MANUAL ANSWITCH V6

Manual anSwitch V6 Operation

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Author: D. Bochsler

Contents

1 Information About this Manual

1.1 Purpose of this Documentation

This document describes the configuration, operation and maintenance of the anSwitch V6 customer Accounts.

The following aspects are covered:

- Description of the configuration of the anSwitch V6 using the web based ConfigurationCenter for administrators and operators, AdminCenter for users.
- Description User accounts with their roles and scopes of accessing the different resources.
- Description of how to apply multi-tenancies.
- Description of the configuration of customer accounts and phone numbers (SIP addresses).
- Description of configuring profile repositories and how they can be applied to Accounts and Addresses.

1.2 Target Audience

This manual is intended for the following users:

- Administrators that must set up new Tenants.
- Administrators that must set up new User accounts.
- Administrator/Operator that must set up new profiles to be used in Accounts and Addresses.
- Operators that must set up new customer Accounts and configuring them according to the customer requirements.
- Supporters who need to help users and customers to solve problems.

2 The Configuration Interfaces of the anSwitch V6

2.1 Introduction

An anSwitch V6 must be configured at various levels to ensure complete and trouble-free operation.
Overview of the configuration interfaces:

Configuration:	Brief description:	Chapter:
Operational anSwitch V6 Configuration	All operational configurations are stored in the anSwitch V6 database. All anSwitch V6 components obtain their operational parameters from the database. The database can be fed via various interfaces:	
	ConfigurationCenter The ConfigurationCenter is a web-based GUI for administrators, operators and supporters of the anSwitch V6. It allows the configuration of all operational parameters of the anSwitch V6. Different authorization levels (roles) can be used to restrict the options within the Configuration-Center.	2.2 ↗
	AdminCenter Via this web-based GUI, the user or customer can make limited configurations for his number or activate features, e.g. set up call forwarding, listen to voice mail, etc.	2.3 ↗
	DataAccessCenter The DataAccessCenter is an HTTP/HTTPS based interface that allows 3rd party applications to access the anSwitch V6 data. For example, the operator could use this interface to set up new customer accounts in his CRM system. The interface enables the configuration of all parameters in the an-Switch V6 database. Access is protected by HTTP authentication. The XLS transformation XSLT is supported.	2.4 ↗
	Other specific interfaces allow a limited configuration of accounts and telephone numbers (SIP addresses):	
	Import/Export via ConfigCenter Importing and exporting configuration data using "MS Excel" files enables accounts and addresses to be read, manipulated and written. Deleting is not possible.	2.5 ↗
anSwitch V6 Components	The anSwitch V6 itself is made up of several interacting components. These anSwitch V6 components are operated as services and - identical to the Linux service - are configured by their configuration files. The anSwitch V6 configuration files are used to make system-wide settings in the anSwitch V6. Aarenet system engineers manage these configuration files and supplement them with system and customer specific settings during commissioning. ➜ The configuration of the anSwitch V6 components is not part of this documentation.	
Linux OS & Services	The anSwitch V6 uses the kernel and services of the Linux operating system as integral components of the anSwitch V6, e.g. MySQL database. These services are parameterized by means of their configuration files. Aarenet system engineers manage these configuration files and supplement them with system and customer-specific specific settings during commissioning. ➜ The configuration of the anSwitch V6 components is not part of this documentation.	

2.2 ConfigurationCenter

2.2.1 Functionality of the ConfigurationCenter

The ConfigurationCenter is a web-based GUI that can be operated with any modern web browser. It enables the configuration of all operational parameters of the anSwitch V6, e.g. accounts and addresses, activation of user features, call routing, gateway setup, etc. The ConfigurationCenter also provides important sources of information for support.

Access to the ConfigurationCenter is only granted to authenticated users. With authentication, Configuration-Center users are each assigned a role that restricts, prevents or even hides the ability to configure or view parameters.

The following roles are available:

- ▸ Administrator
  The administrator has all authorizations to configure the anSwitch V6.

- ▸ Operator
  Above all, the Operator can set up, change and delete accounts and addresses. He can also perform all the activities of the Supporter.

- ▸ Supporter
  The supporter has access to all information that helps to identify and analyze a problem.

The access rights of the roles Administrator, Operator and Supporter can be restricted to the scope of a Tenant.

On demand Aarenet system engineers can create further roles with specific insights and configuration possibilities.

2.2.2 Access to the ConfigurationCenter

Access is possible with any modern web browser. Access is granted with the username and password on the URL specified by the administrator.

For the ConfigurationCenter, the URL must have the following form:

```
HTTP://<IP_ADDRESS>:<TCP_PORT>/configcenter
or
HTTPs://<DOMAIN>:<TCP_PORT>/configcenter
```

The default TCP port is 8443.

Example:

```
https://demo.aarenet.com:8443/configcenter
```

Note	The options offered in the ConfigurationCenter may differ from the options described below. This is due to the assigned user role and/or enabled features in anSwitch V6.
	➔ If in doubt, contact the administrator or operator.

2.2.3   Welcome and Main Page

If contact was established with the ConfigurationCenter via the web browser, the welcome window with the login dialog appears first, e.g.:

The content of the welcome window may vary depending on the system and configuration.

After entering the login credential, the main window of the ConfigurationCenter opens:
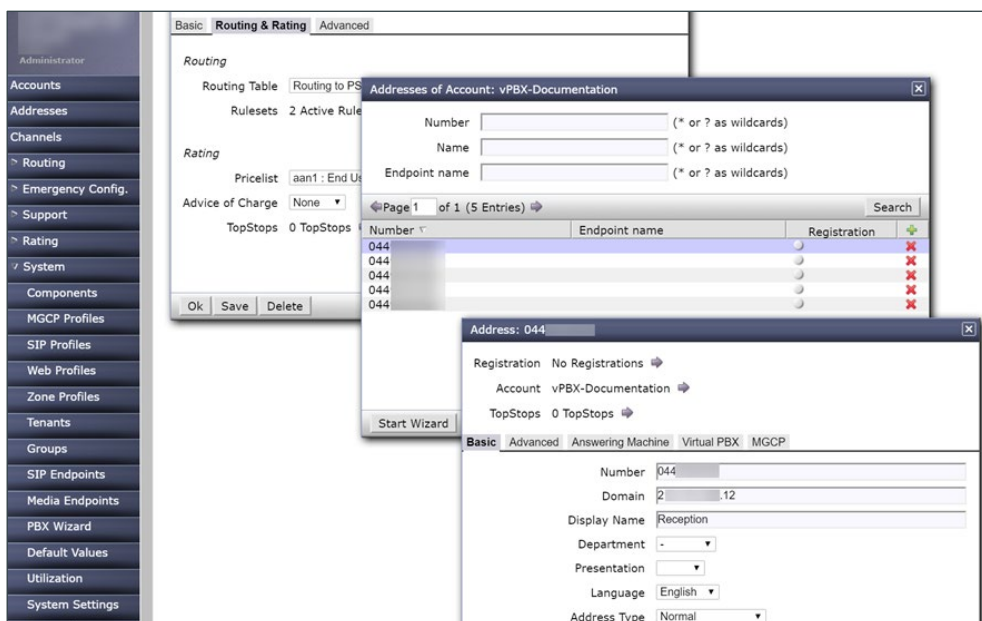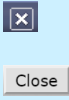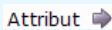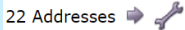
The content of the welcome window may vary depending on the system and configuration.

Note	If the login credentials are entered incorrectly several times, the ConfigurationCenter is blocked for the current HTTP dialog and user for a few minutes

2.2.4   Navigation and operating elements of the web-based centers

The navigation and operating elements are based on current standards:

Navigation element:	Remark:
Accounts Addresses Channels ⊳ Routing	Click on a menu item to open the desired configuration window.
⟳	Update the main window and all open configuration windows.
▣	All open configuration windows are closed.
	In configuration windows with lists, arrows can be used to scroll from one page to the next. A page number can also be entered directly to jump to.
Search☐	A search term can be entered in configuration windows with lists. All entries containing the search term are displayed.
✚	Clicking on the [✚] button opens a configuration dialog for a new instance of the object, e.g. a new account, an additional address for an account.
✖	Click on the [✖] button to delete the displayed instance.
☒ Close	Clicking on the [☒] or [Close] button closes a dialog or window without saving and activating any configurations that have been made.
Delete	Click on the [Delete] button to delete the displayed instance.
Save	By clicking on the [Save] button, the displayed instance is saved and is immediately active. The configuration dialog is not closed.
Ok	Click on the [Ok] button to save the displayed instance and it is immediately active. The configuration dialog is closed.
🔍 ...	Clicking on the [Magnifying glass] button opens a search dialog which allows you to search for the desired entry.
Attribut ➡	Click on the [➔] button to open the configuration dialog for the associated entity.
22 Addresses ➡ 🔧	Click on the [🔧] button to open the wizard dialog, which guides you through the corresponding configuration.

2.2.5   System-wide Configurations for the ConfigurationCenter

System-wide configurations for the ConfigurationCenter are:
▶   The appearance of the welcome and main window.
▶   Visibility of menus, dialogs and parameters.
▶   Definition of roles.

System-wide settings can be defined for communication with the ConfigurationCenter:
▶   The HTTP or HTTPS protocol to be used.
▶   The TCP port to be used.

2.3   AdminCenter

2.3.1   Functionality of the AdminCenter

The AdminCenter is the configuration GUI for the user e.g. for selfcare. The "User" can configure personal set-tings, e.g. call forwarding, accessing the VoiceMail Box, call list etc.

The AdminCenter offers the same configurations as the ConfigCenter but in an optimized view and options for the standard user.

The design of the AdminCenter requires a minimum of design elements so that it can be integrated into an existing provider website.

2.3.2   Access to the AdminCenter

Access is possible with any modern web browser. Access is granted with the username and password on the URL specified by the administrator.

For the AdminCenter, the URL must have the following form:

```
HTTP://<IP_ADDRESS>:<TCP_PORT>
or
HTTPs://<DOMAIN>:<TCP_PORT>
```
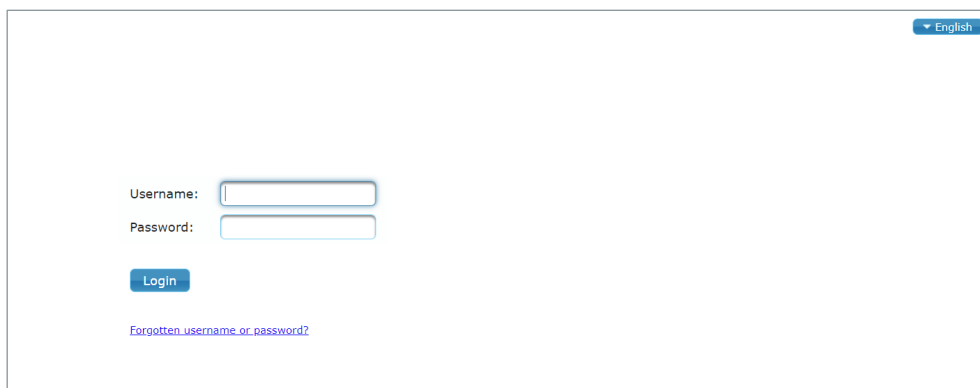
The default TCP port is 8448.

Example:

```
https://demo.aarenet.com:8448
```
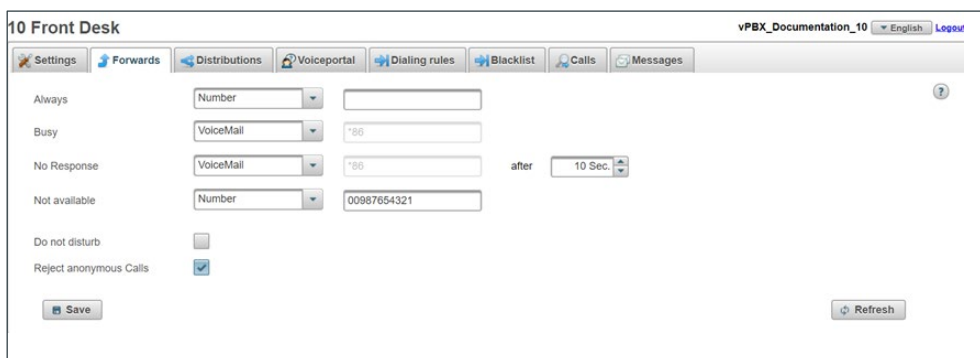
2.3.3   Welcome and Main Page

If contact was established with the AdminCenter via the web browser, the welcome window with the login dialog appears first, e.g.:

The content of the welcome window may vary depending on the system and configuration.

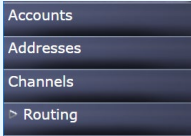After entering the login credential, the main window of the ConfigurationCenter opens:

The content of the welcome window may vary depending on the system and configuration.

2.3.4   The AdminCenter Online Help

Check the AdminCenter online help for the handling and configuration possibilities.

For details see the anSwitch V6 <u>AdminCenter online help</u> ↗.

2.4 DataAccessCenter

2.4.1 Functionality of the DataAccessCenter

The DAML API of the DataAccessCenter allows configuring the anSwitch V6 directly from a customer management system CMS. In a multi-tenant setup of an anSwitch V6 every tenant can have its own CMS application that manages just their own resources.
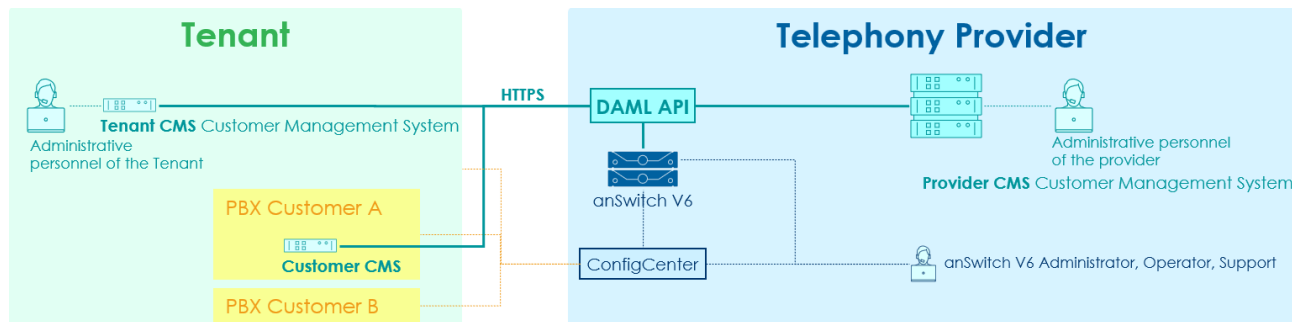
The anSwitch V6 configuration DAML API cover these general features:

▸ Security by:

  ▸ Individual login and authentication for each CMS application.

  ▸ Access only to the assigned resources.

▸ Secure data transfer by HTTPS.

Note	For detailed information check the anSwitch V6 document: "Manual DataAccessCenter DAML API".

2.5 Account Management by Export/Import of Excel Files in the ConfigurationCenter

2.5.1 Introduction

Account data can be imported or exported to the anSwitch V6 database via the file import/export in the ConfigurationCenter.

This configuration interface is characterized by the following features:

  ▸ Account can be selected and exported in the ConfigurationCenter.

  ▸ Excel files with account data can be imported in the ConfigurationCenter.

  ▸ Accounts can be opened.

  ▸ The basic data of an account can be modified.

  ▸ New addresses can be added to an account.

  ▸ The basic data of an address can be modified.

  ▸ The transfer of data to Excel files enables the configuration of an account without knowledge of the organization in the anSwitch V6 database.

Note	Limitation: Existing accounts and addresses cannot be deleted!

2.5.2 Structure of the Account Excel File

Warning	The structure of the account Excel file can change with every anSwitch V6 version without notice!
	➔ Theses account Excel files must not be used for backup purposes!
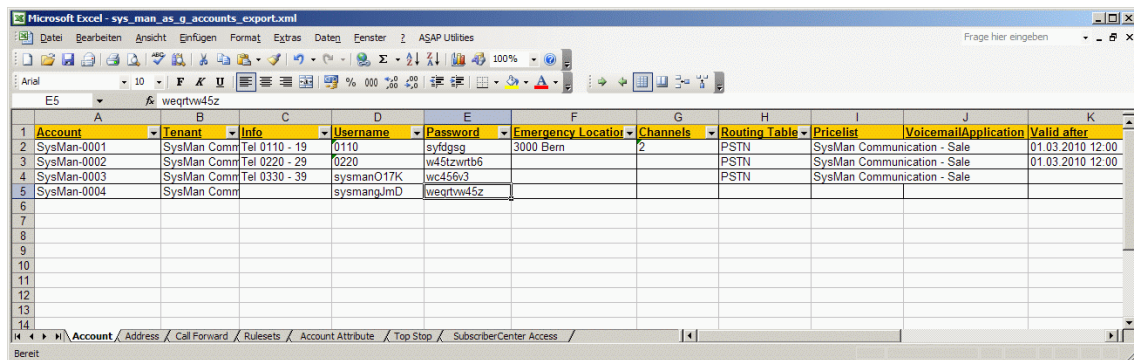
The account export file is structured as an XML file and can be edited with an ASCII editor:

```
1   <?xml version="1.0" encoding="UTF-8" standalone="no"?>
2   <?mso-application progid="Excel.Sheet"?>
3   <Workbook xmlns="urn:schemas-microsoft-com:office:spreadsheet" xmlns:html="http://www.w3.org/TR/REC-
4     <DocumentProperties xmlns="urn:schemas-microsoft-com:office:office">
5       <LastAuthor>Martin Schmid</LastAuthor>
6       <LastSaved>2010-01-04T14:44:25Z</LastSaved>
7       <Version>12.00</Version>
8     </DocumentProperties>
9     <ExcelWorkbook xmlns="urn:schemas-microsoft-com:office:excel">
10      <WindowHeight>10005</WindowHeight>
11      <WindowWidth>21600</WindowWidth>
12      <WindowTopX>120</WindowTopX>
13      <WindowTopY>135</WindowTopY>
14      <ProtectStructure>False</ProtectStructure>
15      <ProtectWindows>False</ProtectWindows>
16    </ExcelWorkbook>
17    <Styles>
18      <Style ss:ID="Default" ss:Name="Normal">
19        <Alignment ss:Vertical="Bottom"/>
20        <Borders/>
21        <Font ss:FontName="Arial"/>
22        <Interior/>
```

The exported file is provided with an "MS Excel" `<ExcelWorkbook> header`. This makes it easy to open the file in "MS Excel" and conveniently edit the data:

The various configuration topics are organized in spreadsheets and can be edited directly. The configurations are assigned using the account name in the first column of each worksheet. Multiple entries, e.g. addresses of an account, always start with the identifying account name:

Most entries are character strings, such as for the Account parameter. If the possible parameter values are specified by the system, they can be selected using a selection list:
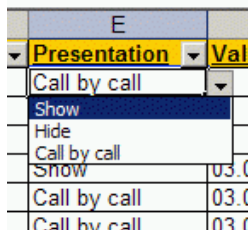
2.5.3 Export the Account Data in XML-Formatted File

Log in the ConfigCenter as Administrator/Operator

> Menu: Accounts
> > Search for the desired account or accounts
> > ➔ The displayed accounts will be exported!
> > > Click button: Export
> > > > Rename and save the generated file "accounts.xml" if necessary.

2.5.4 Modify or Add new Accounts in Excel File

It is assumed that exported "accounts.xml" was modified with e.g. MS Excel:
> Modify existing values.
> Add new accounts with their properties and values.

