "All-in-one Basic" window shows the "Details*" tab. It has a "Server Assignment*" tab. The "Details*" tab contains a form with the following fields: "Name*" (All-in-one Basic), "Recording architecture" (All-in-one Basic), and "Active" (Inactive). Below the form is a table titled "Integration Type" with a "Name" column. The table is empty, showing "No records found". At the bottom, there are "Save" and "Reset" buttons.

Fig. 10: 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.



Integration Type

Name

- eurofunk IDDS UCIP
- IPC Unigy
- Mitel MiVoice 5000 active
- Mitel MiVoice Business active
- Mitel MiVoice MX-ONE active
- Mitel MiVoice MX-ONE CSTA**
- Openfire
- OpenScape 4000 active

Add Cancel

Fig. 11: 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 *Mitel MiVoice MX-ONE CSTA* from the list of the available integration types and click on the button *Add*.
⇒ The name of the integration type now appears in the list in the detail view.

Assign server for All-in-one Basic

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. 12: Recording architecture - tab Server Assignment

- Click on the button **+** next to 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

1-8

<<

>>

8-1

Add

Cancel

Fig. 13: Recording architecture - assign server

- Select the respective 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 appears in the detail view.
- Activate the check boxes in front of the recording variants that you would like to use this server for.

Recording type

☒ VoIP/Video

☐ TDM

☐ Screen




☐ Chat

Fig. 14: Recording architecture - activate recording variant



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

Activate recording architecture

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





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

Fig. 15: 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 add-on for the integration subsequently, you must deactivate the recording architecture and activate it again after having installed the license.

7.2.2.2 Configure server

Each server in your network on which the *neo* software has been installed is recognized automatically as a server of the recording system and displayed in the Servers module. In the Servers module, you can configure the purpose of the servers of your recording system.

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

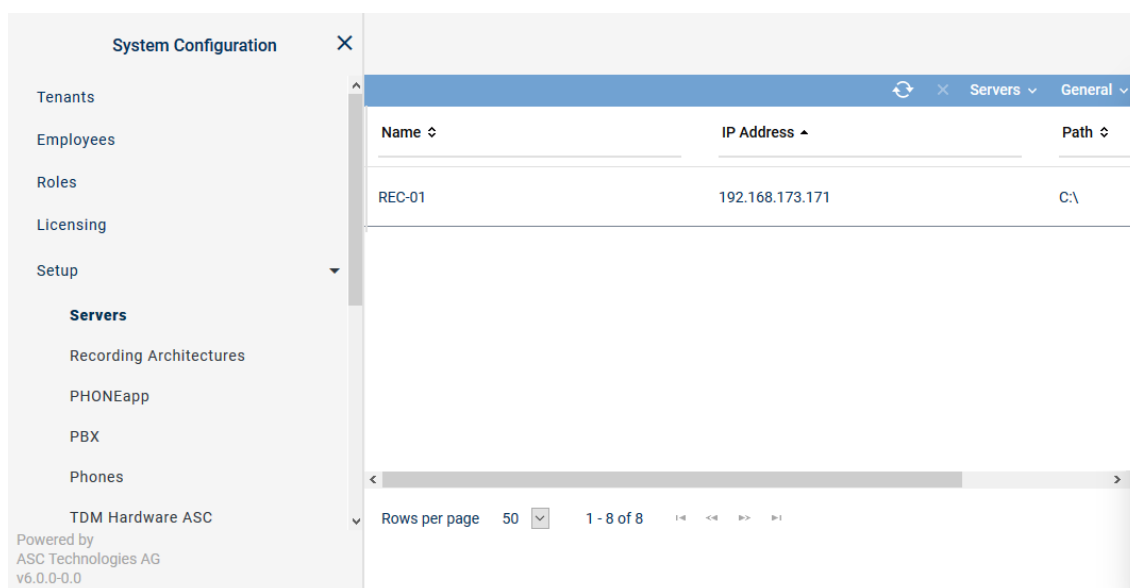


Fig. 16: Servers - main view

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*.

7.2.2.2.1 Toolbar of the Servers module

The toolbar offers the following functions.

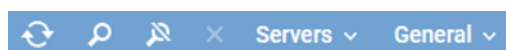







Fig. 17: Toolbar Servers module

	<i>Refresh</i>	Refreshes the main view.
	<i>Search</i>	Opens the window of the search function. The search function allows searching systematically for sets of data which meet certain criteria. The icon  is displayed whenever the search has been adjusted by means of a filter.
	<i>Reset search</i>	Resets all search filters so that all sets of data are displayed in the main view again.
	<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 neo 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 <i>Administrate NTP server</i> .
	<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>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*.

7.2.2.2.2 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.

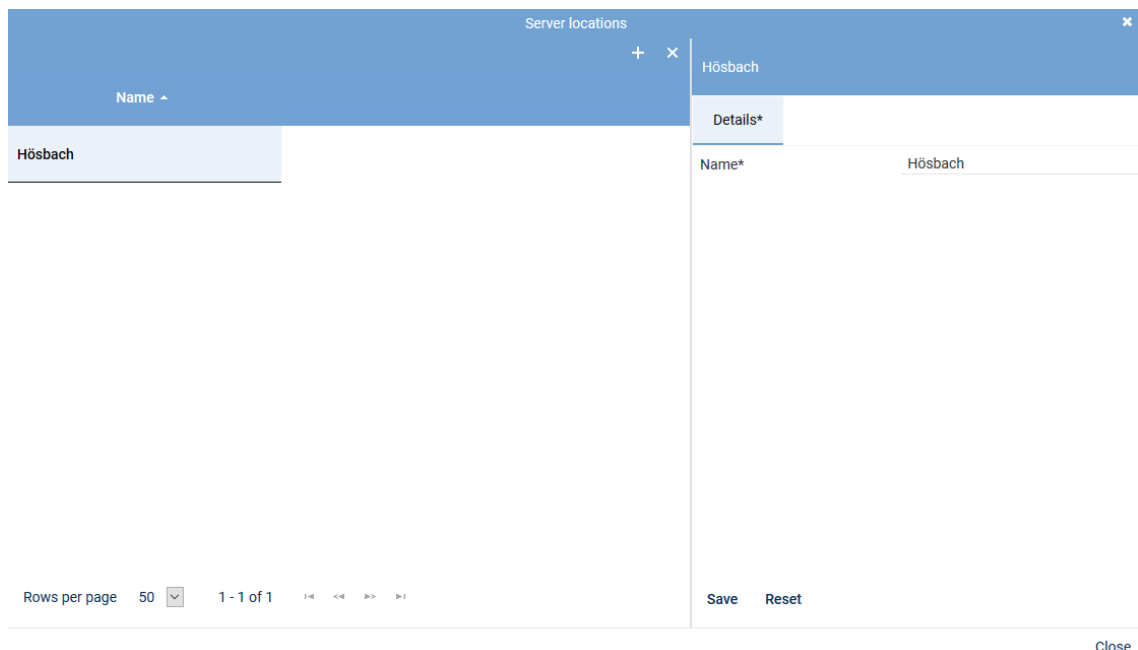



Fig. 18: Add server locations

- 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*.

