

Training anSwitch V7

PBX CREATION & MANAGEMENT

Classification: For Internal Use
Status: Released
Version: E1.4
Author: D. Bochsler

INTRODUCTION & MOTIVATION

This Training covers the topics:

- ▶ Creating a PBX:
 - ▶ Collecting all needed information
 - ▶ Create a PBX with its public phone numbers
 - ▶ Configuring a PBX Administrator user account
- ▶ To understand the needed settings on a peering PSTN carrier device

After this training, the trainee is enabled:

- ▶ To create and configure a PBX
- ▶ To configure a peering anSwitch V6
- ▶ To advise users and customers about accessing their PBX



*IT'S NOT
MAGIC
IT'S "KNOW
HOW"*

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1 OVERVIEW OF THE PBX CREATION TASKS

OVERVIEW OF THE PBX CREATION TASKS

▶ **Task 1: Prepare all needed data of the new PBX**

- ▶ PBX owner data as administrative customer identification and customer information
- ▶ Public numbers and/or number ranges
- ▶ Offering and administrative configurations of the PBX
- ▶ Date & time of activation
- ▶ etc.

▶ **Task 2: Initial configuration of the PBX**

- ▶ Create the PBX on the anSwitch V7 with the given data of **Task 1**

▶ **Task 3: Make sure the call routing to and from the PSTN telephone network**

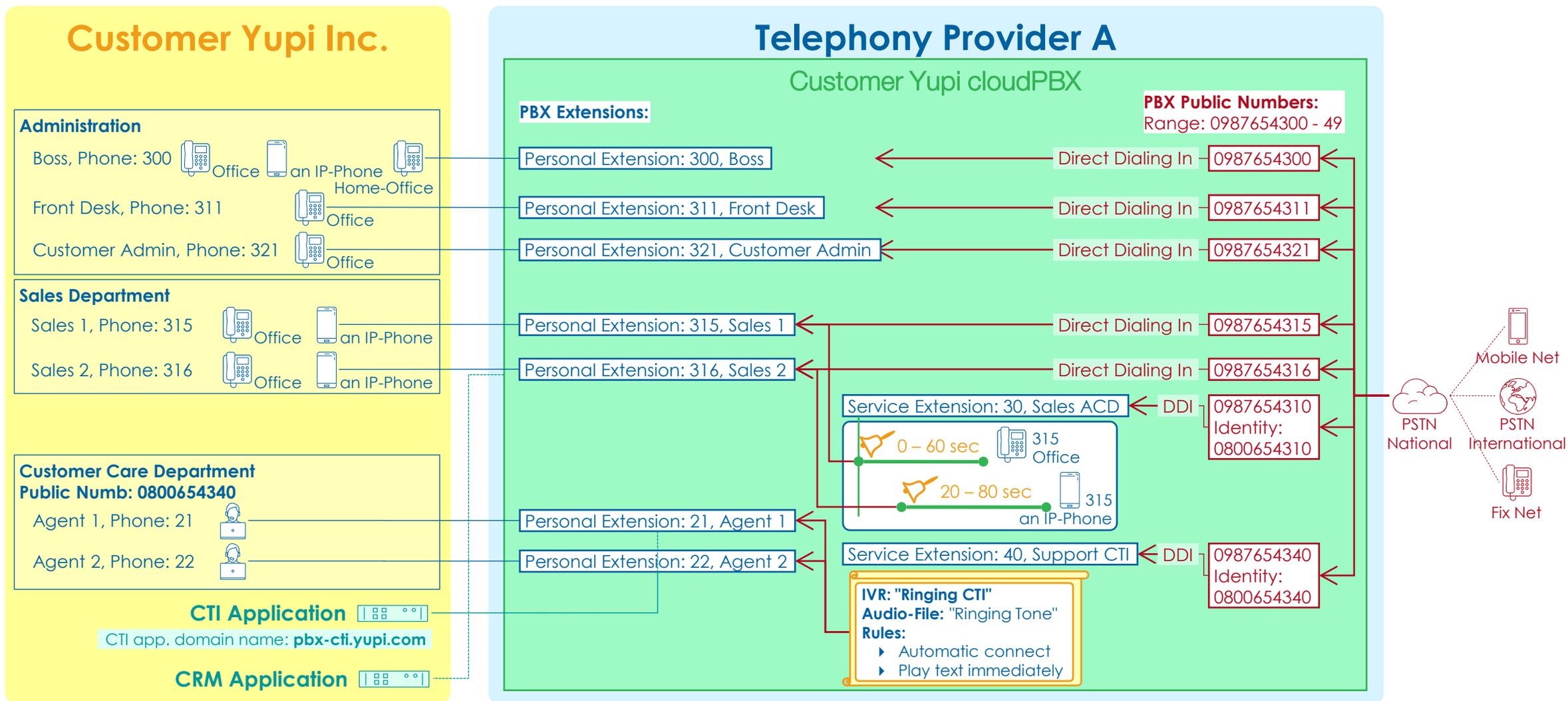
- ▶ Make sure that the routing of the PBX's public numbers to and from the PSTN is ready at the date & time of the PBX activation:
 - ▶ Public number porting finalized
 - ▶ PSTN carrier is routing the public PSTN numbers to and from the PBX