➔ Before importing make sure that the modified account file is XML formatted.
> Menu: Accounts
> > Click button: Import
> > > Select the to import file in dialog: File Upload
> > > > Click button: Upload file
> > > > > A consistency check is first carried out before the data can be saved.
> > > > > > In case of an error the dialog "File Import" click button: Details
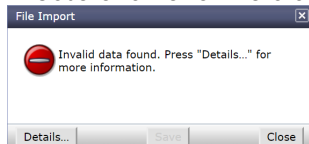
Check the displayed details for evaluating the problem.
> > > > Click button: Save, when the data are consistent.

3 User Accounts for Accessing the Configuration Interfaces

3.1 Overview of the User Accounts

Every user that must access the ConfigCenter needs a user account. The account is also valid for accessing the AdminCenter.

The anSwitch V6 landscape of the different user accesses:
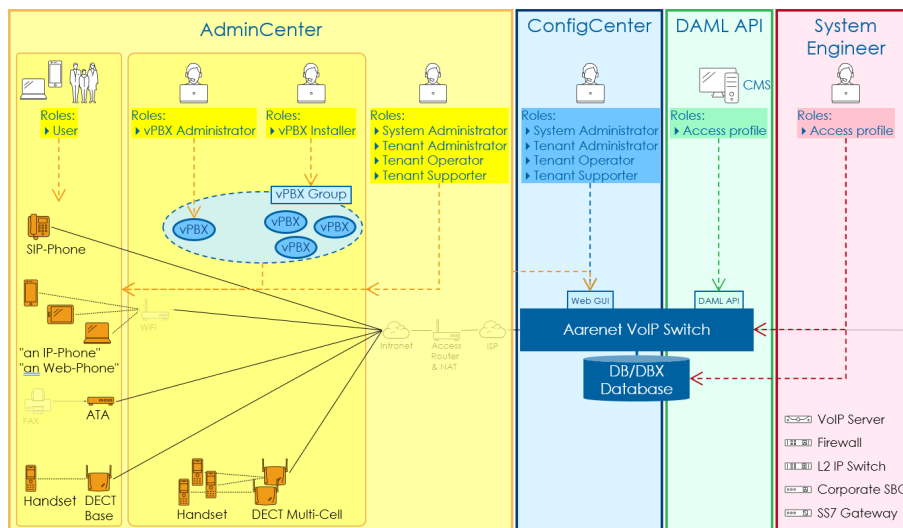
Overview of the different roles and their responsibilities:

AdminCenter	ConfigCenter	DAML API	System Engineer
Roles: ‣ vPBX Administrator ‣ vPBX Installer ‣ User ‣ System Administrator ‣ Tenant Administrator ‣ Tenant Operator ‣ Tenant Supporter	Roles: ‣ System Administrator ‣ Tenant Administrator ‣ Tenant Operator ‣ Tenant Supporter	Roles: ‣ Access profile	Roles: ‣ Access profile
Access: ‣ Web GUI (PC & Mobile)	Access: ‣ Web GUI	Access: ‣ HTTPS/XML	Access: ‣ SSH/SSL, Command line
Description of the Roles: ‣ The "vPBX Administrator" can configure and manage the vPBX and its extensions. ‣ The "vPBX Installer" can configure and manage all vPBXs of its vPBX group. ‣ The "User" can configure and manage its own vPBX extension or residential access. ‣ The "System Administrator" can mange all vPBX. ‣ The "Tenant Administrator, Operator, Supporter" can mange all vPBX of its tenant.	Description of the Roles: ‣ The "System Administrator" can configure the hole VoIP switch. He has all rights. ‣ The "Tenant Administrator" can configure all resources of its tenant. This role has also the operator and supporter rights. ‣ The "Tenant Operator" configures and manages the accounts of its tenant. This role has also the supporter rights. ‣ The "Tenant Supporter" can access the support tools and modify the accounts of its tenant.	Description of the Roles: ‣ The providers CRM system can configure and manage accounts via the DAML API. ‣ Each tenant may have its own access profile which defines the manageable objects and ensures that only accounts of its tenant are accessible.	Description of the Roles: ‣ The "System Engineer" has access to configure and manage the Aarenet VoIP Switch components. ‣ He can perform system wide configurations and maintenance on all VoIP System devices.

A user with the role of Administrator can create and manage user accounts for the ConfigurationCenter. A user account consists of these data:

‣ Name and password of the user account.
‣ Which role is granted to the user.
‣ Resources the user is allowed to access.
‣ Which language is used in the ConfigurationCenter for this user.
‣ Two-Factor and/or LDAP authentication is applied.
‣ Email address for password recovery (via AdminCenter login only).
‣ Deblocking a user account.

The roles are generally assigned the following authorizations:
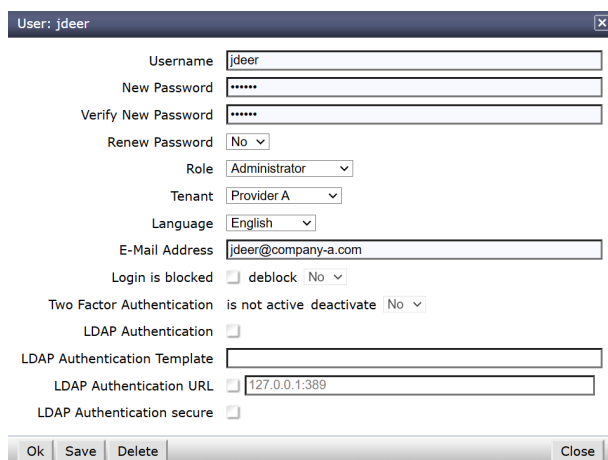
- ▸ Administrator:
  The user can manage all resources of the anSwitch. The access can be limited to scope of a tenant.
- ▸ Operator:
  The user can manage all accounts and its related resources of the anSwitch V6. The Operator has access to all anSwitch V6 support tools. The access can be limited to the scope of a tenant.
- ▸ Supporter:
  The user can read all accounts and its related resources of the anSwitch V6. The Supporter has access to some anSwitch V6 support tools. The access can be limited to the scope of a tenant.

3.2 Manage the User Accounts

For the creation, modifying or deleting a User account, login as Administrator:
> Menu: System
>> Sub-Menu: Users
>>> The dialog "Users" is displayed. It allows:
>>>> ▸ To create a user account, click icon
>>>> ▸ Modify and delete a user account, click the row of the desired account.
>>>> ▸ Delete a User account click icon ✖ or click the button "Delete" in the dialog "User: ..."
>>>>> Configure the user account in dialog: User
>>>>>> Parameter list, see below
>>>>>>> Click button: Save

3.3 Configuring the User Account Parameters by an Administrator

Parameter Name	Data Type	Allowed Values	Description
Username	String	[empty | Max. 128 char] Default: empty	Defines the username for this user.
New Password	String	[empty | Max. 128 char] Default: empty	Defines the password for this user.
Verify New Password	String		Re-enter the password for check.
Renew Password	Selection	[No | Yes]	Defines if the password must be changed by the user upon the first login.

Parameter Name	Data Type	Allowed Values	Description
		Default: No	
Role	Selection	[Supporter | Operator | Administrator | PBX Installer | PBX Administrator] Default: Supporter	Defines the role of the user. Values: ▸ Administrator: The user can read all accounts and its related resources of the anSwitch V6. The Supporter has access to some anSwitch V6 support tools. ▸ Operator: The user can manage all accounts and its related resources of the anSwitch V6. The Operator has access to all anSwitch V6 support tools. ▸ Supporter: The user can read all accounts and its related resources of the anSwitch V6. The Supporter has access to some anSwitch V6 support tools. ▸ PBX Installer: ▸ PBX Administrator: Deprecated. Defines the access to a certain vPBX or list of vPBXs.
Tenant	Selection	[- (none) | List of configured tenants] Default: - (none)	Defines the scope of the accessible resources for the user. Values: ▸ - (none): No limitations ▸ Name: Defines the tenant resources the user has access to.
Language	Selection	[English | German | Vietnamese] Default: English	Defines the language of the ConfigCenter configuration pages.
E-Mail Address	Email Address	[empty | Max. 128 char] Default: empty	Defines the email address where password recovery information for the AdminCenter is sent to.
Login is blocked	Selection	[No | Yes] Default: No	Displays if the account is blocked by too many unsuccessful login attempts. Deblock the account by selecting "Yes"
Two Factor Authentication	☐	Activate Default: Not activated	If activated, defines that the login to the AdminCenter is secured by a two-factor authentication.
LDAP Authentication			Defines the user authentication against a LDAP service. ➜ Check with the Aarenet support for configuration.
LDAP Authentication Template			
LDAP Authentication URL			
LDAP Authentication secure			

3.4   Manage User Account Configuration by the User by the ConfigCenter

The user can manage its own user account:
> Menu: Settings
>> The dialog "Settings" is displayed. It allows:
>> To modify the own user account
>>> Configure the user account in dialog: Settings
>>>> Parameter list, see below
>>>>> Click button: Save

| Note | If the password is lost, contact an Administrator. The Administrator can define a new temporary password for each role. |

Parameter Name	Data Type	Allowed Values	Description
Username	String	[empty | Max. 128 char] Default: empty	Defines the username for this user.
New Password	String	[empty | Max. 128 char] Default: empty	Defines the password for this user.
Verify New Password	String		Re-enter the password for check.
Language	Selection	[English | German | Vietnamese] Default: English	Defines the language of the ConfigCenter configuration pages.
E-Mail Address	Email Address	[empty | Max. 128 char] Default: empty	Defines the email address where password recovery information for the AdminCenter is sent to.

4 Organization Unit "Tenant" & "Group"

4.1 Overview Organization Unit "Tenant" & "Group"

4.1.1 Overview of "Tenant"

A "Tenant" defines an organization unit that is used for separating multiple "Telephone Service Providers" that share the same anSwitch V6.

A "Tenant" is used to bundle accounts and resources that are just available and visible to the tenant's Administrators, Operators and Supporters.
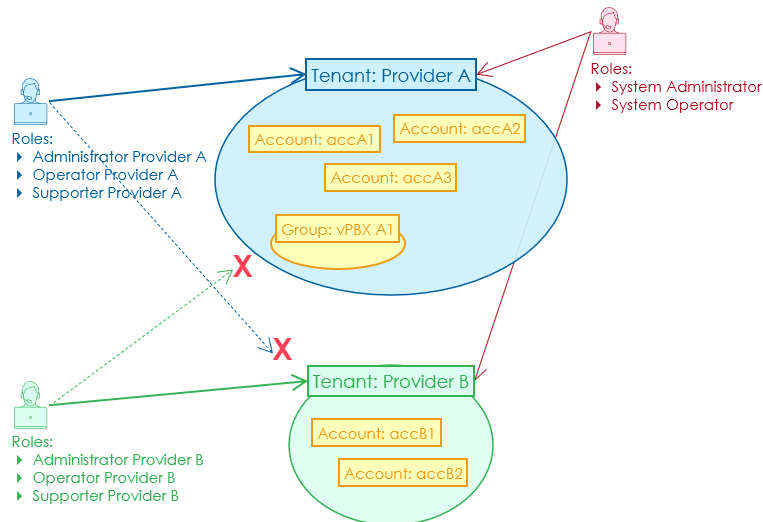
A "Tenant" can manage the following recourses of its own:

▶ Customer Accounts
▶ Concerning the call routing:
   ▶ RuleSets
   ▶ Numbering Plans
   ▶ Routing Tables
   ▶ Gateways

▶ Concerning the Rating:
   ▶ Pricelists for its customers
   ▶ Pricelists for purchasing at PSTN carriers.
   ▶ Rating reports

▶ Concerning the configuration:
   ▶ Tenant Administrator access
   ▶ Tenant Operator access
   ▶ Tenant Supporter access
   ▶ DAML API access
   ▶ Default configurations for new account.

For assigning specific behaviors and limits to a "Tenant" a specific "Group" has to be associated.

4.1.2 Overview of "Group"

The "Group" defines a hierarchical structured organization unit that allows to assign values and behaviors to its members, e.g. tenant:

▶ The "Group" manages configurations like e.g., max. number of concurrent channels per tenant.
▶ The "Group" configurations are managed with attributes which assign the desired property and its value to e.g. a tenant.
▶ A "Group" can have child-groups:
   ▶ Inherit the attributes and behaviors from its parent.

▶   Can overwrite values that are inherited from its parent group.

▶   (Deprecated: The "Group" behaviors are determined by their "Type", e.g. vPBX.)
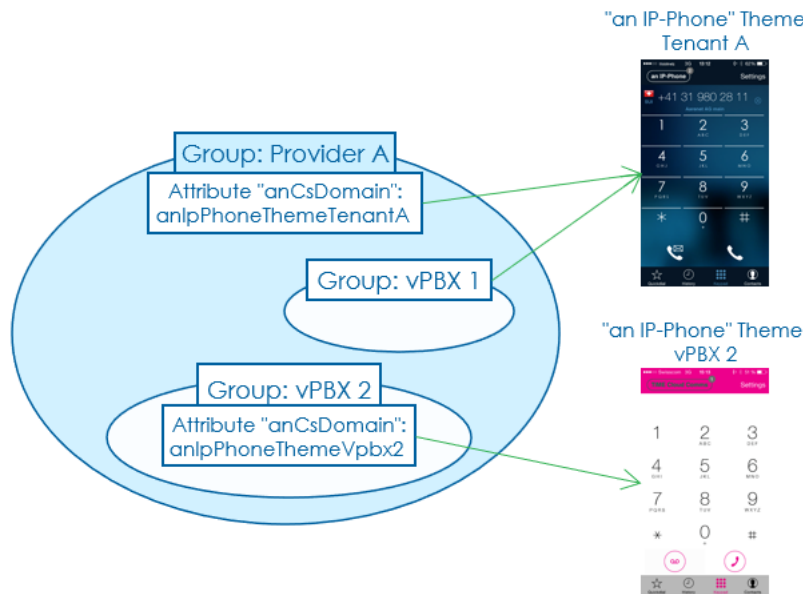
4.1.3   Alternative Usages of a "Tenant"

The concept of "Tenant" can also be used e.g. administrative separation of resources, different types of offerings or access control for Operators/Supporters:

▶   If certain resources in an anSwitch V6 , e.g. gateways, should not be visible to all, it is advisable to open a tenant with the name "System" and assign all these resources to the "System". These resources are then only accessible to e.g. system administrators.

▶   Organize e.g. residential accounts in a tenant and business customers with SIP-trunk in a different tenant.

▶   Create a sandbox tenant where to test new configurations of resources, e.g. RuleSet, Routing Tables, etc.
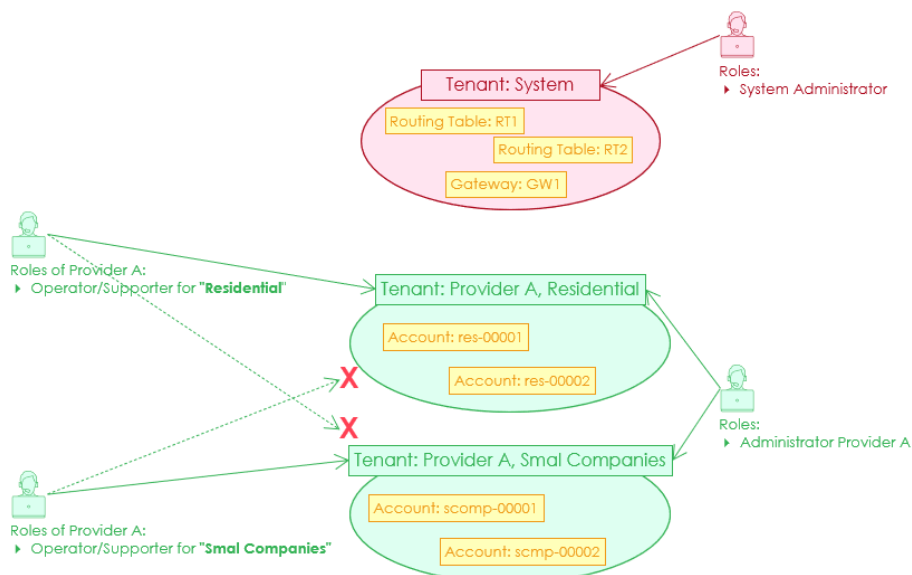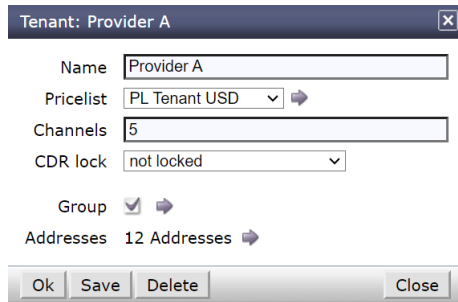
4.2   Manage the OrgUnit "Tenant"

Adding a new Tenant or managing an existing one, open the ConfigCenter as system Administrator or Operator.
> Menu: System
>> Sub-Menu: Tenants
>>> The dialog "Tenants" is displayed. It allows:
>>>> ▸ To create a new Tenant, click icon ✚
>>>> ▸ Modify and delete a Tenant, click the row of the desired Tenant.
>>>> ▸ Delete a Tenant click icon ✖ or click the button "Delete" in the dialog "Tenant: ..."

4.2.1   Configuring the Tenant Parameters

Parameter Name	Data Type	Allowed Values	Description
Name	String	[empty | Name, max. 64 char] Default: empty	Defines the name of the tenant.
Pricelist	Selection	[- (none) | List of configured and allowed pricelists] Default: - (none)	Defines an optional price list that is used for computing the charges of a connection the tenant hast o pay to e.g. PSTN Carrier. Values: ▸ - (none): No pricelist assigned, then no connection charges can be computed. ▸ Selected price list: Defines the price list to use.
Channels	Number	[empty | ≥ 0] Default: empty	Defines the limitation of concurrent connection for the tenant. Values: ▸ empty: No limitations ▸ 0: No connections are possible. ▸ ≥ 1: Limit of max. concurrent connections.
CDR lock	Selection	[not locked | List of the last three month] Default: not locked	Defines how long the CDRs of the tenant must not be changed or deleted in the CDR database. This setting can override the value of the system CDR cleanup task. Values:
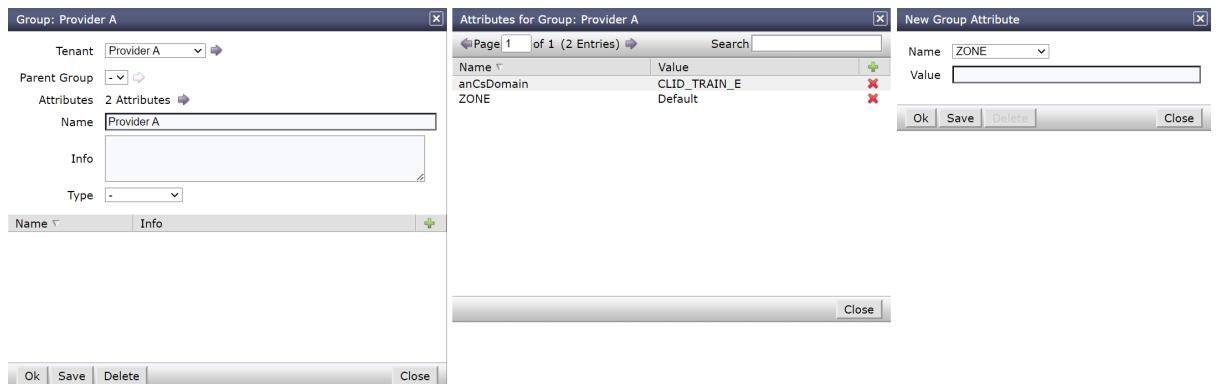
Parameter Name	Data Type	Allowed Values	Description
			▸ not locked: The CDRs are not locked. ▸ List selection: The CDR lock period.
Group	Display & link	Group ✔ ➡	Displays if the tenant has an associated group with the same name. ➡ is the link to the group configuration, details see "Manage the OrgUnit "Group"" ↗.
Addresses	Display & link	Addresses 12 Addresses ➡	Displays the number of active SIP addresses of this tenant. ➡ is the link to the address list of this tenant, details see "Manage Addresses of an Account (Phone Numbers)" ↗.