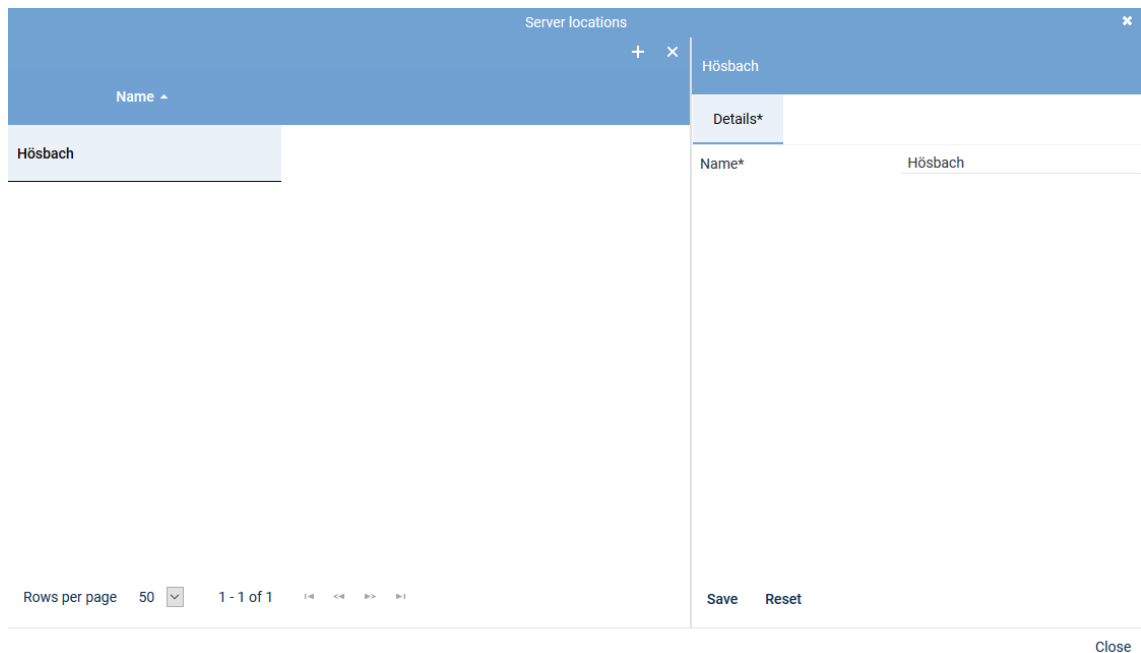
5. To add further locations, repeat the last 3 steps.
6. To close the window, click on the button *Close*.

Delete server location




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

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



The screenshot shows a window titled "Server locations" with a close button (x) in the top right corner. Below the title bar is a table with a header "Name" and a dropdown arrow. The table contains one row with the value "Hösbach". To the right of the table is a "Details*" tab. Below the tab, there is a form field labeled "Name*" with the value "Hösbach". At the bottom of the window, there are buttons for "Save" and "Reset".

Fig. 19: 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*.

7.2.2.2.3 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. 20: 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.

7.2.2.2.4 Tab Usage

- Click on the tab *Usage* to configure the intended purpose.



As a server may be used for several recording solutions, all intended purposes are displayed. Note that some intended purposes do not apply for certain recording solutions. In chat recording, for instance, audio analysis or replay via phone cannot be used.

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

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

Fig. 21: Servers - tab usage

Group field API Server

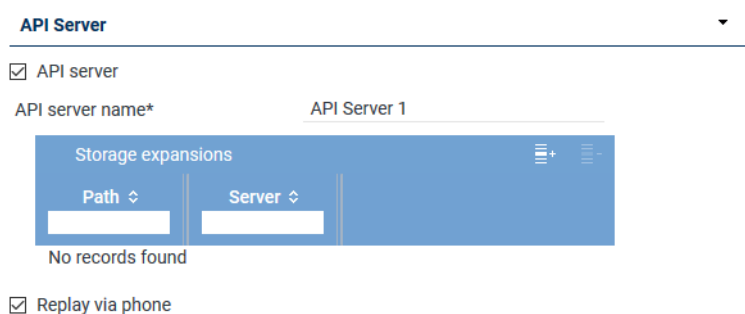


Fig. 22: Group field API Server


The ASC API Server is a service within the *neo* software.




The ASC API Server must have been activated on every server where the Recording Control service runs.


The ASC API Server does not only offer an interface for the internal modules; additionally, the client applications communicate with the *neo* system by means of this interface, too, using defined commands.

Furthermore, the ASC API Server is responsible for replay by means of the web browser. Not until the ASC API Server has started, can the replay server be activated and the corresponding ASC API Server assigned for replay in the web applications.

Parameter	Value/Description
<i>API server</i>	<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>
<i>API server name</i>	<p>Enter the name which is supposed to denote the server in the system. The displayed name can be selected arbitrarily and is a kind of pseudonym.</p> <p>The displayed name is meant to make it easier for users to select a server as different API servers may be used across the system by different tenants. When selecting the API server, these pseudonyms are displayed on the client computers instead of the real server name or the IP address.</p>
<i>List Storage expansions</i>	<p>Here, you can add storage expansions for replay. If a recording which is supposed to be replayed cannot be found on the server, the search is continued on the storage expansions which have been entered here. That way, even recordings can be replayed which have not been transferred to the server.</p> <p>If the function <i>Replay</i> has been activated, you can adjust the following settings:</p> <ul style="list-style-type: none"> By clicking on the icon  (Add), you can add the storage expansions, see chapter "Add storage expansion for replay", p. 26.

Parameter	Value/Description
	<ul style="list-style-type: none"> By clicking on the icon  (<i>Remove</i>), you can remove the storage expansions from the list. <p>If you use several recording servers in your system for which storage expansions have been configured, you can add any storage expansion of any recording server on every API server of the system.</p>
<i>Replay via phone</i>	<p>Activate this function if you would like to use the functions <i>Replay via phone</i> or <i>Last Call Repeat</i>.</p> <p><input checked="" type="checkbox"/> = Function has been activated. <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

- Click on the icon  (*Add*) in the toolbar of the list.
- 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. 23: 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



Fig. 24: Group field Audio analysis

Parameter	Value/Description
<i>Emotion detection</i>	<p>Activate this check box to activate emotion detection for audio analysis.</p> <p><input checked="" type="checkbox"/> = Function has been activated. Tenants can use the function emotion detection.</p> <p><input type="checkbox"/> = Function has not been activated.</p>

Tab. 4: Configure audio analysis

Group field Recording Control/Key Management

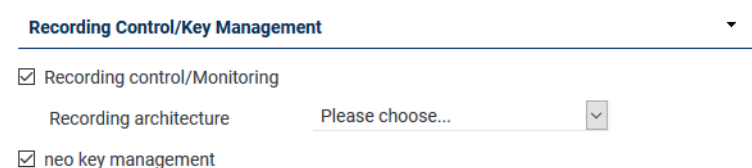


Fig. 25: Group field Recording Control/Key Management

Parameter	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 API recording control. The function 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 recording architecture via which you would like to control the recording.
<i>neo key management</i>	<p>This function serves for customer-specific recording encryption. To be able to configure the conditions for key management, activate the check box <i>Key management</i>.</p> <p>The function can only be activated if the license <code>ASC_KEY_MANAGEMENT</code> is available.</p> <p>For more information about the configuration of key management refer to the administration manual <i>Configuration server and recording architectures</i> and to the installation manual <i>Installation Dongle Manager</i>.</p>

Tab. 5: 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. 26: Group field Data Processing


Parameter	Value/Description
<i>Data storage</i>	Activate the check box to allow the modification of the additional functions of data processing.
<i>Transfer data for replay</i>	<p>Activate the check box if you would like to transfer data only for replay to another server.</p> <p>If the function has been activated, you can select a server from the list <i>Target Server</i> to which the recorded data is supposed to be transferred for replay. The data is not stored on the target server but deposited in a cache temporarily in order to be replayed.</p> <ul style="list-style-type: none"> By clicking on the icon  (<i>Add</i>), you can add the target server, see chapter "Add target server to a list", p. 29. By clicking on the icon  (<i>Remove</i>), you can remove the target server from the list. <p>NOTICE! Only those servers are displayed on which an API server and a replay server have been configured.</p>
<i>Transfer data for data storage</i>	<p>Activate the check box if you would like to transfer data for storage to another server.</p> <p>If the function has been activated, you can select a server from the list <i>Target Server</i> to which the recorded data is supposed to be transferred for data storage purposes. In the drop-down list, all servers are displayed on which the function <i>Data Storage</i> has been activated. The data is copied to the target server and stored there.</p>