▶ **Task 4: Inform the PBX Owner**

- ▶ URL of the Portal UI
- ▶ PBX administrator access

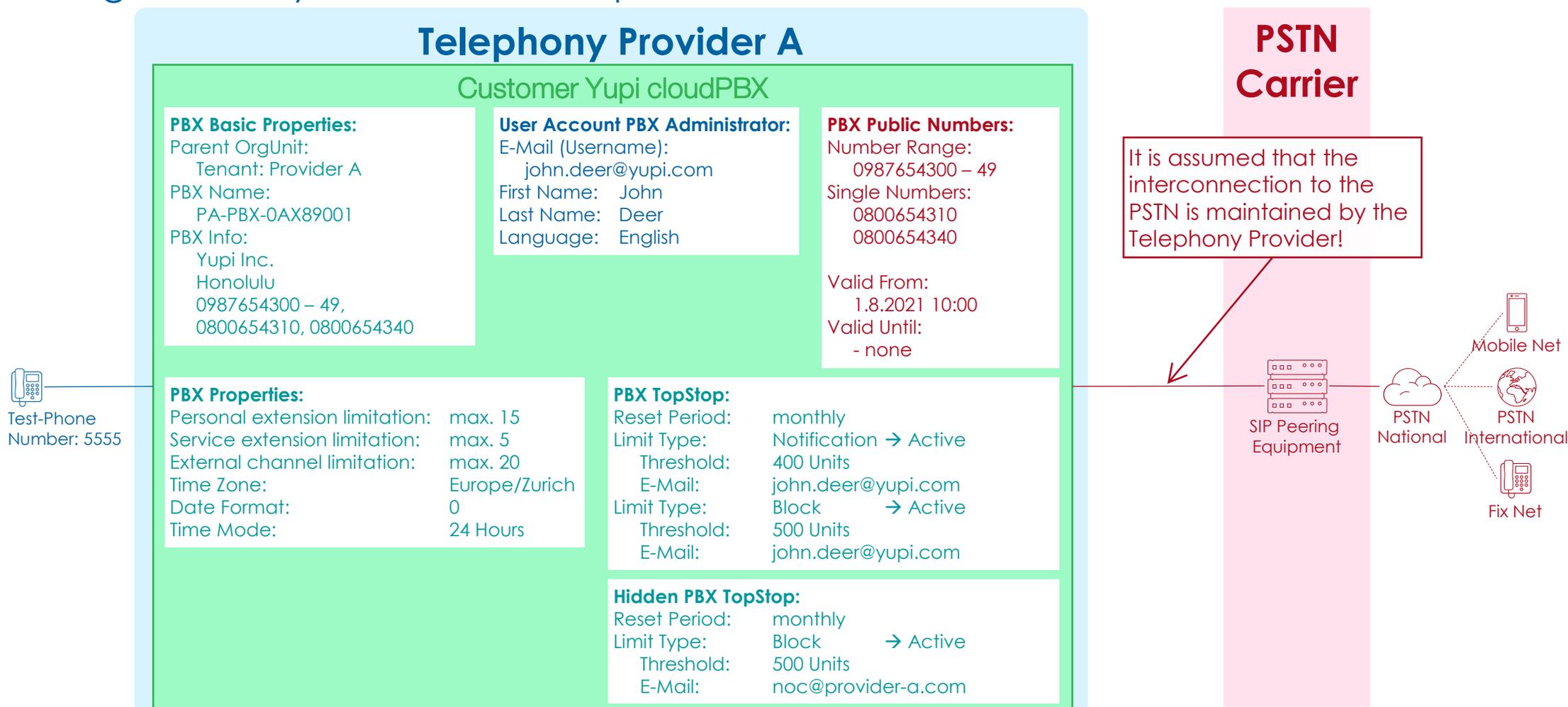
OVERVIEW OF THE EXAMPLE PBX

- For the following training we use this PBX scheme as the goal we want to achieve:



OVERVIEW OF THE EXAMPLE PBX CREATION

- ▶ With the creation of the PBX, we "install an empty" PBX with the initial configuration by the Provider A operations:



2 TASK 1: PREPARE ALL NEEDED DATA OF THE NEW PBX

OVERVIEW OF THE PREPARATION TASK

- ▶ **Task 1: Prepare all needed data of the new PBX**
 - ▶ Collect all needed data for the initial PBX creation
 - ▶ PBX owner data as administrative customer identification and customer information
 - ▶ Public numbers and/or number ranges
 - ▶ Offering and administrative configurations of the PBX
 - ▶ Date & time of activation
 - ▶ Hidden TopStop thresholds
 - ▶ Optional PBX access configurations

PREPARE THE BASIC DATA OF THE PBX

► Prepare the basic PBX data:

Topic	Example	Value	Description
PBX			
Name	PA-PBX-0AX89001	.....	Unique identification name of the PBX. Usually, it corresponds to an administrative identification of the customer
Description	Yupi Inc, Honolulu, 0987654300 – 49, 0800654310 0800654340	.....	Any optional information. Note: ► As the name often is a cryptic identification, fill in something you can search, like the company name.
Member of	Provider A	.....	Defines the parent OrgUnit, usually a Tenant
Teams Domain		.....	Optional: Only needed if an MS Teams integration is required. MS Teams domain configuration, see presentation: training_answitch_804_ms_teams_e

PREPARE THE PUBLIC NUMBERS DATA OF THE PBX

► Prepare the PBX public number data:

Topic	Example	Value	Description
Public Phone Numbers			
Number range	0987654300- 49,0800654310,0800654 340	.....	Define the public numbers of the PBX <ul style="list-style-type: none"> ► Multiple entries are comma separated, e.g. <ul style="list-style-type: none"> ► Single numbers: 0600,0605 ► Ranges: 0650-3 This generates 4 numbers → 0650,0651,0652,0653
Valid from	20.4.2021 06:00	.....	Define from which date/time the number are valid for routing. This means before this date no call are possible from and to this numbers.
Valid until	-	.....

Note

Always configure a "Valid from" date/time when the customer already has a PBX and uses these public numbers somewhere in the PSTN e.g., with another telephony provider. Without a "Valid from" other OnNet users dialing a public number of this new PBX will not be routed to the PSTN but to this new and probably not ready PBX of the customer.

PREPARE THE PROPERTY DATA OF THE PBX

► Prepare the PBX properties:

Topic	Example	Value	Description
PBX Properties			
Personal Extensions	10	.....	Define the maximum number of PBX personal extensions for SIP phones Note If no personal extension number is configured no PBX extensions can be created.
Service Extensions	5		Define the maximum number of PBX service extensions for ACD or IVR
External channels	20	.....	Define the maximum number of external connections to and from the PBX. 0 : No connections to and from the PBX are possible. Note If no external channels number is configured no outgoing and incoming calls to public numbers are possible!
Public prefix		.....	Define the PBX number prefix for fetching a line for a call to the PSTN Default: (empty) Digit: 0 – 9
Time Zone	Europe/Zurich	.....	Select the time zone of the PBX
Date Format	dd.mm.yyyy	.....	Select Europe or USA date style
Time Mode	24 hours	.....	Select 24/12hour time mode

PREPARE THE INCOMING CALL ROUTING DATA OF THE PBX

► Prepare the PBX incoming call parameters:

Topic	Example	Value	Description
PBX Properties			
Time mode	Timetable	.....	<p>Select the PBX call routing mode for incoming calls:</p> <ul style="list-style-type: none"> ► Timetable (default): The selected timetables in the Advanced Call Distributions ACD and Interactive Voice Response IVR of the PBX extensions are applied. ► Night: The call routing of the selected timetable that is valid at 24:00 of this day is applied. It is reset to mode 'Timetable' automatically at 24:00 of this day. ► Weekend: The call routing of the selected timetable that is valid at 24:00 of the next Sunday is applied. It is reset to mode 'Timetable' automatically at 24:00 of the next Sunday. ► Night permanent: The call routing of the selected timetable that is valid at 24:00 of this day is applied. It can only be reset manually by selecting e.g. "Timetable". ► Weekend permanent: The call routing of the selected timetable that is valid at 24:00 of the next Sunday is applied. It can only be reset manually by selecting e.g. "Timetable".

PREPARE THE PBX ADMINISTRATOR ACCOUNT DATA OF THE PBX

► Prepare the PBX Administrator configuration parameters:

Topic	Example	Value	Description
PBX Administrator			
E-Mail	john.deer@yupi.com	.....	The e-mail is the username of this user account.
First Name	John	.....	Any string
Last Name	Deer	.....	Any string
Language	English	.....	Select the language to be used in the Web Portal UI

Note

There is no password to define yet!

→ The PBX Administrator must create the password at the first contact with the login dialog by using the password recovery process.