4.3   Manage the OrgUnit "Group"

Adding a new Group or managing an existing one, open the ConfigCenter as system Administrator or Operator.
> Menu: System
  > Sub-Menu: Groups
    > The dialog "Groups" is displayed. It allows:
      ▸ To create a new Group, click icon ➕
      ▸ Modify and delete a Group, click the row of the desired Group.
      ▸ Delete a Group click icon ✖ or click the button "Delete" in the dialog "Group: …"

4.3.1   Configuring the Group Parameters & Attributes

Parameter Name	Data Type	Allowed Values	Description

Tenant	Selection	[- (none) |
		  List of configured and
		  allowed tenants]
		
		Default: - (none)
			Defines the tenant this group belongs to.
			
			Values:
			▸ - (none):
			  No parent assigned.
			
			▸ Tenant:
			  Defines the selected tenant this group be-longs

Parent Group	Selection	[- (none) |
		  List of configured and
		  allowed groups]
		
		Default: - (none)
			Defines the parent group of this group.
			
			This group inherits all configurations from its parent group unless the parameters or

Parameter Name	Data Type	Allowed Values	Description

			attributes overwrite the corresponding values from the parent.
			
			Values:
			▸ - (none):
			  No parent group assigned.
			
			▸ Group:
			  Defines the selected parent group.

Attributes	Display & Link	2 Attributes ➡	Displays if the number of attributes defined in this group. ➡ is the link to the attribute configuration. It opens the dialog with the list of assigned attributes and allows to manage the attributes.
Name	String	[empty | Name, max. 64 char] Default: empty	Defines the name of the group. Note: If the group is associated with a **tenant**, then its name **must be identical** to the tenant!
Info	String	[empty | Name, max. 128 char] Default: empty	Any information about this group

Type	Selection	[- (none) |
		  PBX |
		  Department]
		
		Default: - (none)
			Defines the group type.
			
			Values:
			▸ - (none):
			  → Use this for groups associated with a tenant.
			
			▸ PBX, Department:
			  → Deprecated
			  Defines a vPBX or department of a vPBX group.

Name & Info		*List of children groups of this group.*	

Configure Group Attribute:

New Group Attribute ☒

Name [ZONE ˅]

Value [Public Zone]

[Ok] [Save] [Delete]   [Close]

Parameter Name	Data Type	Allowed Values	Description
Name	Selection		Defines the Group Attribute name.
Value	String	[empty | Value, max. 256 char] Default: empty	Defines the value of the attribute.

4.3.2   List of the Group Attributes

Group Attribute	Description
ZONE	Refers to a Zone Profile "Key", which is configured in ConfigCenter > "System" > "Zone Profiles". It is used to differentiate the provisioning behavior of devices in distinct IP Zones.
anCsDomain	Defines "Cloud ID" of the "an IP-Phone". The "Cloud ID" defines the validity and GUI of the "an IP-Phone".
channels maxPrivate musicOnHold publicPrefix switchNight switchWeekend teamsDomain	Obsolete vPBX attributes
anSoftDomain	Deprecated

5 The Customer "Account"

5.1 Introduction to the Central Function of the Account

In the anSwitch V6 the user or customer is represented in the "Account".

In the context of the anSwitch V6 nearly all user configuration eclipse the "Account"

▸ All configurations of an account are directly done in the menu "Account", e.g. the SIP credentials, or assigned via profiles, e.g. the routing table.

▸ An account is usually configured by an "Operator".
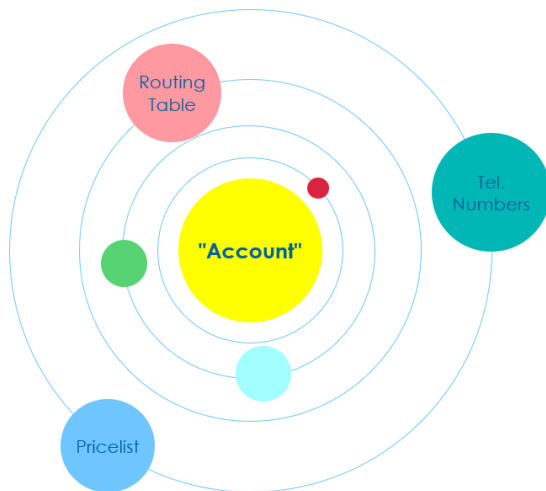
5.2 The Provider Defines the Usage of the Account

The anSwitch V6 doesn't know predefined types of accounts, e.g. residential, business or vPBX extensions! The different usage of the parameter configuration makes the difference.

The provider's marketing has to define and naming their offerings for their customers, for example:

Offering Name	Max. Phone Numbers	Max. Channels	AdminCenter Access	VoiceMail	AN Phone APPs	…
"Residential User"	1	2	No	Yes	No	…
"Power Residential"	3	6	Yes	Yes	Yes	…
"Small Business SIP Trunk"	10	6	No	No	No	…
"Business SIP Trunk"	100	30	No	No	No	…

The Operator must then configure the customer Account to meet the marketing offering and therefore the customer needs.

5.3 Use-Cases of a Customer Account

5.3.1 "Residential" Customer Account

The "Residential" customer Account may be characterized as follows:

▸ The customer wants to use the user telephony features offered by the anSwitch V6, e.g. call forwarding, VoiceMail Box, etc.

▸ The customer has a limited number of phone numbers.

▸   The customer's phones will individually register the phone number of the Account.
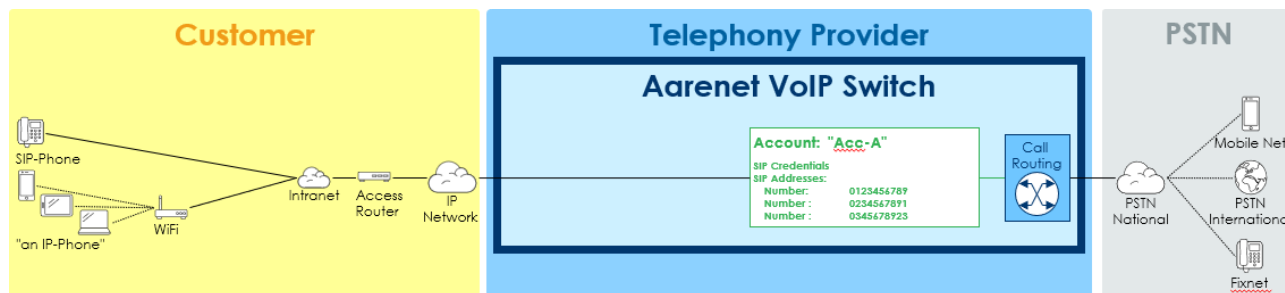
The information an Operator needs for configuring this type of Account:

▸   Basics:
- ▸   Tenant
- ▸   Customer ID
- ▸   Customer info & Email address
- ▸   Channel limitations
- ▸   Emergency Location

▸   Routing & Rating:
- ▸   Routing Table
- ▸   Blocking ruleset
- ▸   Pricelist
- ▸   TopStop limitation

▸   Advanced:
- ▸   Account valid from

▸   Addresses:
- ▸   Telephone numbers
- ▸   Voicemail Box & AdminCenter Access

Information that must be returned to the customer after the creation of the Account:

▸   SIP credentials:
- ▸   Username & Password

▸   Telephone numbers:
- ▸   Telephone numbers (confirmed)

▸   Registration domain:
- ▸   Domain name or IP address

▸   Voicemail Box access:
- ▸   PIN

▸   AdminCenter access:
- ▸   URL
- ▸   Username
- ▸   Password

5.3.2   "Business" Customer Account

The "Business" customer Account may be characterized as follows:
- ▸   The customer has an own IP PBX which handles the user telephony features.
- ▸   The customer has many phone numbers, e.g. 100 numbers.
- ▸   The customer requires just the call routing from and to the PSTN.

In this use-case we have to distinguish between to cases:
1.   The customer's SIP equipment can register on the anSwitch V6.
- ▸   We need to define which is the main number the SIP equipment has to register.

▸ This type of use-case is easy to handle for an Operator and doesn't generate extra efforts.

Customer

SIP-Device IP & Port
e.g.: 192.168.0.100:5560

CPE-Contact IP & Port
11.11.11.11:xxxx

IP-PBX

Access Router
or
Firewall
with **NAT**

Configuration SIP-Equipment:
▸ IP & Port of SIP Endpoint
Authentication:
▸ SIP-Credential
▸ Main Number

ISP

Telephony Provider

SIP Endpoint
99.99.99.99:5060

Telephony
Provider
Transfer
Network

anSwitch V6

Account: "Acc-A"

SIP-Credentials
Main Number: 0222222000
Numbers: 0222222001-99

Call Routing

PSTN

Mobile Net

PSTN
National

PSTN
International

Fixnet

2. The customer's SIP equipment cannot register on the anSwitch V6.
  ▸ We need to configure a SIP-Trunk profile on the anSwitch V6 for interoperation with SIP equipment.
  ▸ This type of use case can lead to a great deal of effort, as the configuration of the SIP-Trunk profile can take a long time depending on the IP environment and customer requirements.
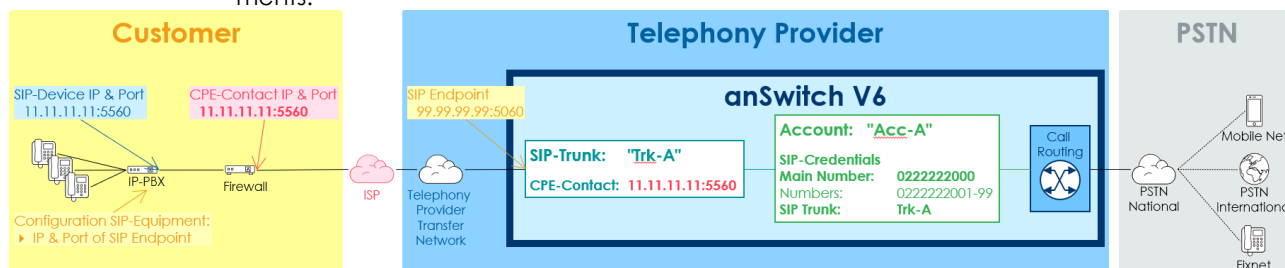
Customer

SIP-Device IP & Port
11.11.11.11:5560

CPE-Contact IP & Port
11.11.11.11:5560

IP-PBX

Firewall

Configuration SIP-Equipment:
▸ IP & Port of SIP Endpoint

ISP

Telephony Provider

SIP Endpoint
99.99.99.99:5060

Telephony
Provider
Transfer
Network

anSwitch V6

SIP-Trunk: "Trk-A"
CPE-Contact: 11.11.11.11:5560

Account: "Acc-A"

SIP-Credentials
Main Number: 0222222000
Numbers: 0222222001-99
SIP Trunk: Trk-A

Call Routing

PSTN

Mobile Net

PSTN
National

PSTN
International

Fixnet

The information an Operator needs for configuring this type of Account:

▸ Basics:
  ▸ Tenant
  ▸ Customer ID
  ▸ Customer info & Email address
  ▸ Channel limitations
  ▸ Emergency Location

▸ Routing & Rating:
  ▸ Routing Table
  ▸ Blocking ruleset
  ▸ Pricelist
  ▸ TopStop limitation

▸ Advanced:
  ▸ Account valid from
  ▸ Music on Hold MOH transparent

▸ Addresses:
  ▸ Telephone numbers
  ▸ Main number

▸ In case of the need of SIP-Trunk profile a project should be started for the evaluation of the configuration requirements of the SIP-Trunk profile.

Information that must be returned to the customer after the creation of the Account:

▸ SIP credentials:
  ▸ Username & Password when the customer's SIP equipment can register.

▸ Telephone numbers:
  ▸ Telephone numbers (confirmed)
  ▸ Main number for registration

▸ Registration domain:
  ▸ Domain name or IP address

6   Manage an Account

6.1   Variants of Managing an Account

An account can be managed by various ways:

  ▸   ConfigCenter
      This is the main variant and offers all possibilities to configure an account and its parameters.
      For details see below.

  ▸   DAML API of the DataAccessCenter
      The DAML API allows configuring the account directly from a customer management system CMS.
      For details see the manual "Manual DataAccessCenter DAML API".

  ▸   AdminCenter
      Once an account is created a user can manage, configure and apply user features to the account. A user cannot create or delete the account and its phone numbers.
      For details see the anSwitch V6 AdminCenter online help ⬈.

6.2   Managing and Configuring an Account Using the ConfigCenter
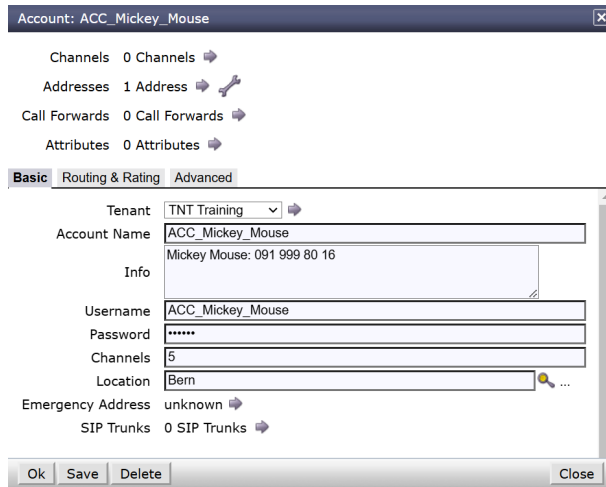
Log in to the ConfigCenter as Administrator or Operator:

  >   Menu: Accounts
     >   The dialog "Accounts" is displayed. It allows:
        ▸   To create a customer Account, click icon ✚
        ▸   Modify and delete a customer Account, click the row of the desired account.
        ▸   Delete a customer Account click icon ✖ or click the button "Delete" in the dialog "Account: ..."
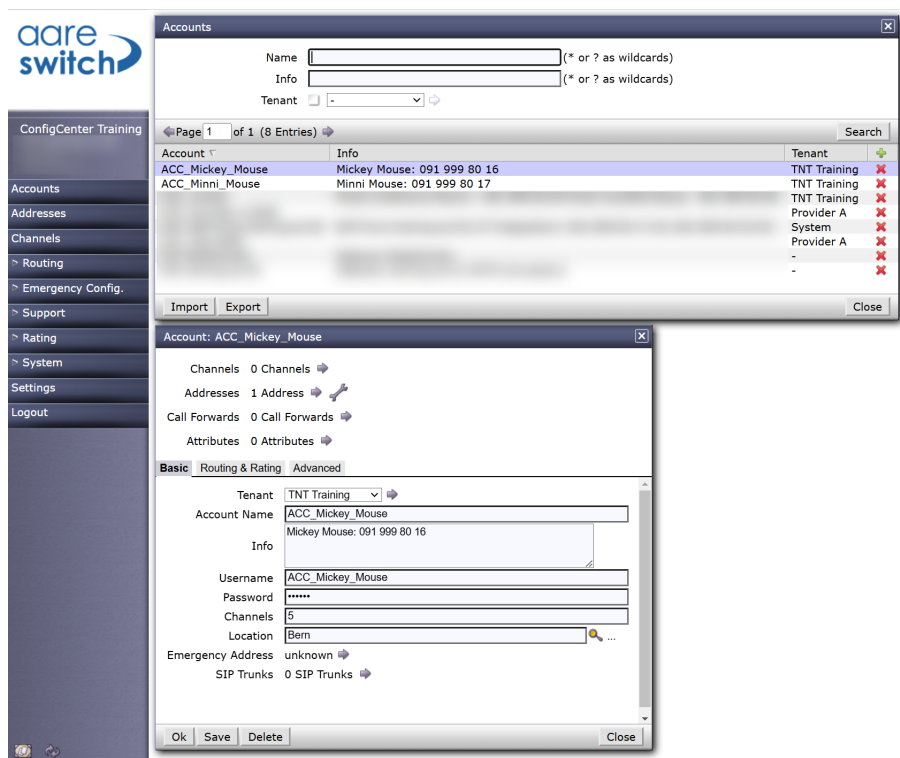
6.3 Configuring the Account Parameters

6.3.1 Account Tab "Basic" Parameters
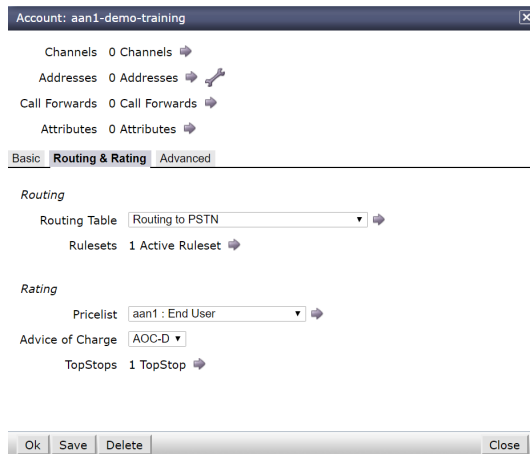
Parameter Name	Data Type	Allowed Values	Description
Channels	Display & link	Channels 0 Channels ➡	Displays the number of active connections of this Account. ➡ is the link to the list of active connection, details see "Display of Concurrent Calls of an Account" ↗.
Addresses	Display & link	Addresses 1 Address ➡ 🔧	Displays the number of addresses (phone numbers) of this Account. ➡ is the link to the list of addresses, details see "Manage Addresses of an Account (Phone Numbers)Display of Concurrent Calls of an Account" ↗. 🔧 is the link to the list of address wizard, details see "Managing and Configuring an Address Using the ConfigCenter" ↗.
Call Forwards	Display & link	Call Forwards 1 Call Forward ➡	Displays the number of call forwards of this Account. ➡ is the link to the list of call forwards, details see "Manage Call Forwards of an Account" ↗.
Attributes	Display & link	Attributes 1 Attribute ➡	Displays the number of call forwards of this Account. ➡ is the link to the list of call forwards, details see "Manage the Attributes of an Account" ↗.
Tenant	Selection	[- (none) | List of configured Tenants] Default: - (none)	Defines the owning tenant of the account. Note: ▸ The tenant must be configured on system level. If logged in as tenant Administrator/Operator, then the tenant value is given and cannot be changed.
Account Name	String	[empty | Max. 32 char] Default: empty	**Mandatory configuration!** Defines a **unique** identification name of the account. Values:

Parameter Name	Data Type	Allowed Values	Description
			▸ ?: A "?" character is a placeholder for a counting number. Example: 1. Create the first account with name: test-???? 2. The created account will have assigned the name: test-0000 3. Create the next account with name: test-???? 4. The created account will have assigned the name: test-0001
Info	String	[empty | Max. 128 char] Default: empty	Any information about this account.
Username	String	[empty | Max. 32 char] Default: empty	**Mandatory configuration!** Defines the SIP username of the account. It must be used by all SIP devices that register to any SIP address of this account. Values: ▸ ?: A "?" character is a placeholder for a random character. Example: ▸ Create username: myname-???? ▸ The created username: myname-1ntA
Password	String	[empty | Max. 32 char] Default: empty	**Mandatory configuration!** Defines the SIP password of the account. It must be used by all SIP devices that register to any SIP address of this account. Note: The value will never be displayed (a line of dots is displayed) and is stored encrypted in the database! Values: ▸ ?: A "?" character is a placeholder for a random character. Example: ▸ Create password, e.g.16 ?: ???????????????? ▸ The created password will have 16 random chars.
Channels	Number	[empty | ≥ 0	Determines how many concurrent connections are possible for this account. Note: Limiting the number of channels can also be seen as a security feature! In case of a fraud the fraudulent peer cannot open an unlimited number of concurrent connections.