Parameter	Value/Description
	<ul style="list-style-type: none"> By clicking on the icon  (Add), you can add the target server, see chapter "Add target server to a list", p. 29. By clicking on the icon  (Remove), you can remove the target server from the list. <p>NOTICE! Only those servers are displayed on which the function <i>Data Storage</i> has been activated.</p> <p>If the function has been activated, you can activate the transfer for a certain period of time.</p> <ul style="list-style-type: none"> Activate period of time <input checked="" type="checkbox"/> = Function has been activated. The fields for entering the time become active. Select the time via the rotating field for the period from – to. Active period of time <input type="checkbox"/> = Function has not been activated. <p>NOTICE! In distributed systems with slow network connections, the storage interval for the data transfer can be adjusted. The storage interval for the data transfer has to be configured by an ASC service technician or by an authorized partner company.</p>
<i>Receives data from</i>	<p>This table contains those servers which transfer data to this server.</p> <p>In the column <i>Name</i>, the name of the server appears from which data has been transferred.</p> <p>In the column <i>Only Replay</i>, the purpose of the transfer is displayed:</p> <p> = Data is transferred only for replay.</p> <p> = Data is transferred for data storage.</p>
<i>Archiving</i>	Activate the check box <i>Archiving</i> if you would like to use the server for archiving purposes.
<i>Export</i>	Activate the check box <i>Export</i> to allow the export from this server.
<i>Import</i>	<p>Activate the check box <i>Import</i> so that the imported data can be stored on this server.</p> <ul style="list-style-type: none"> Recording architecture From the drop-down list, select the recording architecture that fulfills this function. In the drop-down list, all recording architectures are displayed which enable this function as well. <p>NOTICE! If you would like to use a server for the import function on which no recording is supposed to take place, you can configure an architecture exclusively for the import.</p>

Tab. 6: Configure data storage

Add target server to a list

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



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

Rows per page: 20 | 1 - 6 of 6

Add **Cancel**

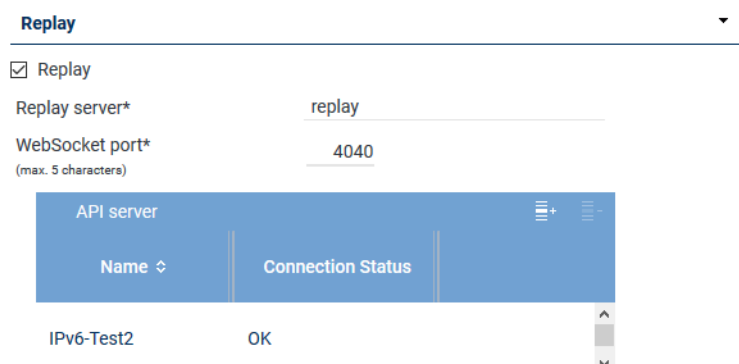
Fig. 27: Select server



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

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

Group field Replay



Replay

☒ Replay



Replay server*

WebSocket port*
(max. 5 characters)

Name	Connection Status
IPv6-Test2	OK

Fig. 28: Group field Replay

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

Parameter	Value/Description
<i>Replay server</i>	<p>If the function has been activated, you can enter a displayed name which is supposed to denote the server as the replay server in the system in the entry field <i>Replay server</i>. The displayed name can be selected arbitrarily and is a kind of pseudonym. As the replay server and the API server must not be identical, you can select different pseudonyms.</p> <p>The displayed name is meant to make it easier for users to select a server as different replay servers may be used across the system by different tenants. When selecting the replay server, these pseudonyms are displayed on the client computers instead of the real server name or the IP address.</p> <p>In order to be able to reach the server activated for replay from a public network and with configured port forwarding, you have to set the configuration in the tab <i>Replay Server Address Mapping</i>. For further details about the configuration refer to the administration manual <i>Configuration of servers and recording architectures</i>.</p>
<i>WebSocket port (maximum of 5 characters)</i>	Enter the port via which the data to be replayed in <i>POWERplay</i> Web are supposed to be transmitted.
<i>List API server</i>	<p>Here, you can add API servers that the replay server may use. If a recording which is supposed to be replayed cannot be found on a server, the search is continued on the API servers which have been entered here.</p> <p>If the function <i>Replay</i> has been activated, you can adjust the following settings:</p> <ul style="list-style-type: none"> By clicking on the icon  (<i>Add</i>), you can add the API server, see chapter "Add API server to a list", p. 31. By clicking on the icon  (<i>Remove</i>), you can remove selected API servers from the list.

Tab. 7: Configure replay


Search and replay functions



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

Add API server to a list

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

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




Fig. 29: 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](#).

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

Group field Virtualization



Fig. 30: 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. 8: Configure virtualization



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

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

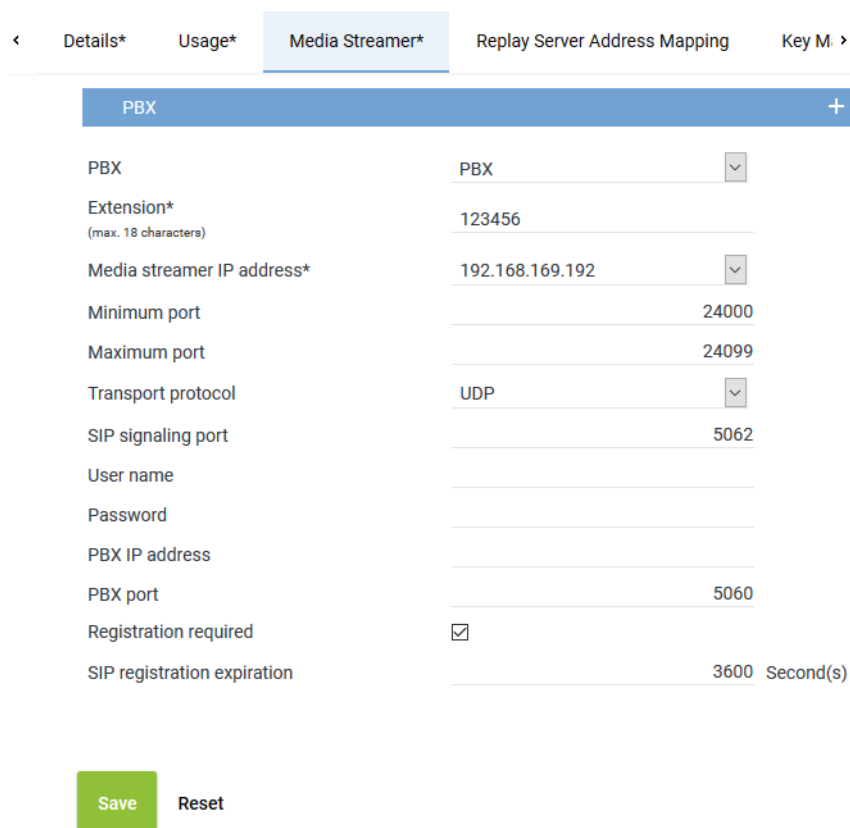
7.2.2.2.5 Tab Media Streamer

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*.



The screenshot shows the 'Media Streamer' configuration tab. At the top, there are tabs for 'Details*', 'Usage*', 'Media Streamer*' (selected), 'Replay Server Address Mapping', and 'Key M. >'. Below the tabs is a blue bar with 'PBX' and a '+' icon. The configuration fields are as follows:

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)

At the bottom, there are two buttons: 'Save' (green) and 'Reset'.

Fig. 31: 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. 38.</p>
Extension	<p>Extension which is supposed to be mapped to the Media Streamer. This is a mandatory field; the configuration cannot be saved if this information is missing.</p> <p>If an external analog gateway has been integrated, enter the value 8000.</p>
Media streamer IP address	<p>IP address which is supposed to be used for the exchange of the audio data and for the SIP communication.</p> <p>Select an IP address from the drop-down list. In the drop-down list, all IP addresses of the server are displayed.</p> <p>If an external analog gateway has been integrated, select the IP address 169.254.254.100 in the drop-down list.</p>

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

7.2.2.2.6 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*.