PREPARE THE TOPSTOP DATA OF THE PBX

► Prepare the PBX & hidden TopStop parameters:

Topic	Example	Value	Description
PBX & Hidden TopStop			
Reset Period	monthly	.....	Select the period for resetting the max. values: <ul style="list-style-type: none"> ► monthly (default): Automatic reset at the beginning of every month ► daily: Automatic reset at the beginning of every day ► manually: Manual reset by an administrator or operator
Limit:			Add as many limits as needed, e.g. for the notification of several e-mail addresses
Active	active		Select if the limit is active or not
Threshold	400	.....	Define the currency threshold when an e-mail must be sent
Type	Notification	.....	Select the action that must be taken when the threshold value is reached: <ul style="list-style-type: none"> ► Notification (default): Send a message to the defined e-mail address ► Block: Send a message to the defined e-mail address and interrupt all active connections of this PBX and prevent any further outgoing calls.
E-Mail	john.deer@yupi.com	.....	Define the e-mail address that must be informed

Note

The configuration of TopStop limits is only possible when a customer price list is assigned in its PBX OrgUnit or the parent OrgUnit of the PBX e.g.: Tenant.

3 TASK 2: INITIAL CONFIGURATION OF THE PBX

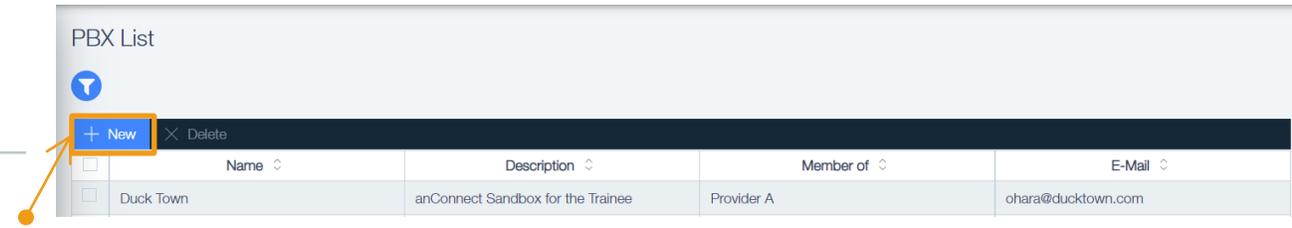
OVERVIEW OF THE PBX CREATION TASK

- ▶ **Task 2: Initial Configuration of the PBX**
 - ▶ Create the PBX with the prepared parameters of Task 1
 - ▶ Configure the PBX basics & properties
 - ▶ Configure the public telephone numbers
 - ▶ Configure the PBX Administrator user access
 - ▶ Configure the PBX and hidden TopStop

START THE INITIAL CREATION OF THE PBX

1. Access the Portal with sufficient rights, usually: Operator

- > Menu: Operator
- > Sub-Menu: PBX List
- > Click button: + New



2. With the PBX wizard configure the parameters and finalize

- > Click button: Save



The screenshots show the following configuration steps:

- Settings - PBX:** Name: PA-PBX-OAX89001, Description: Yupi Inc, Honolulu, 0987654300 - 49, 0800654310 0800654340, Member of: Provider A, Teams Domain: ou.0, CTI Device ID: ou.0
- Settings - Properties:** Extensions: 10, Service Extensions: 5, External channels: 20, Public Prefix: Europe/Zurich, Time Zone: Europe/Zurich, Date Format: dd.MM.yyyy, Time Format: 24 Hours, Time mode: Timetable
- Settings - Public numbers:** Number range: 0987654300-49,0800654310,0800654340, Valid from: 12.09.2023 06:00, Valid until: (empty)
- Settings - Topstop:** Hidden Topstop: , Pricelist Type: Customer Price List, Reset Period: monthly
- Settings - Limits:** A table with columns: Type, Threshold, Currency, Active. One entry is shown: Block, 900.00, UNIT, Active.
- Settings - PBX Administrator:** E-Mail: john.deer@yupi.com, First Name: John, Last Name: Deere, Language: English

RESULT OF THE PBX CREATION

- ▶ After the initial PBX creation process the new PBX appears in the PBX list

PBX List

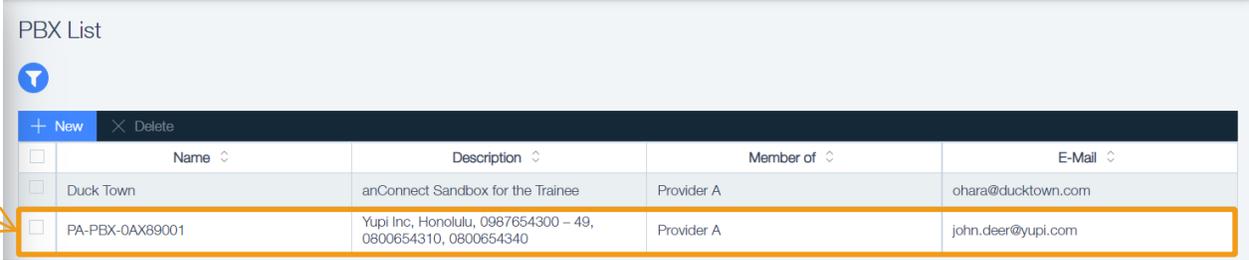
[+ New](#) [X Delete](#)