Parameter Name	Data Type	Allowed Values	Description
			Values: ▸ empty: No limitations ▸ 0: No channels → no incoming and outgoing connections are possible. ▸ ≥1: Exact number of possible channels for connections.

Location	Selection	[empty |
		Emergency location]
			Assigns an emergency location to the account.
			This configuration defines the emergency call center to which an emergency call is forwarded.
			The emergency location is valid for all outgoing emergency calls from this Account.
			More specific emergency locations can be assigned for every phone number (Address) of the account.
			
			Search the available locations:
			a. Type chars of the location and click the icon 🔍.
			b. Click the icon 🔍.
			
			The dialog "Select emergency Location" opens and lists all available locations:
			   1. Type chars of the searched location.
			   2. The list will become smaller.
			   3. Finaly select the desired location.
			   4. Click button: Ok
			
			Values:
			▸ empty:
			The system-wide default emergency location is used.
			
			▸ Emergency Location:
			The location name must be already configured in the emergency call configuration of this anSwitch V6.

Emergency Address	Display & link	Alpenstrasse 2b; 3072 Bern ➡	Displays if the account has an associated Emergency Address according EU Regulations (NG112). Note: The implementation is according to the Swiss regulation. ➡ is the link to the linked Emergency Address, details see "Manage SIP-Trunk Profiles for SIP Equipment Communication" ↗.
SIP Trunks	Display & link	SIP Trunks 1 SIP Trunk ➡	Displays if the Account has an associated SIP-Trunk Profile. ➡ is the link to the list of SIP-Trunk profiles, details see "Manage the Emergency Address" ↗.

6.3.2 Account Tab " Routing & Rating" Parameters

Parameter Name	Data Type	Allowed Values	Description

Routing Table	Selection	[empty | List of RoutingTable]	Assigns a RoutingTable to the account. A RoutingTable is necessary for routing calls to the PSTN.
			
			Note: Only allowed RoutingTables are displayed. For example, RoutingTables of other Tenants are not listed.
			
			Values:
			▸ empty:
			  For outgoing calls only OnNet connections are possible.
			
			▸ RoutingTable:
			  The RoutingTable name must be already configured in the routing configuration of this anSwitch V6.

Rulesets	Displays the number of selected RuleSets	2 Active Rulesets ➡	Defines the Rulesets that must be applied to this account. For assigning RuleSets click the icon ➡: ▸ The dialog "RuleSets for Account: …" opens. ▸ Select the desired RuleSets. ▸ Click button: Ok For checking the applied Rules of all RuleSets (there may be activated RuleSets on higher level) click button "Show selected Rules". This displays the dialog "Selected Rules of Account: …" with all applied Rules that may influence incoming and outgoing calls from this account. This can be helpful in case of problem solving. Note: For checking the applied Rules of all RuleSets (there may be activated

Parameter Name	Data Type	Allowed Values	Description
			RuleSets on higher level) click button "Show selected Rules". This displays the dialog "Selected Rules of Account: …" with all applied Rules that may influence incoming and outgoing calls from this account. This can be helpful in case of problem solving.
Pricelist	Selection	[- (none) | List of Pricelists]	Assigns a user pricelist to the account. Values: ▸ empty: No call rating. ▸ Pricelist: The price list name must be already configured in the price list configuration of this anSwitch V6. Note: No TopStop security is possible if no price list is assigned to the account!
Advice of Charge AoC	String	[None | AOC-D] Default: None	Deprecated! Activate sending advice of charge AOC to all SIP devices registered to the account.
TopStops	Displays the number of created TopStops	2 TopStops ⮕	Defines the TopStops that are assigned to this account. TopStop can be used: ▸ For realizing a prepaid offering. ▸ As **security feature**! In the case of fraud, it can limit the financial damage for the customer. ⮕ is the link to the list of account's TopStop, details see "Account TopStop" ↗.

6.3.3   Account TopStop

Manage TopStop as Administrator/Operator:
> Menu: Accounts at Tab "Routing & Rating"
  > Click button ⮕ at Active Rulesets ⮕
    > The dialog "TopStops of Accounts" is displayed. It allows:
      ▸ To check all active TopStop of this account
      ▸ To create a new TopStop, click icon ✚
      ▸ Modify a TopStop, click the row of the desired TopStop.
      ▸ Delete a TopStop click icon ✖ or click the button "Delete" in the dialog "TopStop of Account: ..."

Example dialog "TopStops of Account" with the list of all configured TopStops:

Configuration dialog for a TopStop of an Account:
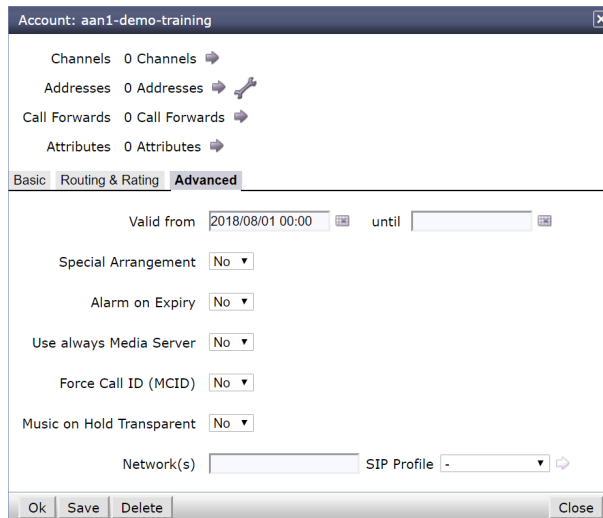
Property Name	Data Type	Allowed Values	Remark
Access	Selection	[- (none) | System | Account | Address] Default: - (none)	Defines the 3 types of TopStop objects that can be assigned to an account. Values: System: This TopStop is usually defined by a system administrator/operator or tenant operator. → Use this type of TopStop for "hidden" TopStops that cannot be changed by a customer or user. → In the ConfigCenter it is visible for administrators and operators. → In the AdminCenter this TopStop is not visible. Account: This TopStop is usually defined by a tenant operator. → A customer may see this configuration in the ConfigCenter and may modify it. → In the ConfigCenter it is visible for system administrators/operators and tenant administrators/operators. → In the AdminCenter this TopStop is not visible.

Property Name	Data Type	Allowed Values	Remark
			Address: This TopStop is usually defined by a tenant operator or user. It will be applied to individual addresses of the account. → In the ConfigCenter it is visible for system administrators/operators and tenant administrators/operators. → In the AdminCenter this TopStop is visible for users.
Account	Selection	[- (none) | Name of the account] Default: - (none)	Defines that this TopStop is valid for the whole account.
Address	Selection	[- (none) | List of configured addresses] Default: - (none)	Defines that this TopStop is valid for the selected address of this account.
Monitor Charge	Selection	[active | inactive] Default: active	Defines if the TopStop is active or not.
Maximum Charge	Float	[empty | value ≥0.0] Default: empty	Defines the blocking limit per month for the account. It may not be exceeded by the charging sum of all connections of this account. If set to "empty" then no blocking limit is supervised.
Current Charge	Float		Display of the current sum of charges.
Remaining Charge	Float		Display of the remaining sum.
Monthly Reset	☐	Activate Default: Activated	If activated it defines that the monthly maximum limit is reset at the start of a new month. Note: If not activated, the maximum charge can be interpreted as prepaid charge.
Alarm E-mail	Email Address	[empty | Max. 128 char] Default: empty	If configured it defines the email address where this TopStop information is sent to when any limit is reached: ▸ Alarm limit. ▸ Block limit
Alarm Level	Selection	[No | 10 | 20 | … 90 | 100] Default: No	Defines the alarming limit in percent of the max. blocking limit where an alarm-email must be sent.
Daily TopStop	Selection	[active | inactive] Default: inactive	Defines if the daily TopStop is active or not.
Daily Maximum Charge	Float	[empty | value ≥0.0] Default: empty	Defines the blocking limit per day for the account. It may not be exceeded by the charging sum of all connections of this account. If set to "empty" then no blocking limit is supervised.
Daily Current Charge	Float		Display of the current daily sum of charges.
Daily Remaining Charge	Float		Display of the remaining daily sum.

6.3.4   Account Tab " Advanced"

Parameter Name	Data Type	Allowed Values	Description
Valid from	YYYY/MM/DD hh:mm	[empty | Date/Time] Default: empty	Defines the date/time of the activation of the account (and its addresses). Values: ▸ empty: The account is activated. ▸ Date/Time: The account is activated beginning at Date/Time.
until	YYYY/MM/DD hh:mm	[empty | Date/Time] Default: empty	Defines the date/time of the deactivation of the account (and its addresses). Values: ▸ empty: The account is activated. ▸ Date/Time: The account is deactivated beginning at Date/Time.
Special Arrangement	Selection	[No | Yes] Default: No	If activated, then the call control will not execute the caller identification check for all outgoing calls to the PSTN. Note: The caller identification check is usually enforced by law. Check the consequences if activated.
Alarm On Expiry	Selection	[No | Yes] Default: No	If activated, the call control generates a monitoring alarm when no SIP-device is re-registering to the account. Note: This is a support measure that can be used if a real-time alarm is required to investigate why a SIP-device can't re-register again.
Use always Media Server	Selection	[No | Yes] Default: No	If activated, the call control forces the peers of a connection to send their media streams via a MediaServer of the anSwitch V6.

Parameter Name	Data Type	Allowed Values	Description
			Note: This can be used as support measure to investigate QoS problems during a connection.
Music on Hold Transparent	String	[No | Yes] Default: No	If activated, then the Music on hold of an e.g. IP-PBX is sent transparently to the peer device on hold. Else the standard hold music of the anSwitch V6 is sent.
Force Call ID (MCID)	String	[true | false] Default: false	If activated, the call control will enforce to display the caller id of an incoming call even when the call was anonymous. Note: The application of MCID may be regulated by law. Check the consequences if activated.

Network(s)	String	[empty | Max. 128 char]
		
		Default: empty
			Defines whitelisted IP subnets from where a SIP-device is allowed to register to this account.
			
			Values:
			▸ empty:
			  No limitations
			
			▸ List:
			  Comma separated list of IP subnets, e.g.:
			  0.10.10.0/24, 192.168.0.0/22

SIP Profile	Selection	[- (none) | List of configured SIP-Profiles] Default: - (none)	Defines a prepared SIP-Profile with whitelisted IP subnets from where SIP-device is allowed to register to this account.

6.4 Display of Concurrent Calls of an Account

Active connections of an account are displayed in the "Channels" list. The numbers of the caller and called party as well as the actual duration of the connection are displayed. The list is updated periodically. Administrators/Operators with sufficient authorization can actively terminate connections!

Log in to the ConfigCenter as Administrator or Operator:

> Menu: Accounts
>> Click at 0 Channels ➡ the icon ➡
>>> The dialog "Channels of Account: …" is displayed.
▸ It displays:
▸ Direction: Outgoing and incoming channels of a connection
▸ Number: Calling number
▸ Peer: Called number
▸ State   State of the call
▸ Delete a connection, click icon ✖
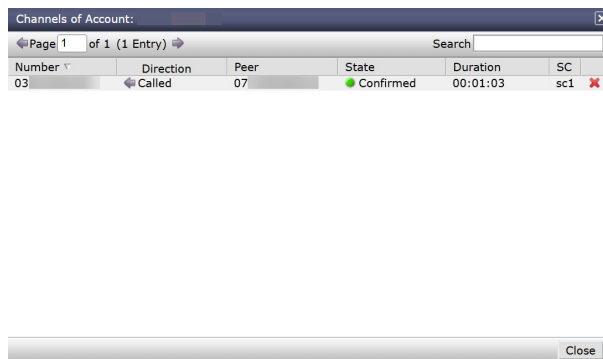
7 Manage Addresses of an Account (Phone Numbers)

7.1 Variants of Managing Addresses

An address can be managed by various ways:

- ‣ ConfigCenter
  This is the main variant and offers all possibilities to configure an address and its parameters.
  For details see below.
- ‣ DAML API of the DataAccessCenter
  The DAML API allows configuring the addresses of an account directly from a customer management system CMS. For details see the manual "Manual DataAccessCenter DAML API".
- ‣ AdminCenter

Addresses cannot be managed via the AdminCenter.

7.2 Managing and Configuring an Address Using the ConfigCenter

For managing addresses a customer account must already be created.

Addresses can then be added, modified or deleted:

- ‣ Single addresses can be managed, see "Manage a Single Address"
- ‣ A range of addresses can be managed with the address wizard, see "Manage an Address Range with the Address Wizard".

7.2.1 Manage a Single Address

Adding a new address to an account or managing an existing one, Log in to the ConfigCenter as Administrator or Operator.

Add a new address:

- > Menu: Accounts
  - > Search for the account the new address must be added.
    - > Click the icon ➡ at Addresses   0 Addresses ➡
    - > The dialog "Addresses of Account: …" is displayed. It allows:
      - ‣ To create a new address, click icon ➕
      - ‣ Modify and delete an address, click the row of the desired address.
      - ‣ Delete an address click icon ✖ or click the button "Delete" in the dialog "Address: …"

Manage an existing address:

- > Menu: Addresses
  - > The dialog "Addresses" is displayed.
    - > Search for the address that must be managed.
      - > Click the row of the desired address
        - > The dialog "Address: …" is displayed. It allows to:
          - ‣ Modify the address parameters.
          - ‣ Delete the address, click the button "Delete".

7.2.2 Manage an Address Range with the Address Wizard

Adding a new address range to an account or managing range, Log in to the ConfigCenter as Administrator or Operator.

Add a new address range or manage an existing range:
> Menu: Accounts
>> Search for the account the address range must be managed.
>>> Click the icon 🔧 at Addresses 1 Address ➡ 🔧
>>>> The address wizard dialog "Address Wizard for of Account: …" is displayed. It allows:
- To create new addresses
- To modify addresses
- To delete addresses,
>>>>> Select the action to be done.
>>>>>> Define the addresses to be managed.
>>>>>>> Click the button: Next >
>>>>>>>> Follow the instructions of the wizard:
- For action "Create": Configure the desired parameter.
- For action "Modify": Select the parameter and configure the new value.
- For Action "Remove": Define the addresses.

Select the action to be done:

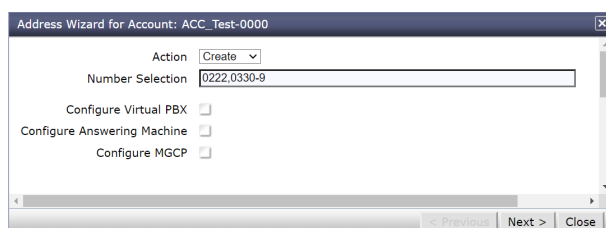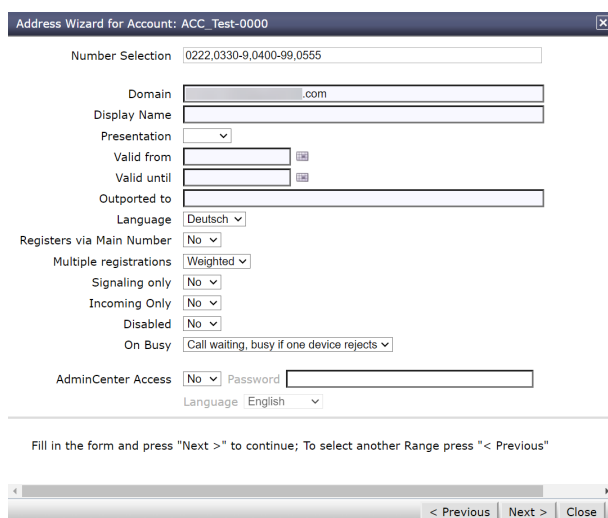| Parameter Name	Data Type	Allowed Values	Description
Action	Selection	[Create | Modify | Remove] Default: Create	Defines what has to be done with the defined addresses in parameter "Number Selection". Values: ▸ Create: The defined addresses will be created. ▸ Modified: The defined addresses will be modified. ▸ Remove: The defined addresses will be deleted.
All Numbers	Selection	[No | Yes] Default: No	Specifies for the "Modify" and "Remove" actions whether all addresses in the account or only the addresses listed in "Number Selection" should be taken into account. Values: ▸ No: Just the listed addresses will be considered. ▸ Yes: All addresses will be considered.
Number Selection	String	[empty | Max. 128 char] Default: empty	Defines the addresses to be managed. Values: ▸ empty: No addresses are managed. ▸ Addresses: Defines single addresses. Single addresses and ranges must be comma separated.

Parameter Name	Data Type	Allowed Values	Description
			Example: 0222,0330-9,0400-99,0555 Will create or manage the: ▸ Single numbers 0222 and 0555 ▸ The 10 addresses range 0330, 0331, …, 0339 ▸ The 100 addresses range 0400, 0401, …, 0499

For action "Create": Configure the desired parameter:

▸ Configure the desired parameter values (see "Configuring the Address Parameter")

For action "Modify": Select the parameter and configure the new value.

▸ For example, for all addresses of the account:

▸ Select the parameters and configure the new parameter values (see "Configuring the Address Parameter"):

For Action "Remove": Define the addresses.

▸ Define the addresses to be deleted.
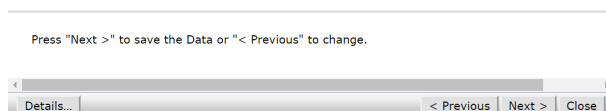
The address wizard will execute the action when al given data are valid:

▸ If there are problems the wizard will notify it with a notification dialog.

▸ Execution details and the position where a problem raised can be checked in the log → click button: Details …
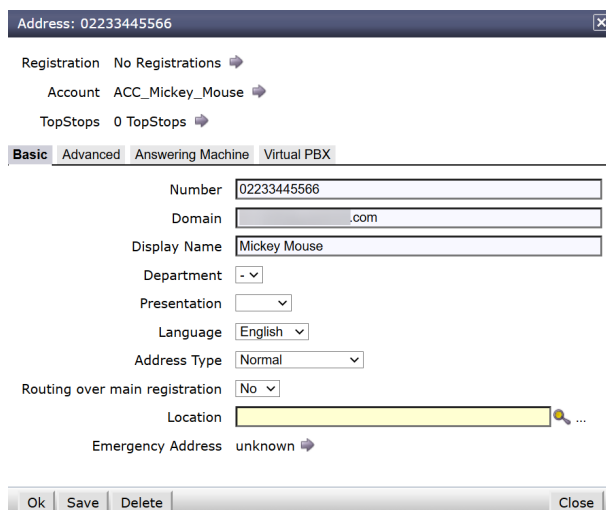
7.3 Configuring the Address Parameters

7.3.1 Address Tab "Basic" Parameters

Parameter Name	Data Type	Allowed Values	Description
Number	Number	[empty | Max. 128 char] Default: empty	**Mandatory configuration!** Defines the phone number part of the SIP address.