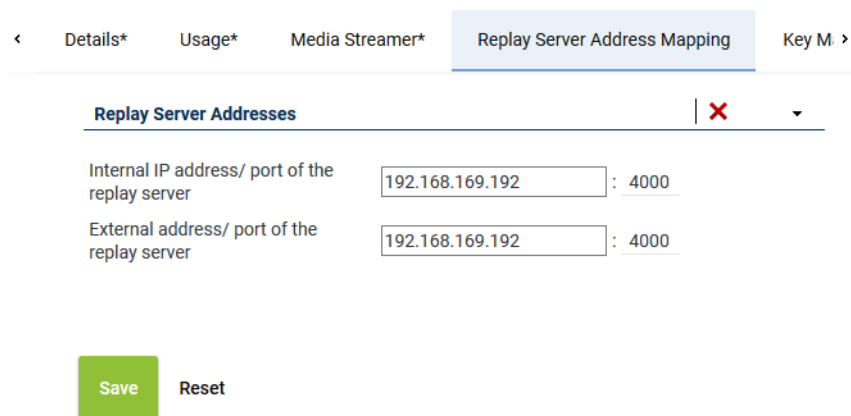


Fig. 32: Servers Module - tab Replay Server Address Mapping

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*.

7.2.2.2.7 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. 33: 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*.

7.2.2.2.8 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*.

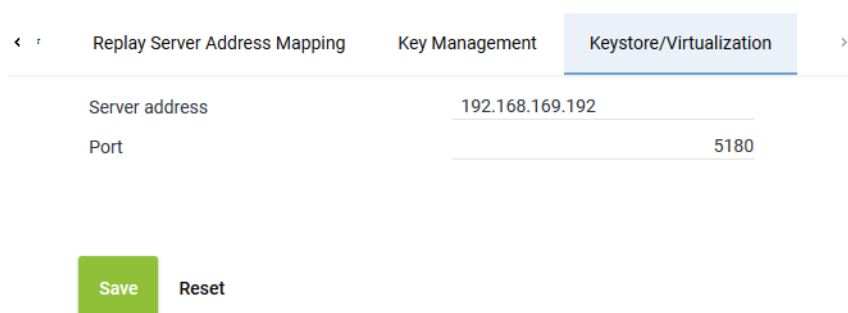


Fig. 34: Servers module - tab Keystore/Virtualization

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

- 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*.

7.2.2.3 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.

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

⇒ The following window appears:

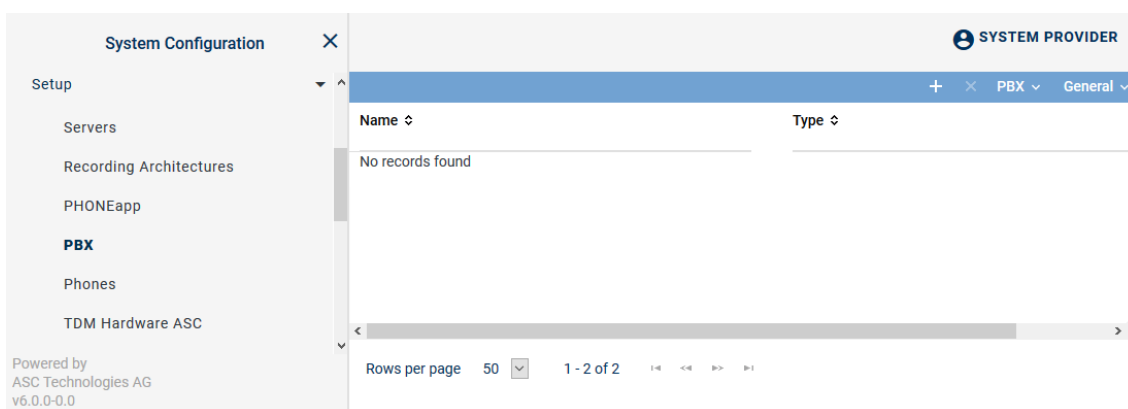


Fig. 35: Create new PBX

7.2.2.3.1 Toolbar of the PBX module

The toolbar offers the following functions.

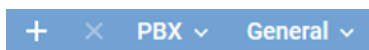




Fig. 36: Toolbar PBX module


	<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>

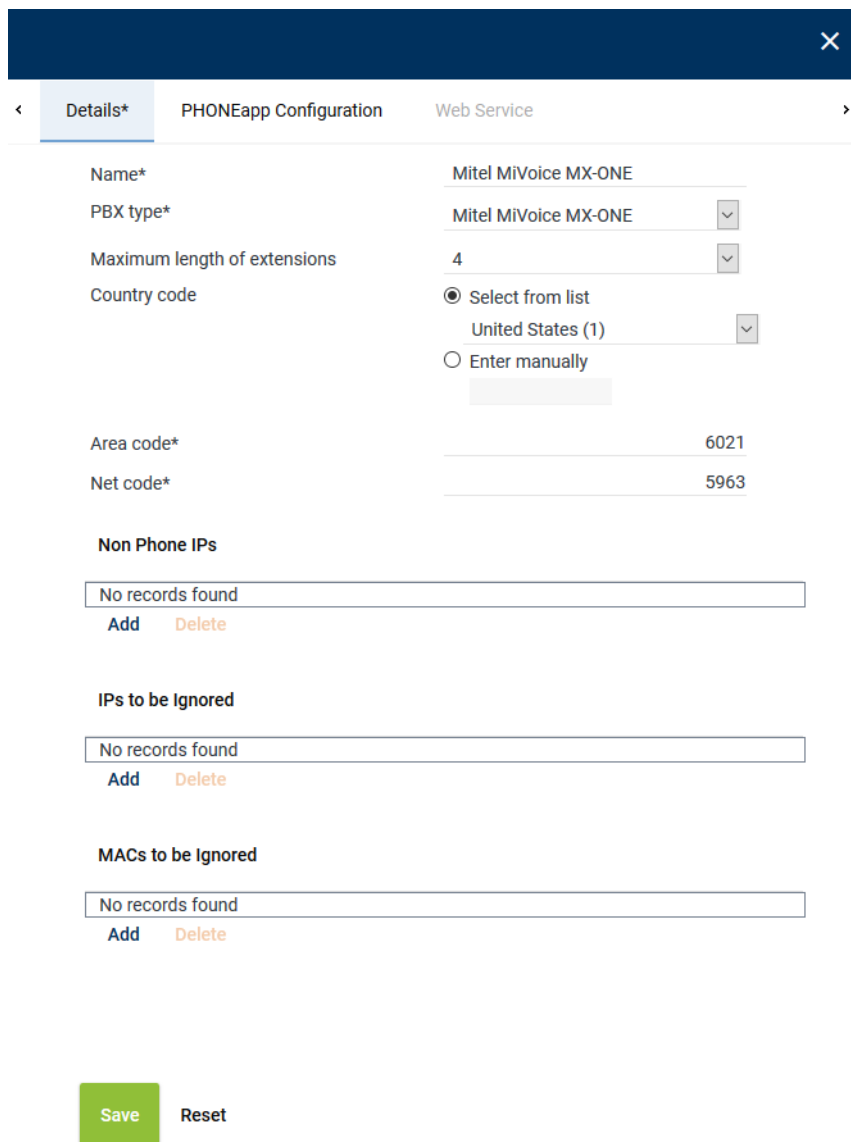
<i>Save Table Configuration</i>	Saves the current table configuration of the main view as default view of the user.
<i>General Help</i>	Opens the online help.
<i>Module Help</i>	Opens the module-specific online help.



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

7.2.2.3.2 Create new PBX

- Click on the icon  (*Create*) in the toolbar of the main view of the PBX module.
⇒ In the detail view, the tab *Details* appears.



The screenshot shows a web interface for creating a new PBX. At the top, there's a dark blue header with a close button (X). Below it, a tab bar shows 'Details*' (selected), 'PHONEapp Configuration', and 'Web Service'. The 'Details*' tab contains several form fields: 'Name*' (filled with 'Mitel MiVoice MX-ONE'), 'PBX type*' (dropdown menu with 'Mitel MiVoice MX-ONE'), 'Maximum length of extensions' (filled with '4'), 'Country code' (radio button selected for 'Select from list' with a dropdown showing 'United States (1)', and an option for 'Enter manually' with an empty text box), 'Area code*' (filled with '6021'), and 'Net code*' (filled with '5963'). Below these are three sections: 'Non Phone IPs', 'IPs to be Ignored', and 'MACs to be Ignored', each with a 'No records found' message and 'Add' and 'Delete' buttons. At the bottom, there are 'Save' and 'Reset' buttons.