<input type="checkbox"/>	Name ↕	Description ↕	Member of ↕	E-Mail ↕
<input type="checkbox"/>	Duck Town	anConnect Sandbox for the Trainee	Provider A	ohara@ducktown.com
<input type="checkbox"/>	PA-PBX-0AX89001	Yupi Inc, Honolulu, 0987654300 – 49, 0800654310, 0800654340	Provider A	john.deer@yupi.com

MANAGE/CHECK THE PBX

1. After the initial PBX creation, check the result is as follows:

- > Menu: Operator
- > Sub-Menu: PBX List
- > Click the row of the newly created PBX

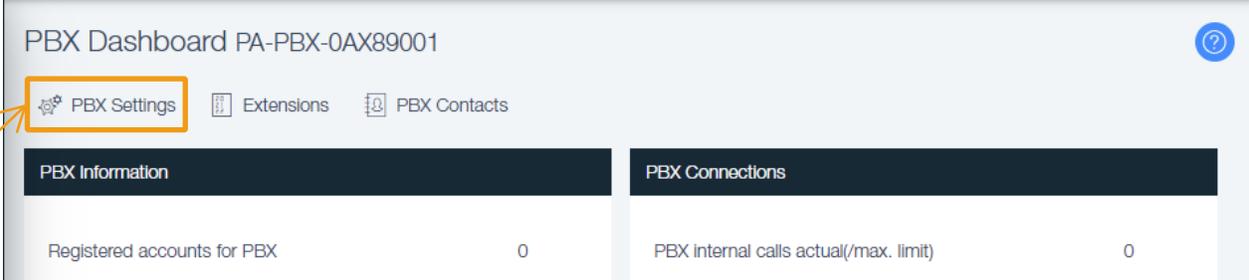


The screenshot shows a table titled "PBX List" with columns: Name, Description, Member of, and E-Mail. The row for "PA-PBX-0AX89001" is highlighted with an orange border. An orange arrow points to the checkbox in the first column of this row.

	Name	Description	Member of	E-Mail
<input type="checkbox"/>	Duck Town	anConnect Sandbox for the Trainee	Provider A	ohara@ducktown.com
<input type="checkbox"/>	PA-PBX-0AX89001	Yupi Inc, Honolulu, 0987654300 -- 49, 0800654310, 0800654340	Provider A	john.deer@yupi.com

2. The page of the PBX Dashboard is displayed:

- > Click the link: PBX Settings



The screenshot shows the "PBX Dashboard PA-PBX-0AX89001" with a navigation bar containing "PBX Settings", "Extensions", and "PBX Contacts". The "PBX Settings" link is highlighted with an orange box. Below the navigation bar are two summary cards: "PBX Information" and "PBX Connections".

PBX Information		PBX Connections	
Registered accounts for PBX	0	PBX internal calls actual/(max. limit)	0

MANAGE/CHECK THE PBX BASIC CONFIGURATION

3. Check the PBX initial basic configuration and make corrections if needed.

Settings: PA-PBX-0AX89001

Dashboard PBX List

Save

PBX	Public numbers	Properties
Name PA-PBX-0AX89001	Number range 0449980105,0550-9,0650-9,0800654310,0800654340,098765	Extensions 20
Description Yupi Inc. Honolulu, 0987654300 - 49, 0800654310 0800654340	Valid from 20.04.2021 06:00	Service Extensions 20
Member of Provider A	Valid until 	External channels 20
Teams Domain c1.tms-provider.com:5070		Public Prefix
CTI Device ID: ou.26		Time Zone Europe/Zurich
		Date Format dd.MM.yyyy
		Time Format 24 Hours
		Time mode Timetable

On Hold Music	anCall	Public Call Permission
Upload	Application ID 	National calls ALLOW
		Service calls PIN
		International calls ALLOW

MANAGE/CHECK THE INITIAL PBX ADMINISTRATOR CREATION

5. Check the PBX Administrator initial configuration and make corrections if needed.

- > Menu: Operator
- > Sub-Menu: Users
- > Click the row of the newly created PBX Administrator

User

Users

Save

Base Settings

E-Mail
john.deer@yupi.com

First Name
John

Last Name
Deere

Language
English

Settings

Owner
PA-PBX-0AX89001

Password
••••••

LDAP User Name

User blocked

Roles

+ New X Delete

<input type="checkbox"/>	Role	Access to OrgUnit	Parent OrgUnit
<input type="checkbox"/>	PBX Administrator	PA-PBX-0AX89001	Provider A

CONFIGURE THE PBX TOPSTOP LIMITS

4. Configure the PBX TopStop limits:

- > Click the button: + New
- > Configure all needed limits

The screenshot shows the PBX configuration interface. The 'Topstop' section displays the current value as 412.01 UNIT and the reset period as monthly. Below this is a table of limits with a '+ New' button highlighted in orange. The 'Client Trunk' section shows the SIP Client Trunk toggle is turned off.