Parameter Name	Data Type	Allowed Values	Description
Domain	String	[empty | Domain name, max. 128 char | IP address] Default: empty	**Mandatory configuration!** Defines the domain part of the SIP address. This is usually the domain name or IP address of the virtual public IP address of the anSwitch V6 . Values: ▸ empty: Not allowed. ▸ Domain name: Domain name ▸ IP address: IP address
Display Name	String	[empty | - | Display, max. 64 char] Default: empty	Defines the display part of the SIP address. Values: ▸ empty: The transferred display information is not touched. ▸ -: The transferred display information is deleted. ▸ Display: The transferred display information is replaced with this string.
Department	Selection	[empty | List of configured departments of a vPBX] Default: empty	Deprecated! Defines the vPBX department this private vPBX number belongs to.
Presentation	Selection	[empty | Show | Hide] Default: empty	Defines whether the outgoing call from this address is signaled anonymous to the peer or not. Values: ▸ empty: The presentation is transferred as it is received from the registered SIP device. ▸ Show: The presentation is activated in any case. ▸ Hide: The presentation is deactivated in any case.
Language	Selection	[English | Deutsch | Français | Italiano] Default: English	Defines the language of: ▸ The in-band notifications, e.g. of do not disturb. ▸ VoiceMail Box notifications
Address Type	Selection	[Normal | Main Number |	Defines how this address must be used.

Parameter Name	Data Type	Allowed Values	Description
		Base Number | Preferred Number] Default: Normal	Values: ▸ Normal: Defines that a SIP device has to register to this number. The call control needs the registration information to route incoming calls to this number. ▸ Main Number: This number is used for the registration of all numbers in this account which are tagged "Yes" at parameter "Routing over main registration". ▸ Base Number: Defines a number prefix for routing incoming calls with matching numbers toward the main number. ▸ Preferred Number: Defines that this number is used in the SIP Header "From" or "P-Preferred" for all outgoing calls from this account. Note: ▸ There is only one main number allowed per account! ▸ "Normal" numbers and a range of numbers which are registered via a "Main" number can be mixed within an account.
Routing over main registration	Selection	[No | Yes] Default: No	Defines id this address is registered automatically, when the main number of this account has a registered SIP-device. Values: ▸ No: The address is not concurrently registered with the main number. ▸ Yes: The address is concurrently registered with the main number.
Location	Selection	[empty | Emergency location] Default: empty	Assign a specific emergency location to the Address. This configuration defines the emergency call center to which an emergency call is forwarded. The emergency location is valid for all outgoing emergency calls from this Address. Search the available locations: 1. Type chars of the location and click the icon 🔍. 2. Click the icon 🔍. The dialog "Select emergency Location" opens and lists all available locations: 1. Type chars of the searched location.

Registering and incoming routing of different tel. number types:

▸ Behavior "Normal Number":

- Each SIP phone must register individually.
- In coming calls are routed to the SIP-phone(s) if the called number matches fully a configured number.

Account: "Acc-A"

Tel. Number:	Address Type:
0123456789	▸ Normal
0123456790	▸ Normal

▸ Behavior "Main Number":

- The IP-PBX must register only the main number.
- The Aarenet VoIP Switch accepts this registering for all other numbers in this account that have the tag "Routing via main number".
- Incoming calls are routed to the IP-PBX if the called number matches fully a configured number.

Account: "Acc-B"

Tel. Number :	Address Type:
0222222220	▸ Main Number
0222222221 - 9	▸ Normal ▸ Routing via Main Number

▸ Behavior "Base Number":

- The IP-PBX must register only the main number.
- The Aarenet VoIP Switch accepts this registering for all other numbers in this account that have the tag "Routing via main number".
- Incoming calls are routed to the IP-PBX if the called number matches fully a configured number.
- Incoming calls whose called number match the prefix "Base Number" are forwarded to the "Main number", e.g.: 0222229999 → 0222220000

Account: "Acc-C"

Tel. Number :	Address Type:
022222	▸ Base Number
0222220000	▸ Main Number
0222220000 - 0099 0222220500 - 0599	▸ Normal ▸ Routing via Main Number

Parameter Name	Data Type	Allowed Values	Description
			2. The list will become smaller. 3. Finaly select the desired location. 4. Click button: Ok Values: ▸ empty: The account emergency location is used. ▸ Emergency Location: The location name must be already configured in the emergency call configuration of this anSwitch V6.
Emergency Address	Display & link	Alpenstrasse 2b; 3072 Bern ➡	Displays if the Address has an associated Emergency Address according EU Regulations (NG112). Note: The implementation is according to the Swiss regulation. ➡ is the link to the linked Emergency Address, details see "Manage SIP-Trunk Profiles for SIP Equipment Communication" ↗.

7.3.2 Address Tab "Advanced" Parameters

Parameter Name	Data Type	Allowed Values	Description
Valid from	YYYY/MM/DD hh:mm	[empty | Date/Time] Default: empty	Defines the date/time of the activation of this address. Values: ▸ empty: The address is activated. ▸ Date/Time: The address is activated beginning at Date/Time.
until	YYYY/MM/DD hh:mm	[empty | Date/Time] Default: empty	Defines the date/time of the deactivation of the account (and its addresses). Values: ▸ empty:

Parameter Name	Data Type	Allowed Values	Description
			The address is activated. ▸ Date/Time: The address is deactivated beginning at Date/Time.
Outported to	String	[empty | Max. 50 char] Default: empty	Used in Switzerland only! Defines a specific number prefix for outported numbers. When additionally a valid "until" date/time is set and an outported prefix is configured then incoming calls to this number are re-routed back into the PSTN. Note: Mostly it is a PSTN number prefix of the new PSTN carrier of this number.
Multiple registrations	Selection	[Weighted | Yes | No] Default: Weighted	Defines how many SIP-devices are allowed to register. Values: ▸ Weighted: An unlimited number of SIP devices are allowed to register. Outgoing calls toward the registered devices are made according to the requested weighting. ▸ Yes: An unlimited number of SIP devices are allowed to register. ▸ No: Only on SIP device is allowed to register.
Signaling only	Selection	[No | Yes] Default: No	If set to "Yes" only outgoing calls are allowed for SIP devices registered to this number.
Incoming only	Selection	[No | Yes] Default: No	If set to "Yes" only incoming calls are allowed for SIP devices registered to this number.
Disabled	Selection	[No | Yes] Default: No	If set to "Yes" no incoming or outgoing calls are allowed for this number. Note: This number belongs to this account. It cannot be a valid number in any other account on this Aarenet VoIP Switch.
On Busy	Selection	[Call waiting, busy if one device rejects | Call waiting, busy if all devices reject | Signal busy] Default: Call waiting, busy if one device rejects	Defines what a caller will hear when this number is already in an active call. Values: ▸ Call waiting, busy if one device rejects: All registered SIP devices are signaled with the new incoming call. If one device is rejecting the new call, then the caller hears the busy tone. ▸ Call waiting, busy if all devices reject: All registered SIP devices are signaled with the new incoming call. If all SIP devices are

Parameter Name	Data Type	Allowed Values	Description
			rejecting the new call, then the caller hears the busy tone. ▸ Signaling Busy: Immediately rejects the new incoming call (no call waiting) when one device is busy. The caller hears the busy tone.
Mobile Number	Number	[empty | Number, max. 128 char] Default: empty	Defines any type of telephone number that will be signaled in parallel to this address for an incoming call. Values: ▸ empty: Signaling not active. ▸ Number: Defines the parallel called number.
Ring only on SIP Phone if possible	Selection	[No | Yes] Default: No	If set to "Yes" incoming calls are only signaled when a SIP device is registered. This may be needed if a SIP equipment is connected with a SIP-trunk.
AdminCenter Access	☐	AdminCenter Access ✓ ➡ Activate Default: Not activated	If activated, then it is possible to configure an AdminCenter user access for this number. Click ➡ for configuring the AdminCenter address administrator, see below ↗.

7.3.3 AdminCenter Account Dialog "Address Administrator" Parameters

Parameter Name	Data Type	Allowed Values	Description
Number			Display of the address this AdminCenter address administrator belongs.
My Username	String	[empty | Max. 128 char] Default: empty	Defines the username for this AdminCenter account.
My Password	String	[empty | Max. 128 char] Default: empty	Defines the password for this AdminCenter account.
Verify Password	String		Re-enter the password for check.

Parameter Name	Data Type	Allowed Values	Description
Renew Password	Selection	[No | Yes] Default: Yes	If set "Yes", defines that the user upon the very first login is forced to change the password.
Language	Selection	[English | German | Vietnamese] Default: English	Defines the language of the ConfigCenter configuration pages.
E-Mail Address	Email Address	[empty | Max. 128 char] Default: empty	Defines the email address where password recovery information for the AdminCenter is sent to.

Access Networks	String	[empty | Max. 128 char]
		
		Default: empty
			Defines whitelisted IP subnets from where a user is allowed to access the AdminCenter.
			
			Values:
			▸ empty:
			  No limitations
			
			▸ List:
			  Comma separated list of IP subnets, e.g.:
			  10.10.10.0/24, 192.168.0.0/22

WEB Profile	Selection	[- (none) | List of configured SIP-Profiles] Default: - (none)	Defines a prepared WEB-Profile with whitelisted IP subnets from where a user is allowed to access the AdminCenter.
Login is blocked	Selection	[No | Yes] Default: No	Displays if the AdminCenter account is blocked by too many unsuccessful login attempts. Deblock the account by selecting "Yes"
Two Factor Authentication LDAP Authentication LDAP Authentication Template LDAP Authentication URL LDAP Authentication secure			Defines the user authentication against a LDAP service. ➔ Check with the Aarenet support for configuration.

7.3.4   Address Tab "Answering Machine" (VoiceMail Box) Parameters
See chapter "Manage the VoiceMail Box of an Address" ⬈.

7.3.5   Address Tab "Virtual PBX" Parameters
The feature vPBX is deprecated and is not describes anymore in the anSwitch V6 manuals.

8 Manage the VoiceMail Box of an Address
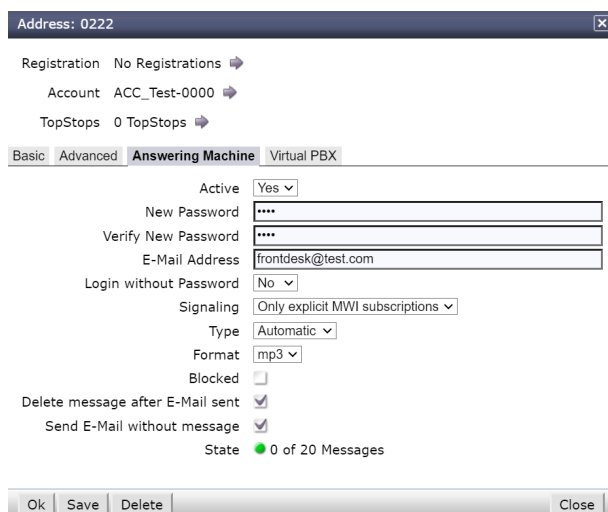
8.1 Overview of the Usage of a VoiceMail Box

The personal VoiceMail Box answers automatically incoming calls and a caller may leave a message or send a FAX:

▶ A VoiceMail Box is associated with an address (phone number).
   ▶ An Administrator/Operator must activate the VoiceMail Box via the ConfigCenter and may execute its initial configuration.
   ▶ A user can manage the VoiceMail Box via the AdminCenter or any phone that is connected to the address.

▶ For recording messages or Fax an Administrator/Operator or the user must configure a Call Forward to the VoiceMail Box.

▶ Received messages:
   ▶ Can be listened to from any phone that is connected to the address by using the *#-procedure *86 .
   ▶ Can be sent as audio file as an attachment of an email.
   ▶ Can be managed and listened to via the user's AdminCenter account.

▶ Received Fax:
   ▶ Can be sent as PDF-formatted file as an attachment of an email.

8.2 Configuring the VoiceMail Box Parameters via ConfigCenter

Manage a VoiceMail Box of an address as Administrator/Operator:
> Menu: Addresses
> > The dialog "Addresses" is displayed.
> > > Search for the address whose VoiceMail Box must be managed.
> > > > Click the tab "Answering Machine":
> > > > > Modify the VoiceMail Box parameters.

Parameter Name	Data Type	Allowed Values	Description
Active	Selection	[No | Yes] Default: No	If set "Yes", defines that the VoiceMail Box is active for this address.
New Password	Number	[empty | PIN, max. 32 digits] Default: empty	Defines the PIN to be used for accessing the VoiceMail Box. Values: ▶ empty:

Parameter Name	Data Type	Allowed Values	Description
			No PIN defined, so no PIN is needed for the VoiceMail Box access. ▸ PIN: Number
Verify New Password	Number		Re-enter the PIN for check.
E-Mail Address	Email Address	[empty | Max. 128 char] Default: empty	Defines the email address where messages or Fax will be sent.
Login without Password	Selection	[No | Yes] Default: No	If set "Yes", defines whether the PIN is needed when the VoiceMail Box is accessed from any phone registered to this account. Note: The PIN is always requested from any access other than the "own" phones.

Signaling	Selection	[Only explicit MWI subscriptions |
		 Implicit, all registered devices |
		 Never]
		
		 Default: Only explicit MWI subscriptions
			Defines whether and how the phone is informed about a new message in its VoiceMail Box. The format is „Message Waiting Information MWI".
			
			 Values:
			 ▸ Only explicit MWI subscriptions:
			   Defines Explicit MWI Subscription only! MWI messages are sent to the phone when it prior subscribed for the WMI service.
			
			 ▸ Implicit, all registered devices:
			   A MWI message is automatically sent to all phones registered to this address. The phone must not subscribe to the WMI service.
			
			 ▸ Never:
			   No WMI message is sent.

Type	Selection	[Automatic |
		   Voice only |
		   Fax only]
		
		 Default: Automatic
			Defines which type of information the VoiceMail Box records.
			
			 Values:
			 ▸ Automatic:
			   Both caller messages and Fax transmissions are recorded.
			
			 ▸ Voice only:
			   Only caller messages are recorded.
			
			 ▸ Fax only:
			   Only Fax transmissions are recorded.

Format	Selection	[wav | mp3] Default: wav	Defines the audio format a caller message is recorded.
Blocked	☐	Activate Default: Not activated	Displays if a VoiceMail Box is blocked after many failed logins. It can be manually de-blocked or blocked.

Parameter Name	Data Type	Allowed Values	Description
Delete message after E-Mail sent	☐	Activate Default: Not activated	Defines that the VoiceMail Box deletes a message or Fax after it is sent to the defined email address. Note: An email address must be configured.
Send E-Mail without message	☐	Activate Default: Not activated	Defines that also a message is sent when a caller doesn't leave a message.
State			Displays the number of recorded messages.

9 Manage Call Forwards of an Account

9.1 Overview of a Call Forward CF

The feature "Call Forward CF" enables incoming calls to an account to be routed toward a new destination upon definable conditions.

The anSwitch V6 offers sophisticated configuration options for call forwards:
Different execution types of CF:
- ▶ Call forward unconditional CFU
- ▶ Call forward busy CFB
- ▶ Call forward rejected CFR
- ▶ Call forward no reply CFNR
- ▶ Call forward fall back CFF
- ▶ Call forward reject CFR
- ▶ Call fork CFO
- ▶ Special cases:
  - ▶ Call redirection REDIR

- ▶ Call forward are executed according to their defined priority.
- ▶ The condition for executing a call forward can be made depending on:
  - ▶ Caller SIP address.
  - ▶ Called SIP address.
  - ▶ The number presentation (e.g. anonymous call) is defined by the calling side.
  - ▶ Java regular expression can be applied.

- ▶ The forwarding destination can be:
  - ▶ Any dialable phone number
  - ▶ Any SIP address
  - ▶ Any VoiceMail Box
  - ▶ etc.

- ▶ Call forwarding can be scheduled to be active during:
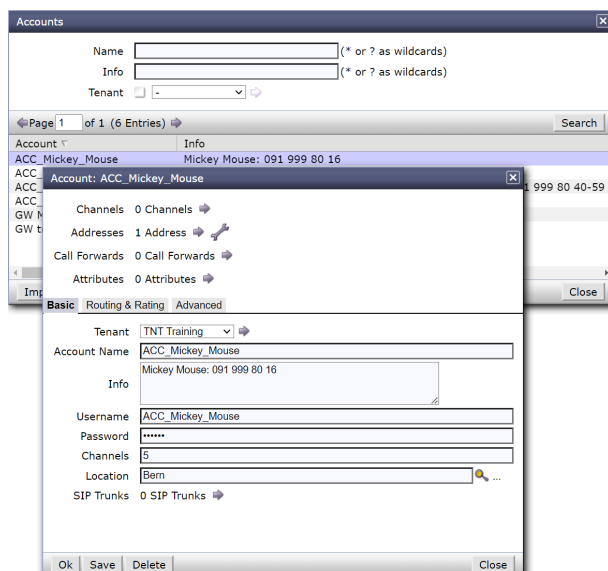 - ▶ Daily periods
  - ▶ Weekdays

Call forward can be activated and configured by:
- ▶ The Administrator/Operator in the ConfigCenter
- ▶ The user in the AdminCenter
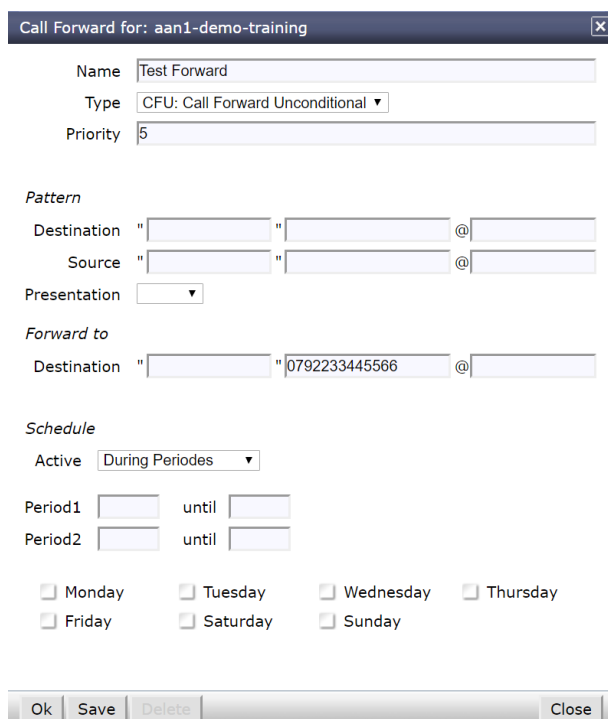- ▶ The user with *#-procedures on a phone which is registered to the account.

9.2 Managing and Configuring a Call Forward Using the ConfigCenter

Manage Call Forward of an account in the ConfigCenter as Administrator/Operator:
- > Menu: Accounts
  - > The dialog "Accounts" is displayed.
    - > Click the row of the desired account.
      - > Click the icon ➡ at Call Forwards   0 Call Forwards ➡
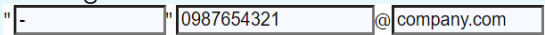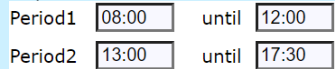
9.3 Configuring the Call Forward Parameters

Parameter Name	Data Type	Allowed Values	Description
Name	String	[empty | Max. 128 char] Default: empty	Defines the name of this call forward. When the call forward was created via AdminCenter then no name is given. When the call forward was created by a user with a *#-procedure the name is created as follows, e.g.: (*2108877665544-0123456789)) (*2108877665544-0123456789) CF service that has activated. New destination For which number of this account this CF is valid.