Fig. 37: Create new PBX - tab Details

- Set the following parameters in the detail view:

Parameter	Value/Description
<i>Name</i>	This <i>name</i> serves as the identifier of this PBX.
<i>PBX type</i>	Select the type of the PBX from the drop-down list.

Parameter	Value/Description
<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. 9: Create PBX

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

7.2.2.4 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.

7.2.2.4.1 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.

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

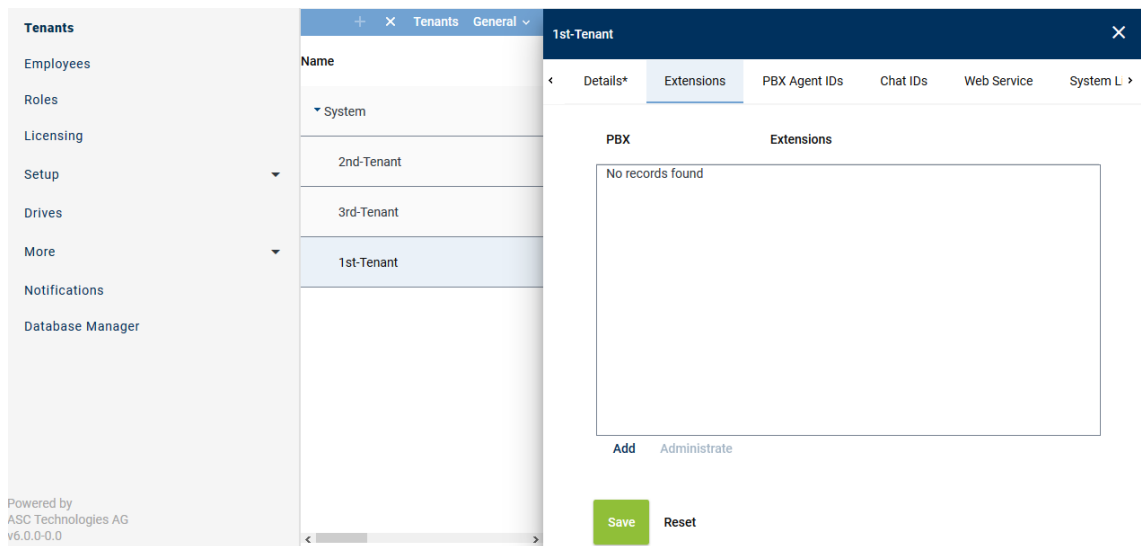


Fig. 38: Tenants - main view - tab Extensions

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:

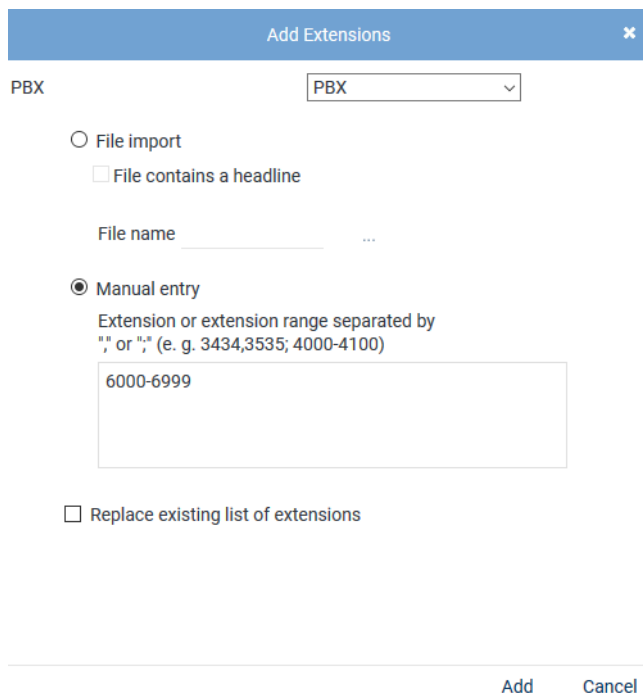


Fig. 39: Assign extensions to tenants

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

File import	<p>Select the option to import extensions from an existing file and add them to the table of extensions. The following file formats are supported:</p> <ul style="list-style-type: none"> • <i>ZIP</i> • <i>TXT</i>
--------------------	---

- CSV

NOTICE! The maximum number of extensions in a file has been limited to 2000 for performance reasons. If more extensions are required, you can import several files.



File contains a headline

Activate this option so that this structured is recognized correctly when importing the file.

The file must not contain more than one column. If commas or other column separators are detected in the file, the file is considered invalid and an error message is displayed.

File name

To import the file, proceed as follows:

- Click on the button  behind the field *File name*.
- Click on the button *Choose File*.
- Select the respective file in the Explorer and click on the button *Open*.
- Click on the button  *Upload File*.

Manual entry

Select this option to enter extensions or extension ranges manually.

To import number ranges, you must enter the same number of digits for the beginning and the end of the range, e. g. 1-9, 10-99, 01-20, 001-200, 4000-5000. If the end of the range asks for several digits, you have to add zeros for the beginning of the range, e. g. 01-10, 010-100.

Enter country codes as number ranges as follows:

+4984496800--+4984496810

NOTICE! The number of digits must be equal. Add zeros in front of digits to level up possible incongruences.

NOTICE! Wildcards cannot be used!

Replace existing list of extensions

Activate the check box to replace the list of extensions.

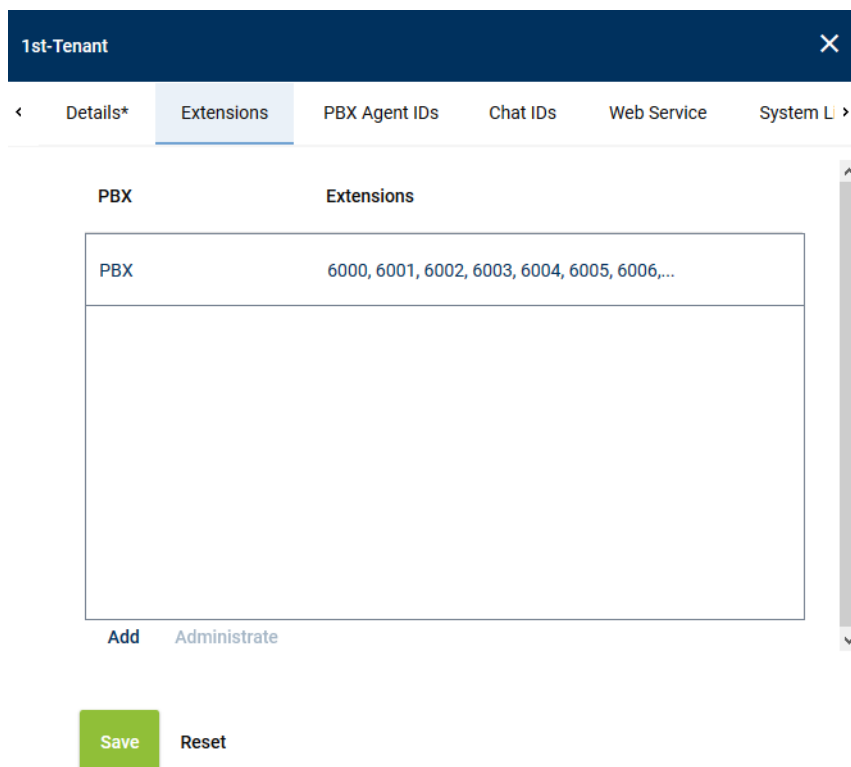
☒ = Function has been activated; the entry replaces the extensions of the selected PBX.

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

- 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.



1st-Tenant

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

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

Add Administrate

Save Reset

Fig. 40: Remove extensions

- Click the button *Administrate*.
- 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.