	Type	Threshold	Currency	Active
<input type="checkbox"/>	Notification	400.00	UNIT	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Block	500.00	UNIT	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Block	500.00	UNIT	<input checked="" type="checkbox"/>

The screenshot shows three 'Topstop' configuration windows. The first window shows the 'Active' toggle turned on and the 'Threshold' set to 400.00 UNIT. The second window shows the 'Type' set to 'Block' and the 'Threshold' set to 500.00 UNIT. The third window shows the 'E-Mail' field set to 'noc@provider-a.com'.

Window	Active	Threshold	Type	E-Mail
1	<input checked="" type="checkbox"/>	400.00 UNIT	Notification	pijohn.deer@yupi.com
2	<input checked="" type="checkbox"/>	500.00 UNIT	Block	john.deer@yupi.com
3	<input checked="" type="checkbox"/>	500.00 UNIT	Block	noc@provider-a.com

CONFIGURE THE HIDDEN PBX TOPSTOP LIMITS

5. Check and manage the hidden PBX TopStop limits:

- ▶ Change to the OrgUnit view of the PBX

> Menu: Operator

> Sub-Menu: Organization Units

> Check and manage the hidden TopStop in file: Price Lists

The screenshot shows the configuration page for OrgUnit PA-PBX-0AX89001. The 'Hidden Topstop' section is highlighted with an orange box and is currently enabled. The 'Pricelist Type' is set to 'Customer Price List'. The 'Current value' is 0.00 UNIT, with a 'Reset' button. The 'Reset Period' is set to 'manually'. Below this, a 'Limits' table is visible, containing one entry for 'Block' with a threshold of 900.00 UNIT and an active status.

Limits				
	Type	Threshold	Currency	Active
<input type="checkbox"/>	Block	900.00	UNIT	<input checked="" type="checkbox"/>

DELETE A PBX

- ▶ Delete a PBX:
Access the Portal with sufficient rights,
usually: Operator

- > Menu: Operator
 - > Sub-Menu: PBX List
 - > Select the PBX which shall be deleted
 - > Click the button: X Delete

The screenshot shows the 'PBX List' interface. At the top right, there is a red header bar with 'Expert-Mode' checked, a star icon, a gear icon, and a user profile icon for 'operator@company-a.com'. Below the header, the title 'PBX List' is displayed. A toolbar contains '+ New' and 'X Delete' buttons. The 'Delete' button is highlighted with a yellow box. Below the toolbar is a table with the following data:

	Name	Description	Member of	E-Mail
<input type="checkbox"/>	Duck Town	anConnect Sandbox for the Trainee	Provider A	ohara@ducktown.com
<input checked="" type="checkbox"/>	PA-PBX-0AX89001	Yupi Inc, Honolulu, 0987654300 – 49, 0800654310, 0800654340	Provider A	john.deer@yupi.com

Warning

The deleting of a PBX is final!

- ➔ ALL data and configurations of the PBX, its extensions, phones, VoiceMail Boxes and messages are deleted.
- ➔ Not deleted are the Call Detail Records CDR.

Note

A PBX Administrator or PBX Member cannot delete its own PBX.

4 TASK 3: MAKE SURE THE CALL ROUTING TO AND FROM THE PSTN NETWORK

OVERVIEW OF THE PBX PSTN CALL ROUTING

- ▶ **Task 3: Make sure the call routing to and from the PSTN telephone network**
 - ▶ Define the needed PSTN interconnection:
 - Variant 1: Routing to the PSTN carrier via the anSwitch V7 system configuration.
 - Variant 2: Register the PBX directly with one or more PSTN carriers and route directly to the registered peering points.
 - ▶ Check incoming and outgoing calls to the PSTN.
 - ▶ Check if incoming calls of ported numbers of the customer are routed via the PSTN carrier.