Parameter Name	Data Type	Allowed Values	Description
Type	Selection	[CFU: Call forward unconditional | CFB: Call forward busy | CFNR: Call forward no reply | CFF: Call forward fall back | CFR: Call forward reject | CFO: Call fork | DIST: Call distribution | REDIR: Call redirection] Default: CFU: Call forward unconditional	Defines the type of the call fowarding CF. Values: ▸ CFU: Call Forward Unconditional The call forwarding is executed in any case. ▸ CFF: Call Forward Fallback The call forward is executed if no valid SIP device registration is active for an account. ▸ CFB: Call Forward Busy The call forwarding is executed if the user is busy with another call. ▸ CFR: Call Forward Rejected This call forwarding is executed when the call is rejected by a user. ▸ CFNR: Call Forward No Reply The call forwarding is executed if within a specified period of time the call is not answered by the called party. ▸ CFO: Call Fork This call forwarding defines a second destination telephone number to be called upon an incoming call. Special call forwards: ▸ REDIR: Call Redirection This call forward defines the RFC compliant "SIP 302 Redirect Temporarily". If a called destination rejects with "302 Redirect Temporarily" then the call is forwarded to the defined destination of the call forward. Outdated call forwards: ▸ DIST: Call Distribution A "Call Distribution" allows in a vPBX complex call forwarding to different destinations.
Priority	Integer	[- (none) | ≥ 1] Default: - (none)	Defines the priority of the call forward execution. Values: ▸ 1: Highest priority. Call Forwards and Call Rejects configured by the user via the AdminCenter or *#-procedures have fixed priorities: ▸ Any Call Forward: Prio 10 ▸ Do not Disturb: Prio 11, 12 ▸ Reject Anonymous calls: Prio 8, 9
Ringing Delay	Integer	Number of seconds	Defines with the call forward type "CFNR: Call Forward No Reply" the delay until the call forward destination is called.

Parameter Name	Data Type	Allowed Values	Description
Pattern:			*The call forward is executed when the whole defined calling SIP address pattern matches:* Pattern Destination " [_____] " 012.* @ [_____] Source " [_____] " 0041.* @ [_____] Presentation [Hide ∨] *The destination (called side), source (calling side) and calling side presentation can be combined. The combination acts as logical AND function.*
Destination	String	[empty | Max. 128 char of the whole SIP address] Default: empty	Defines the SIP address pattern of the dialed destination SIP address that must match. " [Home Office] " [0123456789] @ [home.com] Values: ▸ empty: No check of the SIP address part. ▸ SIP Address parts: Defines the display, number and domain pattern. Note: Java Regex patterns are allowed[1]. " [_____] " 012.* @ [_____]
Source	String	[empty | Max. 128 char of the whole SIP address] Default: empty	Defines the SIP address pattern of the calling SIP address that must match. " [_____] " 0041.* @ [_____] Values: ▸ empty: No check of the SIP address part. ▸ SIP Address parts: Defines the display, number and domain pattern. Note: Java Regex patterns are allowed.
Reject Pattern	String	[empty | String max. 128 char] Default: empty	Defines an optional call reject information of the CF type " CFR: Call forward reject". This information is returned to the caller.
Presentation	Selection	[empty | Show | Hide] Default: empty	Defines how the calling number presentation shall be considered for the call forwarding. Values: ▸ empty: No check of the caller presentation. ▸ Show: The caller defined that the calling SIP address is presented. ▸ Hide: The caller defined that the calling SIP address must not be presented. → Defines an anonymous call.

---

[1] Java Regex documentation

Parameter Name	Data Type	Allowed Values	Description
Forward to:			
Destination	String	[empty | - | Number, max. 128 char of the whole SIP address] Default: empty	Defines the SIP address pattern of the call forwarding destination. " - " 0987654321 @ company.com Values: ▸ empty: The original value of the SIP address is not replaced. ▸ - : The original value of the SIP address is deleted. ▸ Number: New value of the SIP address that defines the call forwarding destination.
Schedule:			
Active	Selection	[During Periods | Outside Periods] Default: During Periods	Defines at which day time periods the call forward shall be active or not active.
Period 1 … until … Period 2 … until …	hh:mm	Hours & minute in 24h notification Default: empty	Defines at which day time periods the call forward shall be active or not active. Example: Period1 08:00 until 12:00 Period2 13:00 until 17:30 If no weekday is selected, then the call forward is active every day.
Monday - Sunday	☐	Activate Default: Not activated	Defines the weekdays the call forward shall be active. If no time periods are configured, then the call forward is active all day (24 hours).

9.4   Examples of Call Forwarding

Example: CF to 08877665544 for any telephone number of the account.

Example: CF to 08877665544 for telephone number 0123456789 of the account.

Pattern

Destination " [ ] " 0123456789 @ [ ]
Source " [ ] " [ ] @ [ ]
Presentation [▾]

Forward to

Destination " [ ] " 08877665544 @ [ ]

0123456789 must match exactly → New destination tel. number.

Example: CF to 08877665544 for 0123456789 telephone number of the account.

Pattern

Destination " [ ] " 0123456789 @ [ ]
Source " [ ] " 007.* @ [ ]
Presentation [▾]

Forward to

Destination " [ ] " 08877665544 @ [ ]

1. 0123456789 must match exactly.
2. The caller must come from Russia "007" → New destination tel. number.

Example: CF to the VoiceMail Box of telephone number 0123456789.

Pattern

Destination " [ ] " 0123456789 @ [ ]
Source " [ ] " [ ] @ [ ]
Presentation [▾]

Forward to

Destination " [ ] " *86 @ [ ]

0123456789 must match exactly → Service 86 "VoiceMail Box"

Example: Reject anonymous calls toward telephone number 0123456789 of the account.

Pattern

Destination " [ ] " 0123456789 @ [ ]
Source " [ ] " [ ] @ [ ]
Presentation [Hide ▾]

Forward to

Destination " [ ] " mcr_star99 @ mediacenter

1. 0123456789 must match exactly.
2. Incoming call must be anonymous. → Standard in-band text "No Anonymous" at MediaCenter

Example: CF to "Test Announcement" with text ID "1" of telephone number 0123456789.

Pattern

Destination	"	0123456789	@	
Source	"		@	
Presentation	▼			

Forward to

| Destination | " | mcf_message1 | @ mediacenter |

0123456789 must match exactly.

Standard in-band text at the MediaCenter

The number after "*88", e.g. **1**, is used for the new destination "mcf_message**1**".

Announcement

Settings | Interactions

Name: Test Announcement

Announcementtext ▶ Play / Modify...   Modify using phone   *881

Immediately   -
Music on wait   -
Periodically   -
Dest. not reachable -
After   10 Sec.   Restart

10 Manage the Attributes of an Account
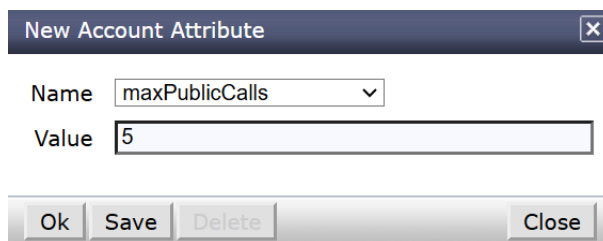
10.1 Overview Account Attributes

The account Attributes allow special configurations of e.g. limits, features that must be valid for just the account.
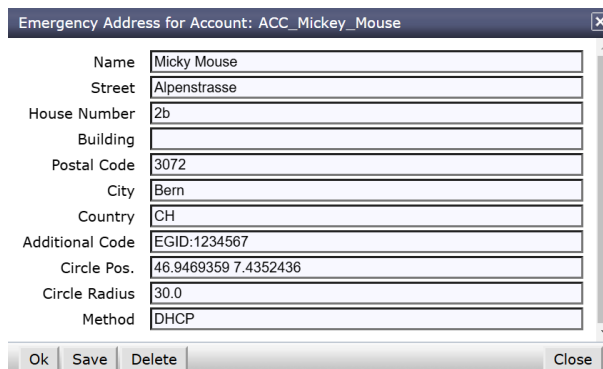
10.2 Configure the Account Attribute Parameters

Manage the account Attribute of an account in the ConfigCenter as Administrator/Operator:
> Menu: Accounts
  > The dialog "Accounts" is displayed.
    > Click the row of the desired Account.
      > Click the icon ➡ at **Attributes   1 Attribute** ➡
        > The dialog "Attributes for Account: …" is displayed. It allows:
          ‣ To create a new Attribute, click icon ➕
          ‣ Modify and delete an Attribute, click the row of the desired Attribute.
          ‣ Delete an Attribute click icon ✖ or click the button "Delete" in the dialog " Attribute: …"

New Account Attribute	☒
Name	maxPublicCalls ▾
Value	5
Ok Save Delete	Close

Parameter Name	Data Type	Allowed Values	Description
Name	Selection		Defines the Account Attribute name.
Value	String	[empty | Value, max. 256 char] Default: empty	Defines the value of the attribute.

10.3 List of the Account Attributes

Account Attribute	Description
maxPublicCalls	Defines the limit of connections of this Account via a gateway to and from the PSTN for this account.
maxPublicCallsIncoming	Defines the limit of connections of this Account via a gateway to and from the PSTN for this account.
maxPublicCallsOutgoing	Defines the limit of incoming connections of this Account via a gateway from the PSTN for this account.
teamsDomain	Defines for the feature "MS Teams Zero Touch" the customer's domain name and port where the Account expects to send and receive SIP messages with a zero-touch SBC. Example: c1.tms-provider.com:5070
announcementProfile	Defines an audio file to be played to the caller before the call is routed and connected
worktimeFraud	Assigns for the Account a different Fraud Detection time slot duration than the defined value on anSwitch V6 system level.
nighttimeFraud	
internationalFraud	The value can be different for calls during working and non-working times and for international calls.

Valid values:
  empty: No limitation
  0:      No connection possible
  ≥ 1:   max. limit of connections

11 Manage the Emergency Address

11.1 Overview of the Emergency Address

The Emergency Address data is additional information that is transferred to an emergency call center. Based on this data, the emergency services can perform more efficiently.

The concept of emergency locating according to the EU regulation NG112 is implemented according to the Swiss regulation (adaptations for other countries are possible).

▸ It requires that location information is collected and transferred to a centralized Location-Information-Service, LIS-server.

▸ The LIS-server returns a URL that needs to be passed as SIP-header to the emergency call.

11.2 Configure the Emergency Address Parameters

Manage the Emergency Address of an account in the ConfigCenter as Administrator/Operator:

For accounts:
> Menu: Accounts
  > The dialog "Accounts" is displayed.
    > Click the row of the desired Account.

For addresses:
> Menu: Addresses
  > The dialog "Address" is displayed.
    > Click the row of the desired Address.
      > Click the icon ➡ at Emergency Address   unknown
        > The dialog "Emergency Address for Account/Address: ..." is displayed.

Emergency Address for Account: ACC_Mickey_Mouse	
Name	Micky Mouse
Street	Alpenstrasse
House Number	2b
Building	
Postal Code	3072
City	Bern
Country	CH
Additional Code	EGID:1234567
Circle Pos.	46.9469359 7.4352436
Circle Radius	30.0
Method	DHCP

Ok | Save | Delete | Close

Parameter Name	Data Type	Allowed Values	Description
Name	String	Max. 60 char	Defines the name of the addressee.
Street	String	Max. 60 char	Defines the street name of the city.
House Number	String	Max. 20 char	Defines the house number in the street. Swiss specific: Contrary to the standard, numbers and text are possible, so that e.g. 12a can be transmitted.
Building	String	Max. 60 char	Defines any information for identifying the building. The building information can occur in addition of the street name and hose number.
Postal Code	String	Max. 20 char	Defines the postal code of the city or street.
City	String	Max. 60 char	Defines the name of the city.
Country	String	Max. 60 char Default: CH	Defines the country 2-letter ISO code, for example: CH.

Parameter Name	Data Type	Allowed Values	Description
			If the value is not provided during the configuration, then the default value CH is used.
Additional Code	String	Max. 50 char	Defines an additional information that can or must be provided. Swiss specific: The use of the Federal Building Identifier EGID:1234567 or VoIP Location Identifier VLI:12345678.
Circle Pos.	String	Max. 60 char	Defines the geographic location position, for example: 46.9469359 7.4352436
Circle Radius	Float	Max. 60 char	Defines the measure of the uncertainty in determining the location position. The measure is in meter, for example: 30.0
Method	Selection	[DHCP | 802.11 | CELL | GNSS | Manual]	Swiss specific: The following values are used for the delivery of VSP and ECSP in Switzerland: Value: ▸ DHCP IP localization from WireLine and private networks. ▸ 802.11 IP localization from Wifi Calling. ▸ CELL Cell localizations incl. TA/RTT for WireLess and Wifi Calling (LastCell). ▸ GNSS Satellite-based localization (GPS, A-GPS, etc.). ▸ Manual Are manually provisioned addresses and replace "Nomadic use"

12 Manage Zone-Profiles for SIP-Device Configuration File Download

12.1 Overview Zone-Profiles

Zone-Profiles allow to define the SIP-phone configuration information. This Zone information is delivered to a SIP-phone when it requests its configuration file from the AdminCenter.
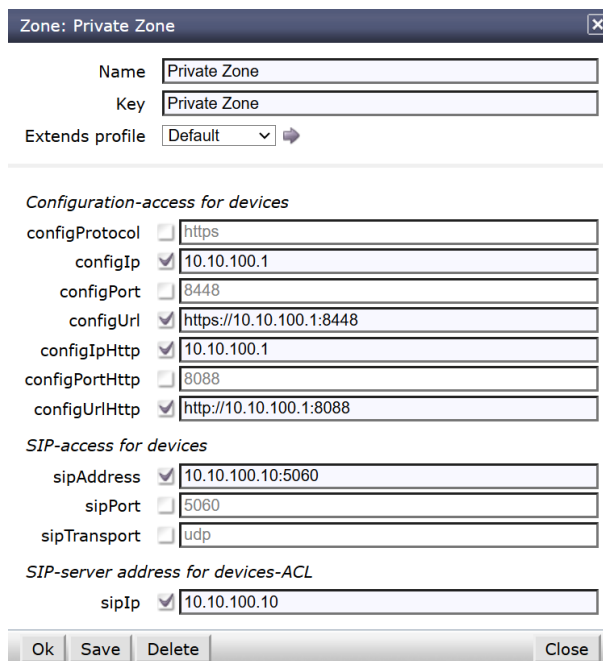
A Zone-Profile can be allocated in the SIP-Endpoint:

     Menu: System > Sub-menu: SIP Endpoints > Dialog: SIP Endpoint: …
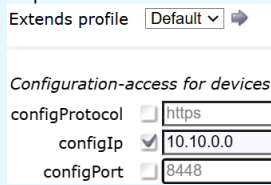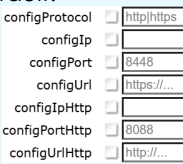
12.2 Configuring Zone-Profile Parameters
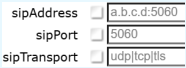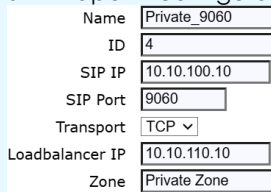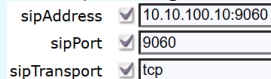
Log in to the ConfigCenter as Administrator or Operator:

> Menu: System
>> Sub-menu: Zone Profiles
>>> The dialog "Web Profiles" is displayed. It allows:
>>>> To create a Zone-Profile, click icon 🟩
>>>> Modify and delete a Zone-Profile, click the row of the desired profile.
>>>> Delete a Zone-Profile click icon ✖ or click the button "Delete" in the dialog "Zone Profile: …"

Parameter Name	Data Type	Allowed Values	Description
Name	String	[empty | Name, max. 128 char] Default: empty	Defines the name of the Zone-Profile.
Key	String	[empty | Key, max. 32 char] Default: empty	Defines the key for the Zone-Profile.
Extends profile	Selection	[- (none) | List of configured Zone-Profile] Default: - (none)	Defines a parent profile and allows to extend or overwrite a parameter value of this profile.

Parameter Name	Data Type	Allowed Values	Description
			Example: Extends profile [Default ⌄] ➡ *Configuration-access for devices* configProtocol ☐ https configIp ✔ 10.10.0.0 configPort ☐ 8448 Values: ▸ - (none): No extension ▸ Zone-Profile: Defines the name of a parent Zone-Profile.
Parameters for the Configuration Access of the SIP Equipment: *Basically, these parameters define where the SIP equipment, e.g. SIP-phone, must request its configuration file from the anSwitch V6.* *Due to the different configuration requirements of the various SIP device types, the same information must be configured several times.*			
configProtocol	☐ String	Activate Default: Not activated [empty | Value, max. 128 char] Default: configProtocol ☐ http|https configIp ☐ configPort ☐ 8448 configUrl ☐ https://... configIpHttp ☐ configPortHttp ☐ 8088 configUrlHttp ☐ http://...	Defines IP protocol to use when the parameters configIP, configPort or configUrl must be used in the generated configuration file. Valid values: ▸ http: Use the HTTP protocol. ▸ https: Use the HTTPS protocol
configIP			Defines the IP address where to download the configuration file. Valid values: ▸ x.x.x.x: IP address ▸ String: Domain name
configPort			Defines the IP port where to download the configuration file. Values: ▸ Number: IP port number
configUrl			Defines the full URL where to download the configuration file. Valid value: ▸ URL: URL, composed with the values of the parameters configProtocol, configIP and configPort.
configIpHttp configPortHttp configUrlHttp			The same configuration options as for the configIP, configPort or configUrl parameters, but the protocol is fixed to HTTP.

Parameter Name	Data Type	Allowed Values	Description
Parameters for Registering and Call Setup for the SIP Equipment at the anSwitch V6:			
sipAddress sipPort sipTransport	☐ String	Activate Default: Not activated [empty | Value, max. 128 char] Default: sipAddress ☐ a.b.c.d:5060 sipPort ☐ 5060 sipTransport ☐ udp|tcp|tls	Configure the IP address, IP port and protocol that is used in the SIP-Endpoint where this Zone-Profile is associated with. Example: SIP-Endpoint configuration: Name Private_9060 ID 4 SIP IP 10.10.100.10 SIP Port 9060 Transport TCP ∨ Loadbalancer IP 10.10.110.10 Zone Private Zone Corresponding Zone-Profile configuration: sipAddress ✓ 10.10.100.10:9060 sipPort ✓ 9060 sipTransport ✓ tcp
sipIp	☐ String	Activate Default: Not activated [empty | Value, max. 128 char] Default: empty	Defines a specific IP address configuration for the Patton SmartNode. The value is usually equal to the sipAddress parameter.