Administrate Extensions

6993
6994
6995
6996
6997
6998
6999

Remove Cancel

Fig. 41: Select extensions

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

7.2.2.5 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.

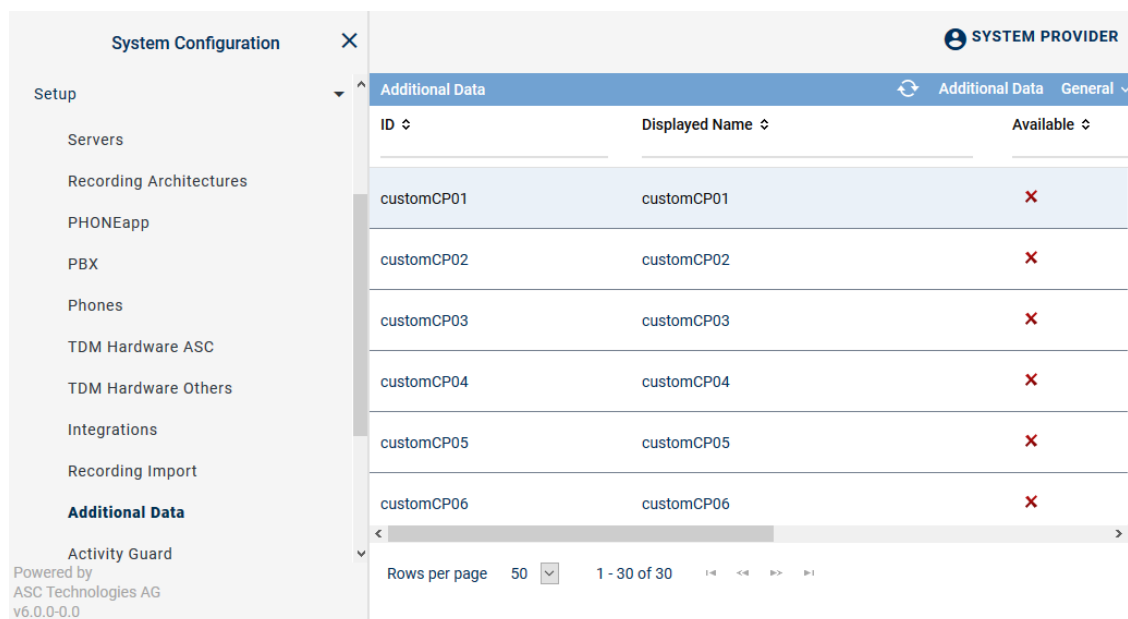


Fig. 42: Additional Data module main view

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. 43: 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. 44: 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 is not available for further use.

7.2.2.6 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:

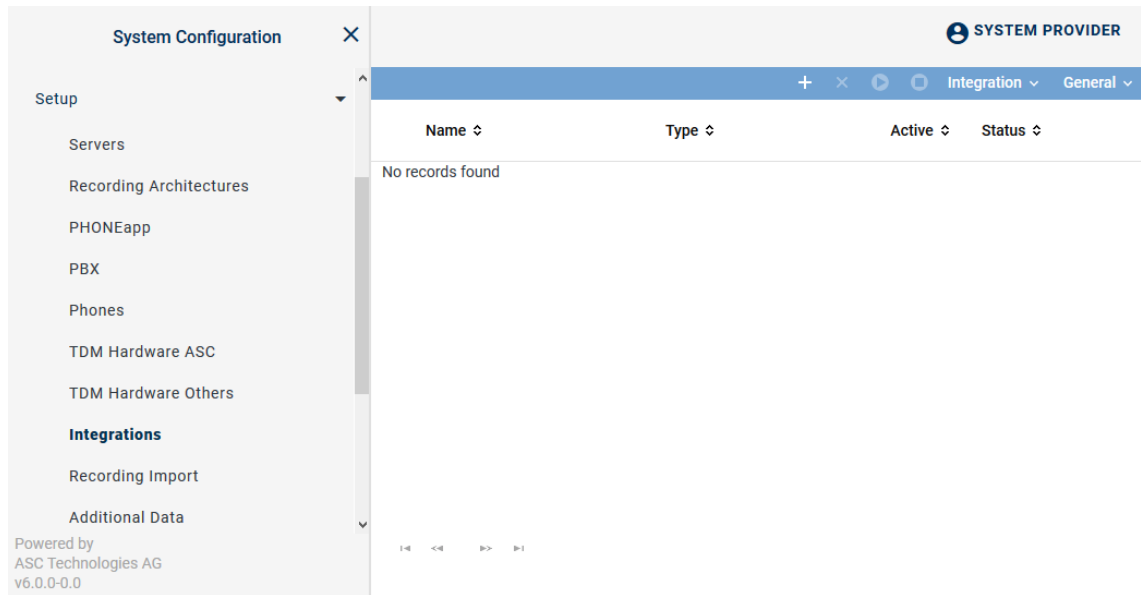




Fig. 45: Integrations - main view

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. ✓ = 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  .
Status	Shows whether the configuration has been carried out completely. ✓ = Configuration is complete. ✗ = Configuration is incomplete.

7.2.2.6.1 Toolbar of the Integrations module

The toolbar offers the following functions.



Fig. 46: 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.

7.2.2.6.2 Assign integration type


- 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.




Fig. 47: Create integration type

- Enter the following parameters:

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

Tab. 10: Create integration type

- Click on the button  next to the field *PBX* to assign the [PBX](#).
⇒ The window *PBX* appears.

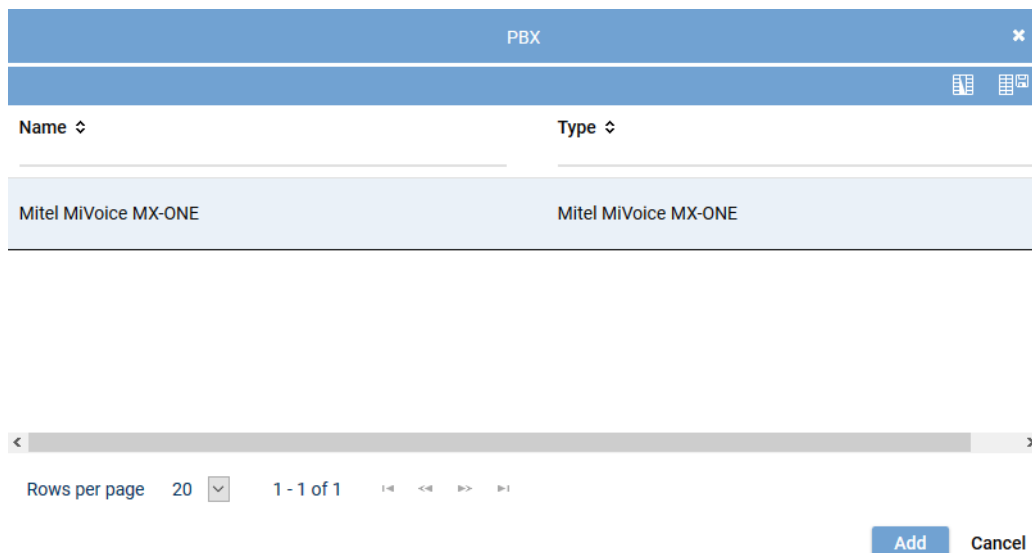


Fig. 48: Integrations - select PBX

- Select the respective [PBX](#) from the list of available PBXs.
- Click on the button *Add*.

7.2.2.6.3 Assign recording architecture for All-in-one Basic

- In the detail view on the bottom right, click on the button *Next*.

⇒ The tab *Recording Architecture* appears.



New Integration

Integration Type Recording Architecture

Recording Architecture

Recording architecture* All-in-one Basic

Save Cancel Back Next

Fig. 49: 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.

7.2.2.6.4 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:









Mitel MiVoice MX-ONE CSTA			
Step		Configuration	
Configure recording architecture		✓	
Configure CTI connection data		✗	
Configure monitor points		✗	
Global recording settings		✗	
Configure recording servers		✗	
Configure add-on		✓	
Configure miscellaneous settings		✓	

Fig. 50: Configuration steps of the integration

7.2.2.6.5 Configure recording architecture

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

- 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.