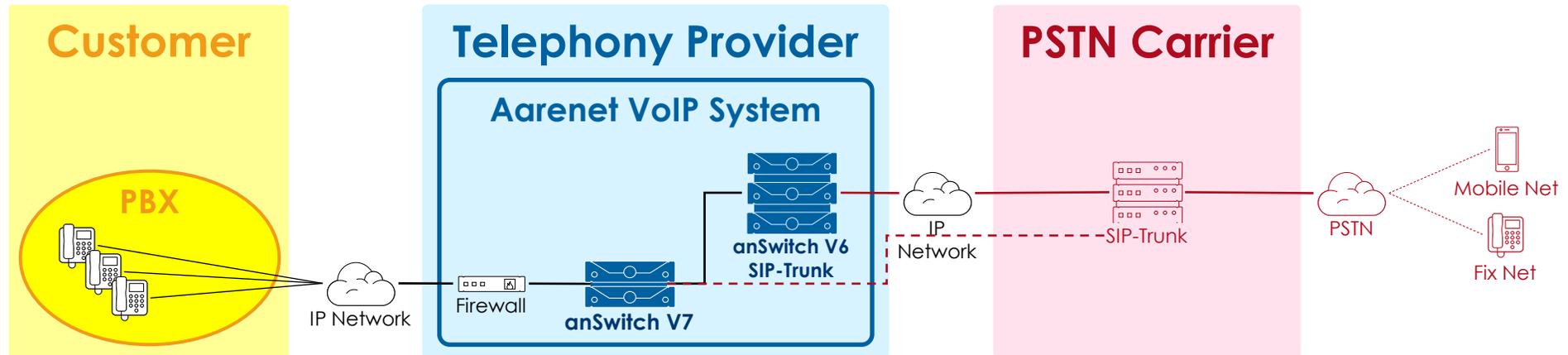
BACKGROUND INFORMATION PSTN INTERCONNECTION

- ▶ An anSwitch V7 PBX needs an upstream VoIP peer that provides Class 5 telephony switch functionalities as:
 - ▶ Approving the correct Caller ID for calls toward public telephone numbers (PSTN and OnNet).
 - ▶ Providing the prioritized emergency call routing
 - ▶ Providing Legal Interception LI
 - ▶ Customer security features, for example:
 - ▶ Cost limitation on level provider (fraud damage limitation)
 - ▶ Fraud warning
 - ▶ Allowing telephony provider specific CDR generation and billing
 - ▶ etc.

- ▶ The PSTN interconnection variants 1 & 2 can run concurrently on the same anSwitch V7!
 - ▶ For each PBX it must be decided whether it will be connected to the PSTN according to variant 1 or variant 2.

VARIANT 1: DEFAULT PSTN INTERCONNECTION

- ▶ By default, the PSTN interconnection is provided on anSwitch V7 system level.
 - ▶ With this variant the Operator or PBX Administrator have **no** additional configuration effort in the PBX.