13 Manage SIP-Profiles of Whitelisted IP-Networks for Phone Registration

13.1 Overview SIP-Profiles

SIP-Profiles allow to define from which IP-subnets a SIP-device, e.g. phone, is allowed to register to an Account.
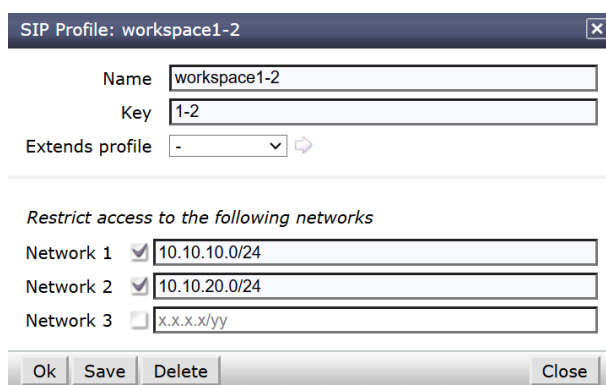
A SIP-Profile can be allocated in the customer Account:
    Menu: Accounts > … > Dialog: Account: … > Tab: Advanced

13.2 Configuring SIP Profile Parameters

Log in to the ConfigCenter as Administrator or Operator:
> Menu: System
  > Sub-menu: SIP Profiles
    > The dialog "SIP Profiles" is displayed. It allows:
      ‣ To create a SIP-Profile, click icon 🞤
      ‣ Modify and delete a SIP-Profile, click the row of the desired profile.
      ‣ Delete a SIP-Profile click icon ✖ or click the button "Delete" in the dialog "SIP Profile: …"

Parameter Name	Data Type	Allowed Values	Description
Name	String	[empty | Name, max. 128 char] Default: empty	Defines the name of the SIP-Profile.
Key	String	[empty | Key, max. 32 char] Default: empty	Defines the key of the SIP-Profile.
Extends profile	Selection	[- (none) | List of configured SIP-Profiles] Default: - (none)	Defines a parent profile and allows to extend or overwrite a network value. Example: Values: ‣ - (none): No extension ‣ SIP-Profile: Defines the name of a parent SIP-Profile.

Parameter Name	Data Type	Allowed Values	Description
Network 1	☐	Activate Default: Not activated	If activated, defines the allowed IP-network. Example:

Network 2	String	[empty |
		  IP network address,
		  in x.x.x.x/yy notation]
		Default: empty
			Network 1 ☑ 10.10.10.0/24
			Network 2 ☑ 10.10.20.0/24
			Network 3 ☐ x.x.x.x/yy

Network 3			

14 Manage Web-Profiles of Whitelisted IP-Networks for AdminCenter Access

14.1 Overview Web-Profiles

Web-Profiles allow to define from which IP-subnets a user's Web browser is allowed to access the AdminCenter user interface.
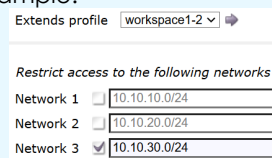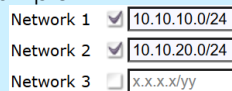
A Web-Profile can be allocated in the Address:
> Menu: Address > … >Dialog: Address: … > Tab: Advanced > Link: AdminCenter Access

14.2 Configuring Web-Profile Parameters

Log in to the ConfigCenter as Administrator or Operator:
> Menu: System
> > Sub-menu: Web Profiles
> > > The dialog "Web Profiles" is displayed. It allows:
> > > ‣ To create a Web-Profile, click icon ✚
> > > ‣ Modify and delete a Web-Profile, click the row of the desired profile.
> > > ‣ Delete a Web-Profile click icon ✖ or click the button "Delete" in the dialog "Web Profile: …"

Parameter Name	Data Type	Allowed Values	Description
Name	String	[empty | Name, max. 128 char] Default: empty	Defines the name of the Web-Profile.
Key	String	[empty | Key, max. 32 char] Default: empty	Defines the key for the Web-Profile.
Extends profile	Selection	[- (none) | List of configured Web-Pro-files] Default: - (none)	Defines a parent profile and allows to extend or overwrite a network value. Example: Values: ‣ - (none): No extension ‣ Web-Profile: Defines the name of a parent Web-Profile.
Network 1 Network 2 Network 3	☐ String	Activate Default: Not activated [empty | IP network address, in x.x.x.x/yy notation] Default: empty	If activated, defines the IP-network. Example

15 Manage SIP-Trunk Profiles for SIP Equipment Communication

15.1 Overview of the SIP-Trunk Profile

A customer Account needs a SIP-Trunk when the customer's SIP equipment does not or cannot use the standard SIP Registration process.

When no SIP Registration is possible then the anSwitch V6 has to learn "manually":

▶	IP address	→ Where is the peering SIP equipment located in the IP network.
▶	Authentication	→ How can the anSwitch V6 make sure that a SIP message is coming from the correct peering SIP equipment.
▶	Caller Identification	→ Which delivered caller number must be used for the caller-ID verification by the anSwitch V6.

➔ This information is configured in the SIP-Trunk Profiles.

A SIP-Trunk Profile can be allocated in the customer Account:

Menu: Accounts > … > Dialog: Account: … > Tab: Basic > Link: SIP Trunks

15.2 Use Cases of SIP-Trunk Profiles

Use Case: Non-registering SIP equipment with own public IP.

The customer's SIP equipment has a direct public IP-address.
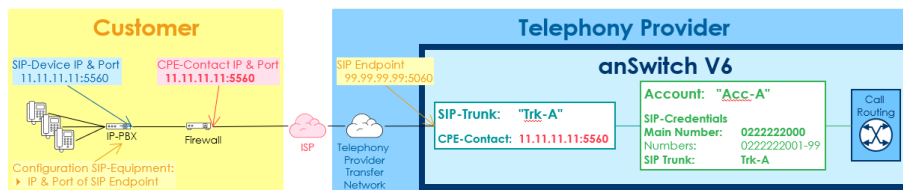
Use Case: Non-registering SIP equipment behind Session Border Controller SBC.

The customer's SIP equipment is hidden by a Session Border Controller SBC.
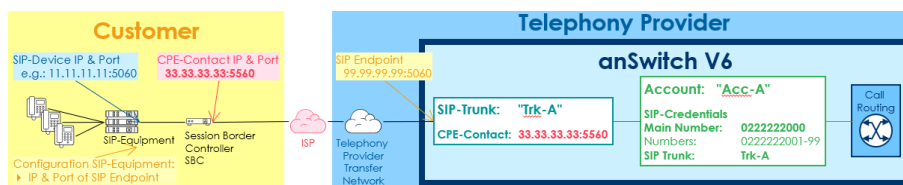
Use Case: Non-registering SIP equipment behind NAT.

The customer's SIP equipment has a private IP-address and is hidden by a NAT'ing IT equipment, e.g. access router, firewall.
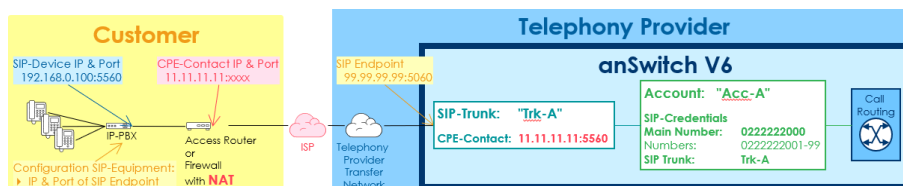
Use Case: Redundant SIP-Trunk setup with weighted outgoing SIP message transmission.

The customer requests a redundant SIP-Trunk interconnection between the anSwitch V6 and the own SIP equipment:

▶ >1 SIP-Trunk profiles can be associated with the customer Account.
▶ Each SIP-Trunk profile can be designed to suit the peering needs.

▸ The SIP-Trunk profile can be weighted for managing the outgoing workload toward the peering equipment.
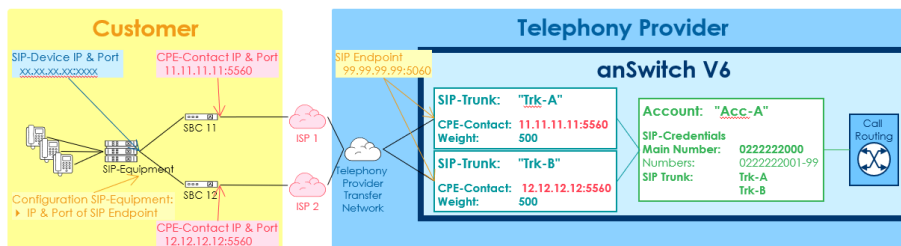
Use Case: Shared SIP-Trunk

The customer requests a shared SIP-Trunk interconnection between the anSwitch V6 and the own SIP equipment.

For example, due to:
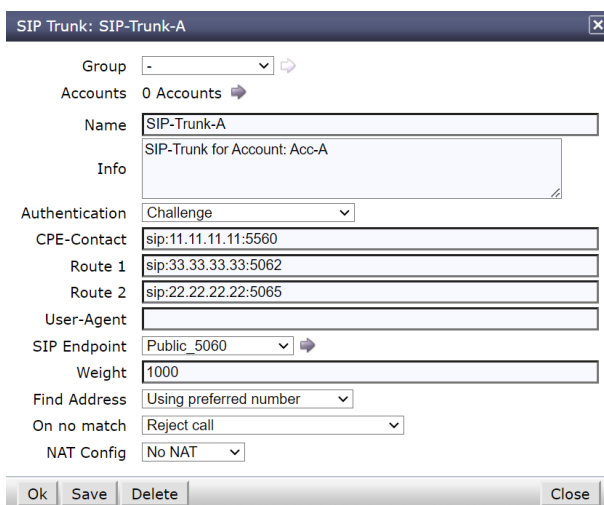
▸ The customer's user groups shall have different pricelists.
▸ Separate CDR-CSV files are created on the anSwitch V6 for the customer's user groups billing.
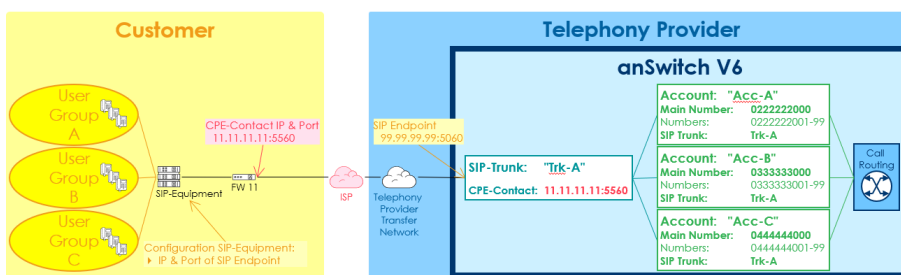
15.3 Configuring the SIP-Trunk Profile Parameters

Log in to the ConfigCenter as Administrator or Operator:

> Menu: System
>> Sub-menu: SIP Trunks
>>> The dialog " SIP Trunks " is displayed. It allows:
▸ To create a SIP-Trunk, click icon 🟢
▸ Modify and delete a SIP-Trunk, click the row of the desired profile.
▸ Delete a SIP-Trunk click icon ❌ or click the button "Delete" in the dialog "SIP Trunk: …"

Parameter Name	Data Type	Allowed Values	Description
Group	Selection	[- (none) | List of configured Group]	Defines that the SIP-Trunk profile belongs to a specific Group.

Parameter Name	Data Type	Allowed Values	Description
		Default: - (none)	Values: ▸ - (none): No Group assigned. ▸ Group: Defines a Group whose members can select this SIP-Trunk Profile. Note: With this selection this SIP-Trunk profile is visible only for the accounts of this group.
Accounts	Display & link	Accounts 1 Account ➡	Displays the number of accounts using this SIP-Trunk profile. ➡ is the link to the list of accounts using this SIP-trunk profile.
Name	String	[empty | Name, max. 32 char] Default: empty	Defines the name of the SIP-Trunk profile.
Info	String	[empty | Max. 128 char] Default: empty	Any information about this SIP-Trunk profile.

Parameters for the Authentication of the Peering SIP Equipment:

▸ Authentication variant 1:
The customer SIP-equipment can answer a **challenge** of the anSwitch V6 with correct SIP-credentials.
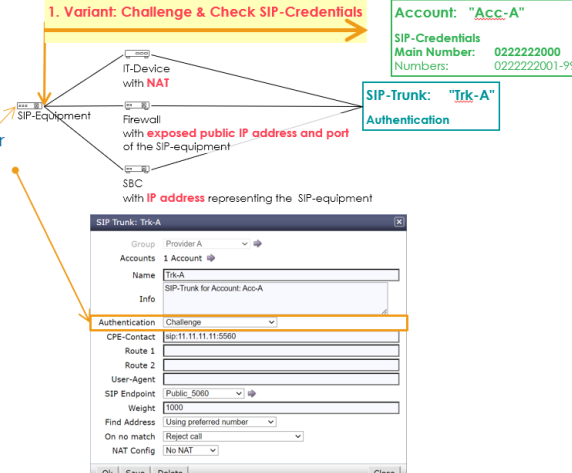
    a. Configure the authentication parameters for checking with challenging:
       ▸ "Authentication"
         Select "Challenge"

    b. The customer must configure the SIP authentication with SIP-credentials in the customer SIP-equipment.
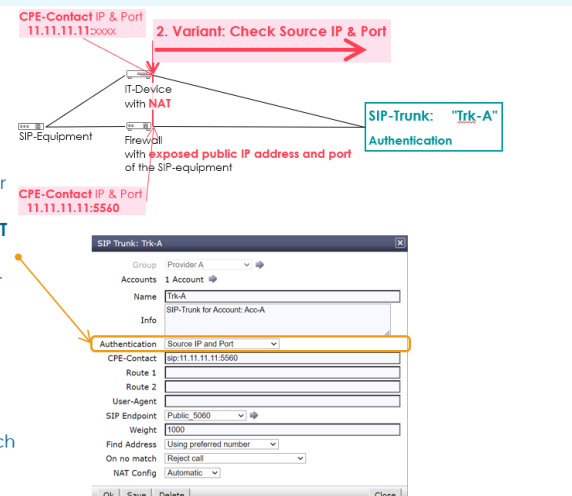
▸ Authentication variant 2:
The anSwitch V6 checks against the **source IP address** (and optional IP port) of the received IP-packets containing SIP-messages.

    a. Configure the authentication parameters for checking just the IP-packet source:
       ▸ SIP-equipment behind IT-device with **NAT**
         ▸ "Authentication"
           Select "Source IP", as the IP port may change.

       ▸ SIP-equipment behind **firewall** with exposed public IP address and port
         ▸ "Authentication"
           Select "Source IP" or "Source IP and Port"

    b. The customer must configure the SIP-equipment and IT-devices so that they match the authentication requirements of the anSwitch V6.
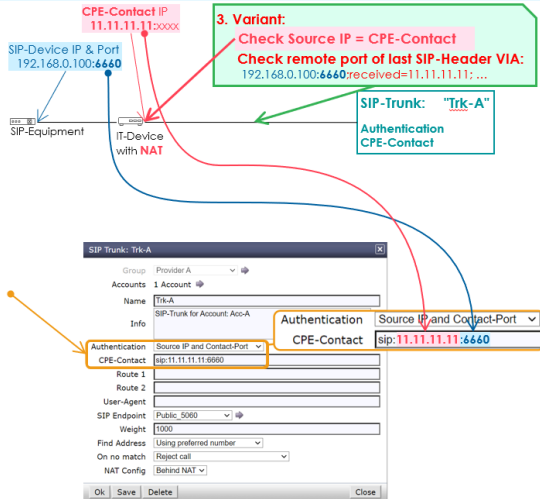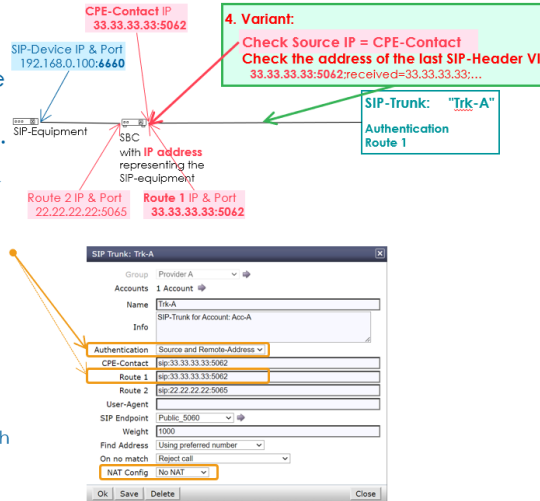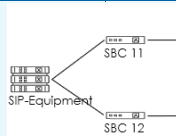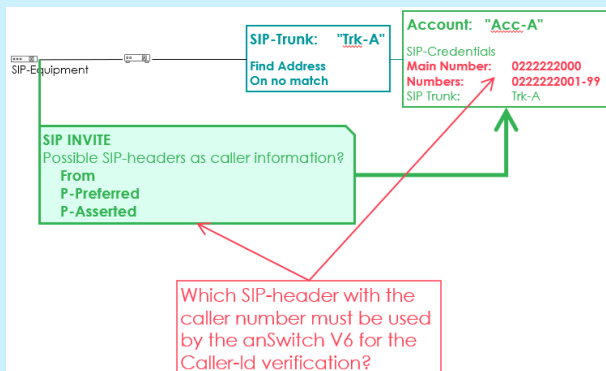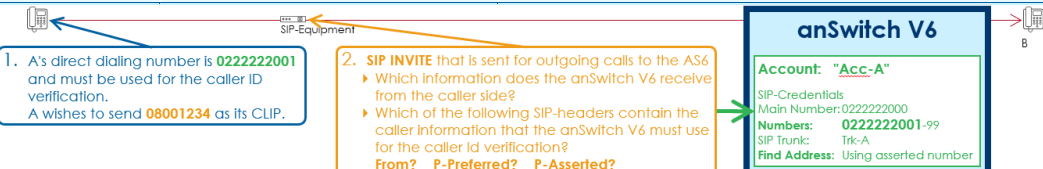
Parameter Name	Data Type	Allowed Values	Description

▶ **Authentication variant 3:**
The anSwitch V6 checks against the **source IP address** and **IP port of the last SIP-header VIA** of the received SIP-message.

a. Configure the authentication parameters for checking the SIP-equipment behind an IT-device with NAT and the contact port from within the SIP-message.

 ▶ SIP-equipment behind IT-device with NAT
  ▶ "Authentication"
   Select "Source IP and Contact-Port"
  ▶ "CPE-Contact"
   Configure the CPE-contact IP address or domain name and the used IP-port for SIP of the SIP-equipment, e.g. 6660

b. The customer must configure SIP authentication in the SIP-equipment.

▶ **Authentication variant 4:**
The anSwitch V6 checks against the **source IP address** and compares the **remote IP information of the last SIP-header VIA with the value of Route 1.**

a. Configure the authentication parameters for checking the SIP-equipment behind an SBC.

 ▶ "Authentication"
  Select "Source and Remote-Address" then the complete remote IP and port are matched against the "Route 1" value.

  Select "Source and Remote-IP" then the remote IP address is matched against the IP address value of "Route 1".

b. The customer must configure the SIP-equipment and IT-devices so that they match the authentication requirements of the anSwitch V6

| Authentication | Selection | [Challenge \| Source IP \| Source IP and Port \| Source IP and Contact-Port \| Source and Remote-Address \| Source and Remote-IP]

Default: Challenge | Defines how the peer SIP equipment hast to authenticate in order that outgoing calls by the peering SIP equipment are processed.

Values:
▶ Challenge:
The peering SIP equipment is challenged by the anSwitch V6 call control. The peering SIP equipment must authenticate with the SIP username and password defined in the associated Account.

▶ Source IP:
▶ Source IP and Port:
The anSwitch V6 call control checks the IP address/port of the received IP packet against the IP address/port defined in parameter "CPE-Contact".

▶ Source IP and Contact-Port:
The anSwitch V6 call control checks the IP address against the IP address defined in parameter "CPE-Contact" and additionally the contact IP port within the SIP-message against the IP port defined in parameter "CPE-Contact". |

Parameter Name	Data Type	Allowed Values	Description
			▸ Source and Remote-Address: ▸ Source and Remote-IP: The anSwitch V6 call control checks of the received IP packet either the complete-address data or just the IP-address against the address data defined in parameter "Route 1"CPE-Contact".