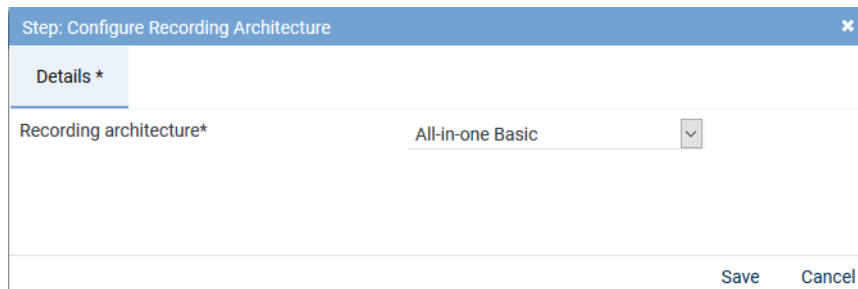



Fig. 51: Configuration step - Configure Recording Architecture

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

7.2.2.6.6 Configure CTI connection data

- In the main view in the line *Configure CTI connection data*, click on the button  (*Edit configuration step*) to configure the CTI connection data.

In this configuration step, you configure grammars, connection data, and additional data if applicable.



Following an update, you must configure this section again.

Tab MiVoice MX-ONE (CSTA)

- Select the tab *MiVoice MX-ONE (CSTA)* to configure the **CSTA** connection to the PBX.

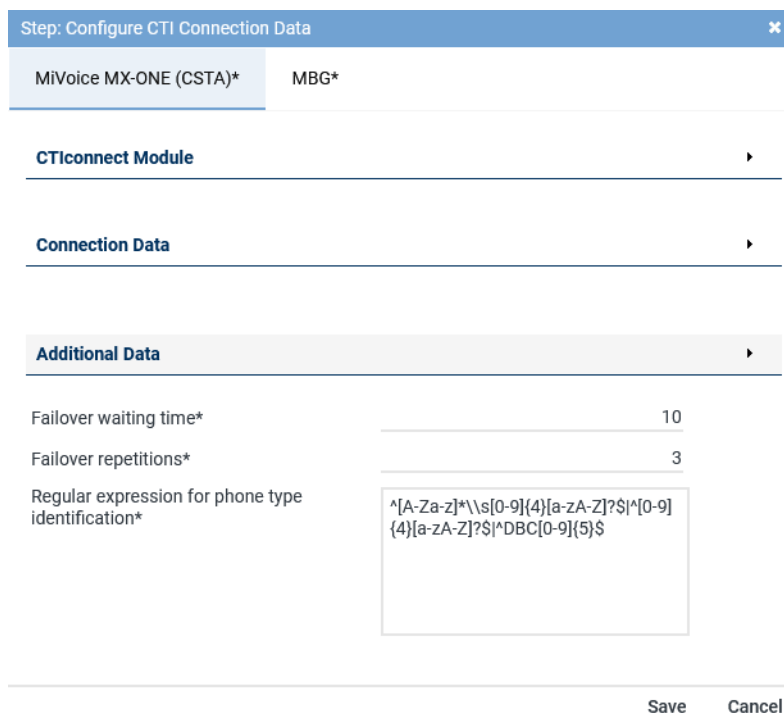


Fig. 52: CTI connection data - tab MiVoice MX-ONE (CSTA)

By configuring the tab *MiVoice MX-ONE (CSTA)*, you configure the recording variants *Active Stream Recording* and/or *Intrusion* and/or *Trunk-side Recording*.

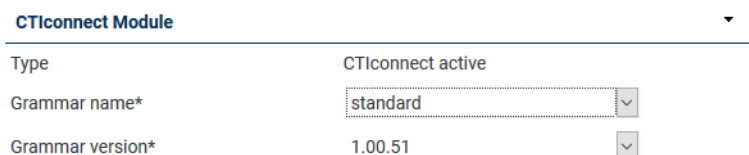
The [CSTA](#) connection is used to monitor the configured monitor points and to start the recording by means of the intrusion feature.



Following an update, you must configure this section again.

Group field CTIconnect Module

In this group field, you can configure the parameters for the CTIconnect module.



CTIconnect Module	
Type	CTIconnect active
Grammar name*	standard
Grammar version*	1.00.51

Fig. 53: Configure CTIconnect module

1. Enter the following parameters for the grammar:

Parameter	Value/Description
Type	Is filled automatically.
Grammar name	A default grammar has been preset. If required, select the name of the grammar from the drop-down list.
Grammar version	Select the current version of the grammar from the drop-down list.

Tab. 11: Configure CTIconnect module



After an update of the [neo](#) software, you must check the grammar versions. After the update, select the latest grammar from the drop-down list. If a customer-specifically adjusted grammar had been imported, check whether it continues to meet the requirements.

Group field Connection Data MiVoice MX-ONE (CSTA)

In this group field, you can configure the connection data to the CTIconnect module.



Connection Data
PBX IP address

No records found

Add Edit Delete

Fig. 54: Configure connection data

1. In the group field *Connection Data* in the table *PBX IP address*, click on the button *Add*.
⇒ The window *Configure Connection* appears.

Configure Connection
✕

PBX IP address*
192.168.170.219

PBX CSTA port*
8882

Transport Layer Security (TLS)
☐

Add Cancel

Fig. 55: Configure connection data

2. Enter the following parameters:

Parameter	Value/Description
<i>PBX IP address</i>	Enter the IP address of the PBX.
<i>PBX CSTA port</i>	Enter the port via which the CSTA connection is supposed to run. Default is <i>TCP 8882</i> , optional for <i>TLS 8883</i> .
<i>Transport Layer Security</i>	Activate this check box to use the connection with TLS .

Tab. 12: Configure connection data

3. Click on the button *Add* to apply the entries and to close the window.
4. If you use additional modules, another device group or multiple connections, repeat the configuration steps accordingly.

Group field Additional Data

In this group field, you can select fields in which additional data delivered for a conversation by the PBX or by an application's add-on is supposed to be displayed.

The content of the database fields is then displayed in the respective column in the players.

Depending on the PBX type, different parameters are available and can be assigned independently.

Arbitrary assignment

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



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

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



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

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

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

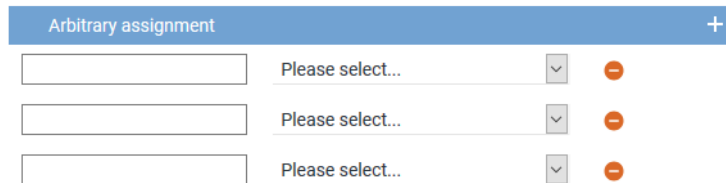



Fig. 56: Arbitrary assignment of the additional data

The following additional data are always available:

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

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



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



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

Tab MBG



Configuring the **MBG** is not required in this recording solution.

7.2.2.6.7 Configure monitor points for MX-ONE CSTA trunk-side recording

In this configuration step, the monitor points of the monitored end devices are configured.

1. In the main view in the line *Configure monitor points*, click on the button  (*Edit configuration step*).

⇒ The window *Step: Configure monitor points* appears in the detail view.

NOTICE! For trunk-side recording, no extension monitor points must be configured. In this case, only the **SIP** trunks are configured.

Tab SIP Trunks

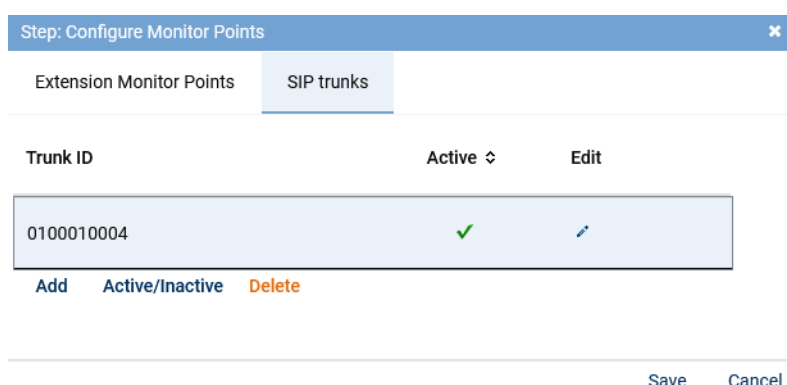
In this tab, you can add, activate, deactivate or remove **SIP** trunks.