Route 1	SIP-Address	[empty |
		  SIP-Address, max. 128 char
		]
		
		Default: empty
			If an intermediate SIP-manipulating device, e.g. a Session Border Controller SBC, is used, "Route 1" defines the IP address or the domain name and the port of this SIP-manipulating device, which points to the anSwitch V6.
			
			Values:
			▸ empty:
			  No intermediate SIP-manipulating device.
			
			▸ SIP-Address: Defines the IP address.
			  For example:
			    sip:33.33.33.33:5062
			    sip:sbc.customer-company.com:5062

Route 2	SIP-Address	[empty |
		  SIP-Address, max. 128 char
		]
		
		Default: empty
			If an intermediate SIP-manipulating device, e.g. a Session Border Controller SBC, is used, "Route 2" defines the IP address or the domain name and the port of this SIP-manipulating device, which points to the customer's peering SIP equipment.
			
			Values:
			▸ empty:
			  No intermediate SIP-manipulating device.
			▸ SIP-Address: Defines the IP address.
			  For example:
			    sip:22.22.22.22:5065
			    sip:sbc.customer-company.com:5065

Parameter Name	Data Type	Allowed Values	Description

Parameters for Processing Incoming and Outgoing SIP-Message:

▸ **Configuration Scenario 1:**
  ▸ SIP-equipment is behind a firewall with exposed fix public IP and port.
  ▸ SIP-equipment is behind IT-device with NAT
    → The public IP address is assigned by the ISP.
    → This IP address must remain fix!

  a. Configure the SIP-Trunk profile parameter:
  ▸ "CPE-Contact"
    Configure the IP address or domain name and port where the anSwitch V6 must send its SIP-messages, e.g.:
      sip:11.11.11.11:5560
      sip:sip.customer-company.com:5560

  ▸ "SIP Endpoint"
    Select the SIP Endpoint where the SIP-messages from the peering customer SIP-equipment are received.
    → The IP address and port of this SIP Endpoint must be configured in the customer SIP-equipment.

  ▸ "NAT Config"
    Select according the situation of the customer SIP-equipment.
    ▸ "Behind NAT"
    ▸ "No NAT"
    ▸ "Automatic": only if the situation is unknown.

▸ **Configuration Scenario 2:**
  ▸ SIP-equipment is behind a Session Border Controller SBC.

  a. Configure the SIP-Trunk profile parameter:
  ▸ "CPE-Contact"
    Configure the IP address or domain name and port where the anSwitch V6 must send its SIP-messages, e.g.:
      sip:33.33.33.33:5560
      sip:sbc.customer-company.com:5560

  ▸ "Route 1" → Toward anSwitch V6
    "Route 2" → Toward customer SIP-equipment
    Configure the IP-address according the SBC settings.

  ▸ "SIP Endpoint"
    Select the SIP Endpoint where the SIP-messages from the peering customer SIP-equipment are received.
    → The IP address and port of the SIP Endpoint must be configured in the SBC.

  ▸ "NAT Config"
    Select "No NAT"

Parameter Name	Data Type	Allowed Values	Description

CPE-Contact	SIP-Address	[empty | SIP-Address, max. 128 char]
		
		Default: empty
			Defines the IP address or domain name and port where the anSwitch V6 must send its SIP-messages toward the peering SIP equipment.
			
			Depending on the IP environment of the customer side the CPE-Contact may be:
			▸ A fixed public IP address of the:
			  ▸ SIP equipment.
			  ▸ Firewall or Session Border Controller SBC proxying the SIP-messages to the SIP equipment.
			▸ Volatile public IP address of a NATing IP device, e.g. access router.
			
			Values:
			▸ empty: No SIP-messages can be sent.
			▸ SIP-Address: Defines the IP address. For example:
			  sip:33.33.33.33:5560
			  sip:sbc.customer-company.com:5560

SIP Endpoint	Selection	[- (none) | List of configured SIP-Endpoints]	Defines the SIP Endpoint where the SIP-messages from the peering customer SIP equipment are received.

Parameter Name	Data Type	Allowed Values	Description
		Default: - (none)	Values: ▸ - (none): No incoming SIP-messages are processed by the anSwitch V6 call control. ▸ SIP-Endpoint: Defines the SIP-Endpoint where the anSwitch V6 accepts incoming SIP-messages from the peering SIP equipment. Note: The IP address and port of this SIP-Endpoint must be configured in the customer SIP equipment.
NAT Config	Selection	[Automatic | Behind NAT | No NAT] Default: Automatic	Defines if the peering SIP equipment is located behind a NATing IT-device, e.g. a customer's access router. If a NATing IT-device is involved, then it must be made sure that the NAT port for the SIP-messages remains open all the time. If the NAT port closes unexpectedly, then no incoming calls to the peering SIP equipment can be signaled by the anSwitch V6. Values: ▸ Automatic: The anSwitch V6 tries to find out if the peering SIP equipment is behind a NATing IT-device. If yes, then the anSwitch V6 makes sure that the NAT port remains open. ▸ Behind NAT: Defines that the peering SIP equipment is behind a NATing IT-device. The anSwitch V6 makes sure that the NAT port remains open. ▸ No NAT: Defines that the peering SIP equipment is not behind a NATing IT-device. Note: Select "Automatic" only if the situation is unknown.
User-Agent	String	[empty | Name, max. 256 char] Default: empty	Defines the application a specifically developed anSwitch V6 Capability-Set that solves interoperability problems between the customer SIP equipment and the anSwitch V6. Values: ▸ empty: Standard SIP and audio stream processing is applied. ▸ Name: Defines the anSwitch V6 Capability-Set to be used.

Parameter Name	Data Type	Allowed Values	Description
			Note: For developing, creating and activating a Capability-Set an Aarenet system engineer is required. Contact your Aarenet account manager for an interoperability project!
Weight	Number	0 - 1000 Default: 1000	The SIP-Trunk profile can be weighted for managing the outgoing SIP-message workload toward the peering SIP equipment. Examples: ▸ Trk-A = 500, Trk-B = 500 : The anSwitch V6 load balances outgoing calls 50% on Trk-A and 50% on Trk-B ▸ Trk-A = 1000, Trk-B = 0 : All outgoing calls are routed via Trk-A. If the connectivity via A fails all outgoing calls are routed via Trk-B. Values: ▸ 0 - 1000: Balanced outgoing SIP-message load via this SIP-Trunk. Note: Incoming calls are accepted in any case from both SIP-trunks.

Parameter Name	Data Type	Allowed Values	Description
Parameters for Handling the Caller-ID Verification			

- ▶ As Class 5 switch the anSwitch V6 is required on an outgoing call to verify the Caller-Id and set the correct caller information.
- ▶ We probably don't know what caller information and combinations are sent by the customer SIP equipment.

Parameter Name	Data Type	Allowed Values	Description
Find Address	Selection	[Using preferred number | Using asserted number] Default: Using preferred number	Defines which SIP-header must be used by the anSwitch V6 call control for the caller-ID evaluation. Values: ▶ Using preferred number: Defines the number of the SIP Header P-Preferred must be used. ▶ Using asserted number: Defines the number of the SIP Header P-Asserted must be used.

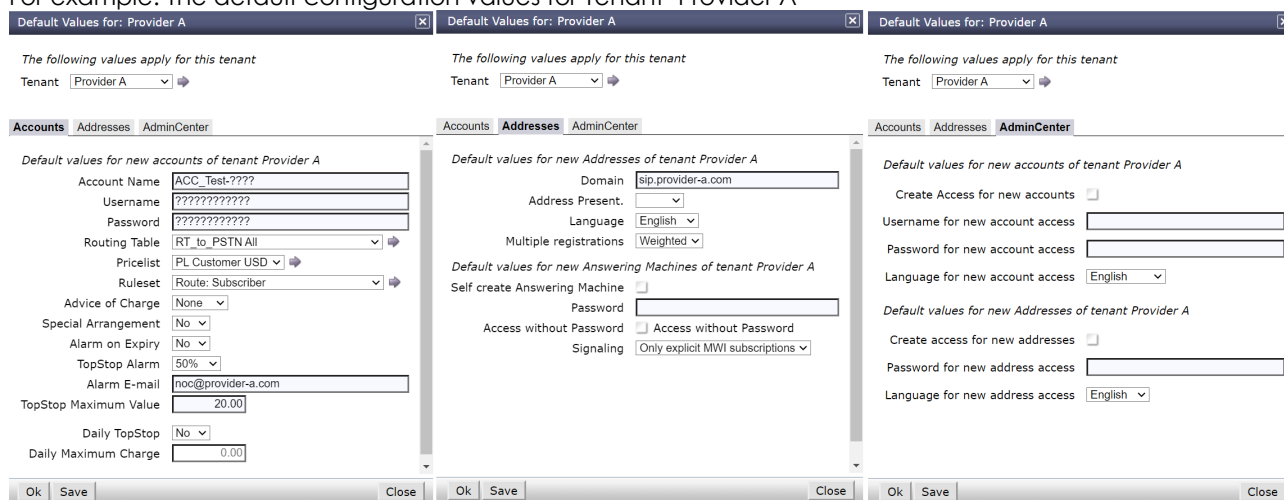| Parameter Name	Data Type	Allowed Values	Description
On no Match	Selection	[Reject call | Continue authentication] Default: Reject call	Defines what has to be done when no valid caller-ID can be identified by the anSwitch V6. Values: ▶ Reject call: The call shall be rejected (SIP cause 401). ▶ Continue authentication: The anSwitch V6 challenges for the SIP-credentials and will route the call if successful.

16 Manage Default Configuration Values of a Customer Account

16.1 Overview to the Default Configuration Values

For the configuration of customer accounts via the ConfigurationCenter, it is possible to define default values for the organization unit types system and tenant.
When default configuration values are configured, e.g. for a certain tenant, then they will be applied when a new customer account is created of the organization unit.

For example: The default configuration values for Tenant "Provider A"

16.2 Configuring the Default Configuration Parameters

Manage the default configuration values as Administrator/Operator:
> Menu: System
>> Sub-menu: Default Values

Parameter Name	Data Type	Allowed Values	Description
Tenant	Selection	[empty | List of configured Tenants] Default: empty	Defines the organization unit the default values are associated with. Values: ▸ empty: The defined default values are applied to the organization unit "System". ▸ Tenant: The defined default values are applied to the organization unit "Tenant" .

The configuration of the available default parameters is identical to their description:
  Configuring the Account Parameter ↗
  Configuring the Address Parameter ↗

17 Deprecated Account and Address Features

The following Account and Address features and their configuration menus in the ConfigCenter are depre-cated.

<div style="background-color: yellow;">

Note Their configuration is still possible, but their functionality is no longer being further developed and errors are not being corrected.

</div>

▶ The feature vPBX is deprecated and all its specific configuration.

  ▶ Address configuration
    Menu: Address > Dialog: Address: … > Tab: virtual PBX

  ▶ PBX Wizard
    Menu: System > Sub-Menu: PBX Wizard

    ▶ Call distributions
      Menu: Accounts > Dialog: Account: … > Sub-Menu: Call Forwards

▶ Veeting UCC interconnection configuration
  Menu: System > Sub-Menu: System Settings

▶ WebRTC application interconnection configuration
  Menu: System > Sub-Menu: RTC Accounts

18   Best Practices

18.1   Limit Temporarily an Account

Situations may arise in which the use of an account must be temporarily restricted, e.g. in the case of a non-paying customer. But due to possible legal obligations, a user must still be able to do emergency calls.
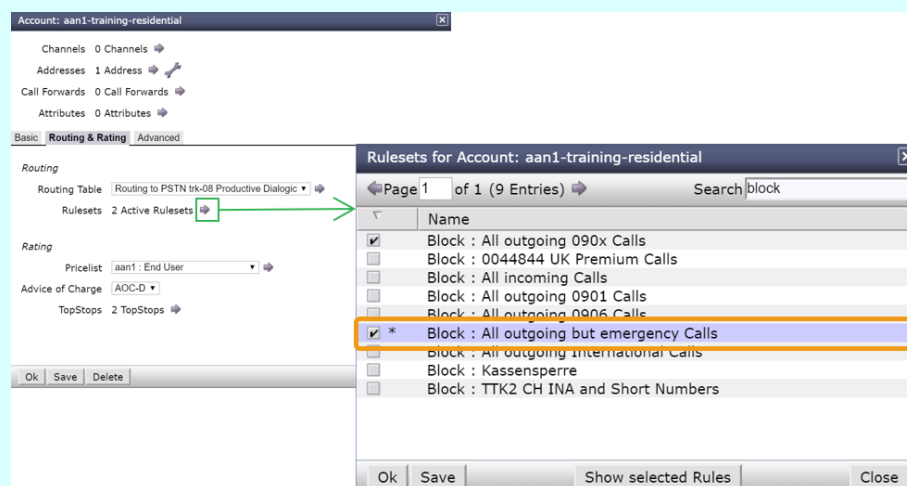
In such a situation it is not recommended to invalidate an account with "Valid until" or setting its channels to 0:
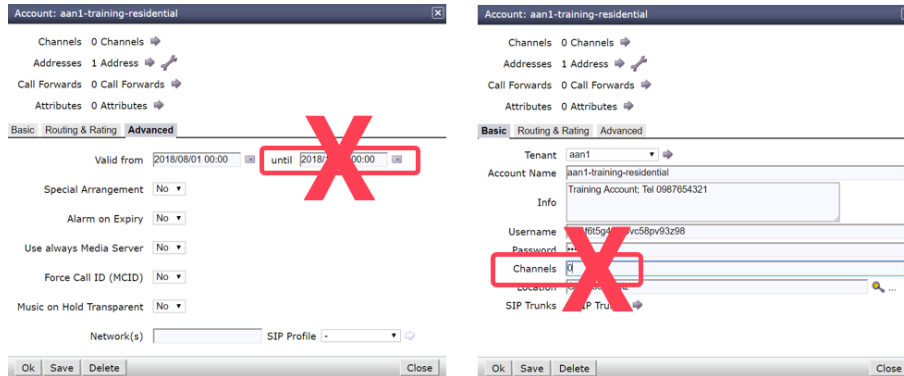
Best Practice	Temporarily limit an "Account" for outgoing calls but not calls to emergency numbers: ➔ Invoke the blocking ruleset "Block: All outgoing but emergency Calls"

18.2   Shutdown an Account

18.2.1   Different Shutdown Scenarios

Different "shutdown" scenarios for an Account are possible, when for example the customer terminates the telephony service contract.

For example:

▸ Delete an Account immediately.
All services and resources are immediately unavailable.
➔ All configurations of the Account and user data like VoiceMail Box messages, will be unrecoverable deleted. The CDR data are not deleted.

▸ Delete an Account after an administrative timeout:
The services and resources are in first step disabled for a certain time. After the administrative timeout, e.g. 6 month, the Account will be deleted.
This scenario may be suitable or needed due to:
▸ Number porting to a new telephone provider.

- ▶ Blocking of the telephone numbers for a certain period of time before they are to be used again.
- ▶ You expect that the customer will come back soon.

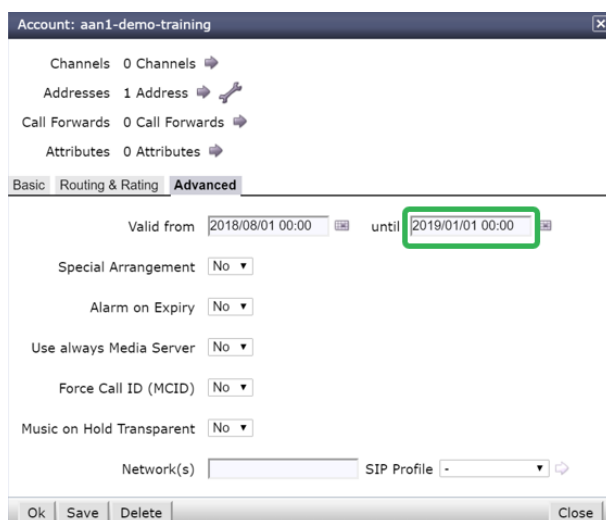Example flowchart for the "Shutdown" scenarios
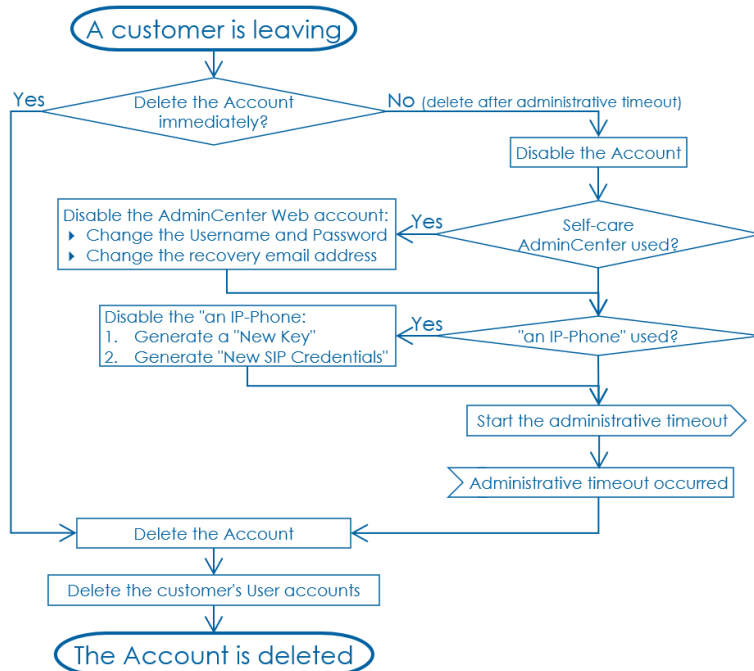
> **Note** The desired shutdown process must be defined by the telephony provider.

18.2.2 Disabling an Account

As Operator disable an Account by configuring a "Valid until" date/time:

- ▶ No calls to and from this account are possible from this date/time on.
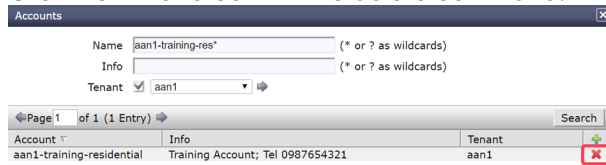- ▶ No AdminCenter access is possible from this date/time on.

> **Note** By invalidate an Account by "Valid until" the Operator can reactivate the Account easily when, e.g. an number porting process failed or a customer wants to come back.

18.2.3   Deleting an Account

As Operator disable an Account:
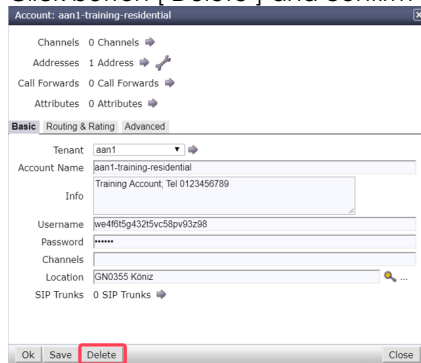
1.   Search for the Account in the ConfigCenter.
2.   Click the ✖ and confirm the delete command.

or

3.   Open the Account dialog.
4.   Click button [Delete] and confirm the delete command.

| Note | By deleting the Account, all associated phone numbers, messages in the VoiceMail Boxes, etc. will be deleted too! |

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