As different **SIP** trunks (trunk IDs) may be used, it is advisable to configure all **SIP** trunk IDs configured in the PBX in the recording system so that no information is lost when changing.

1. Click on the button *Add* to add a **SIP** trunk.

⇒ A new row appears.



Trunk ID	Active	Edit
0100010004	✓	

[Add](#)
[Active/Inactive](#)
[Delete](#)
[Save](#)
[Cancel](#)

Fig. 57: Add SIP trunks

The **SIP** trunk IDs consist of Trunk Line Numbers configured in the **PBX** and are composed as follows:

Layout of a Trunk Line Number

R route number fill with leading zeros, route number 1	RRR = 001
L LIM number fill with leading zeros, LIM 1	LLL = 001
X trunk individual, fill with leading zeros, trunk id 9	XXXX = 0009



Example (Route Number 63)

```
MDSH> roedp:tru=all,rou=63;
ROUTE EQUIPMENT DATA
ROU TRU EQU IP ADDRESS INDDAT CNTRL
```

```
63 001-1 H'000000000000
63 001-2 H'000000000000
63 001-3 H'000000000000
63 001-4 H'000000000000
63 001-5 H'000000000000
63 001-6 H'000000000000
63 001-7 H'000000000000
63 001-8 H'000000000000
63 001-9 H'000000000000
63 001-10 H'000000000000
```

Result:

0630010001
 0630010002
 0630010003
 0630010004
 0630010005
 0630010006
 0630010007
 0630010008
 0630010009
 0630010010


1. At the end of the row in the column *Edit*, click on the icon .
 ⇒ The entry mode opens.
2. In the column *Trunk ID*, enter the name of the trunk.
3. Once you have finished editing, click on the icon  at the end of the row to apply the entries.
4. Repeat the process to add further [SIP](#) trunk IDs.
5. To save the entries, click on the button *Save*.
 To discard entries, click on the button *Cancel*.

7.2.2.6.8 Global recording settings



Configuring global recording settings such as transport protocol, authentication or registration on the [PBX](#) is not required for trunk-side recording.

7.2.2.6.9 Configure recording servers

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

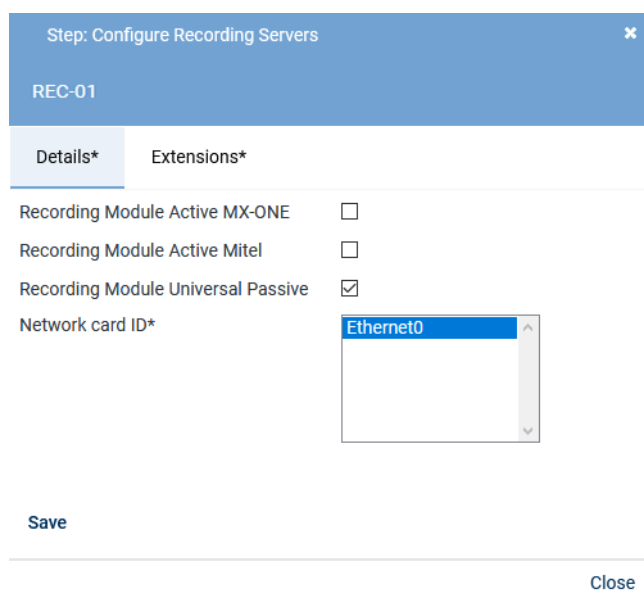


Fig. 58: Configuration step - Configure recording servers

2. *Recording Module Active MX-ONE* is not relevant for this recording solution.
3. *Recording Module Active Mitel* is not relevant for this recording solution.
4. Activate the function *Recording Module Universal Passive* for this recording variant.

Parameter	Value/Description
Network card ID	From the list field, select the network card which is supposed to be used for sniffing RTP audio data.

Tab. 13: Configure recording servers



To avoid that other network traffic interferes with sniffing audio data, a separate network card must have been configured for sniffing which receives only a copy of the audio data of the calls from the SPAN port of a network switch that reach the PBX via the trunk. If additional network traffic is sent to the recording server via the SPAN port, the system's performance may be severely compromised.

5. Click on the button *Save*.
6. Click on the button *Close* to finish this configuration step.



If you use several passive integrations in one recording architecture, you must assign a different network card to each recording server in the configuration step *Configure recording servers*.



If a network card for passive VoIP recording is added in a system in a virtualized environment and does not appear in the selection of available network card IDs, then you have to reboot the server.



Following an update, you must configure this section again.

7.2.2.6.10 Configure add-on



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



Add-ons are not supported in this recording solution.


7.2.2.6.11 Configure miscellaneous settings




Configuring these settings is not required for this recording solution. Even without this configuration step, the integration has been configured comprehensively and can be activated.

7.2.2.6.12 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*.











Mitel MiVoice MX-ONE CSTA		Mitel MiVoice MX-ONE CSTA	✗	✓
Step	Configuration			
Configure recording architecture	✓ 			
Configure CTI connection data	✓ 			
Configure monitor points	✓ 			
Global recording settings	✓ 			
Configure recording servers	✓ 			
Configure add-on	✓ 			
Configure miscellaneous settings	✓ 			

Fig. 59: Activate integration

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.

Mitel MiVoice MX-ONE CSTA		Mitel MiVoice MX-ONE CSTA	✓	✓
Name ↕	Type ↕	Active ↕	Status ↕	
Mitel MiVoice MX-ONE CSTA	Mitel MiVoice MX-ONE CSTA	✓	✓	

Fig. 60: Activated integration



If you use several PBXs, you can create and activate several integrations with the same recording architecture.



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.



Upon activating the standard configuration, a bulk recording will start.


To restrict the recording to particular end devices, the tenant can configure the Recording Planner in the System Configuration accordingly.





For updates, the integration is stopped and deactivated. Once the update has been completed successfully, you must configure the integration again. Once the configuration has been completed, start the recording architecture again and activate the integration so that the new configuration is applied.

7.2.2.6.13 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 ⇅
 Mitel MiVoice MX-ONE CSTA	Mitel MiVoice MX-ONE CSTA		

Fig. 61: Deactivate integration

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

8 Troubleshooting



Before initiating any troubleshooting measures, verify that the recording solution has been configured according to the description in the manual and check whether an up-to-date hotfix version with bug fixes is available.

If no recording is possible, check:

- whether the correct network card has been selected in System Configuration, see [chapter "Configure server", p. 20](#).
- the correct installation of the [SPAN](#) port

When opening a ticket, include the following information:

- Log files with test calls
NOTICE! Before creating any log files, adjust the settings of the log levels in the Log Level module in the System Monitoring as described below, see user manual *System Monitoring*.
- detailed description of the issue and of the scenarios of the test calls which have been made
- extension, MAC IP address of the affected device
- manufacturer, type, and software version of the PBX
- Wireshark traces of the recording network interface

Log level settings

Module	Log level
RECORDING_CONTROL	DEBUG
RECORDING_MODULE_MANAGER	DEBUG
API_SERVER	DEBUG
FILE_MANAGER	DEBUG

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Glossary

API

Application Programming Interface

API server

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

CSTA

Computer Supported Telecommunications Applications (CSTA) Standard which defines how data is transferred between PBX and all external computer programs connected to the device.

CTI

Computer Telephony Integration

IP

Internet Protocol, basic protocol for Internet communication

LCR

Last Conversation Repeat

MBG

Mitel Border Gateway

PBX

Private Branch Exchange

RTP

Real-time Transport Protocol is a protocol to continuously transmit audio and video files via the IP protocol within the network.

SIP

Session Initiation Protocol

SPAN

Switched Port Analyzing

TCP

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

TDM

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

TLS

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

UDP

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

URL

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

VM

Virtual machine

VoIP

Voice over IP