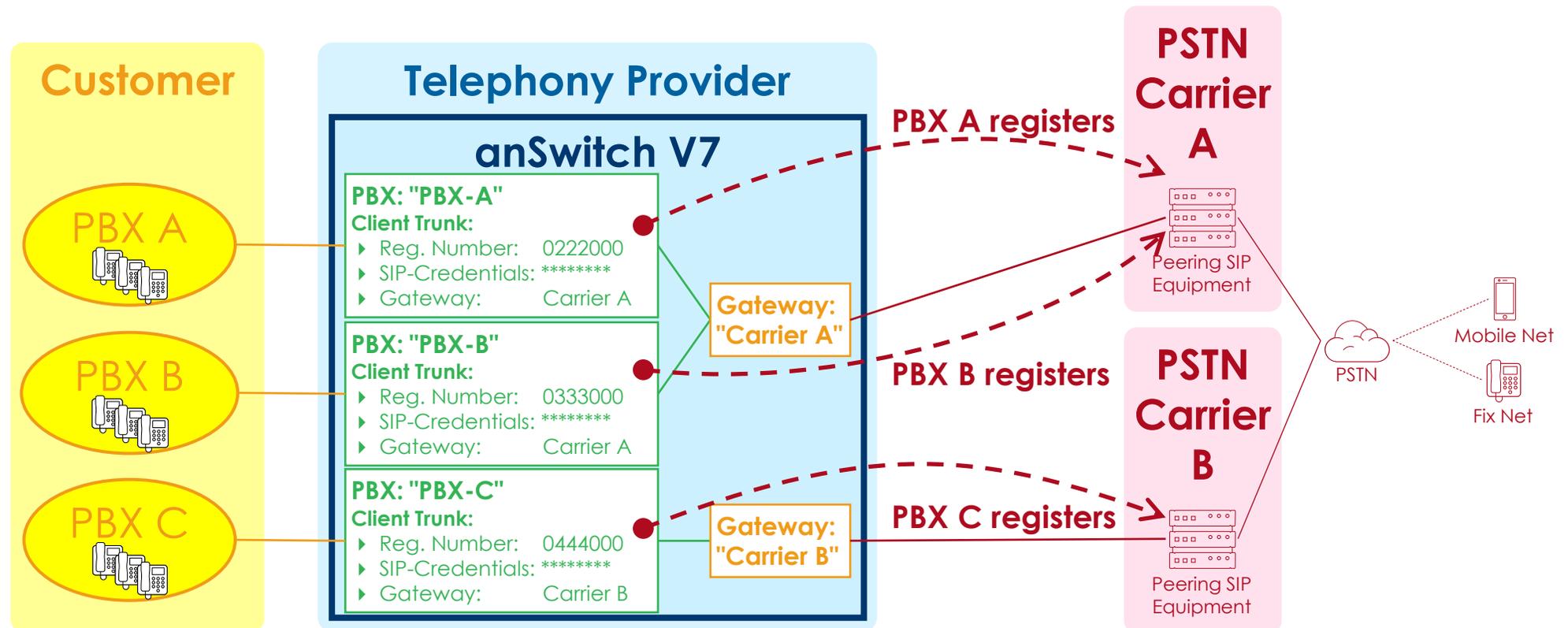
Note

If the upstream VoIP peer is an anSwitch V6, then check for configuration details the training presentation:

[training_as7_602_pstn_via_answitch_v6](#)

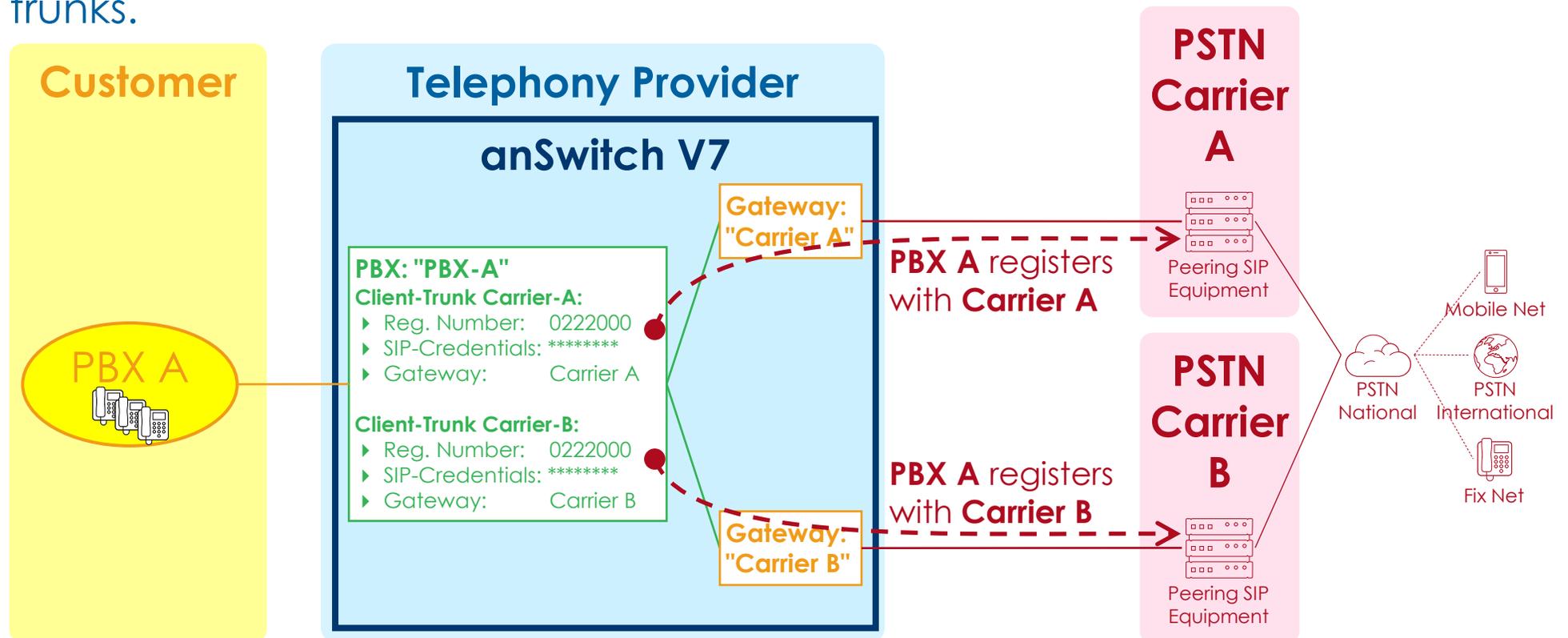
VARIANT 2: REGISTERED PSTN INTERCONNECTION

- ▶ The PBX registers with one or more SIP peering equipment of PSTN carriers.
 - ➔ With this variant the Operator or PBX Administrator must configure one or more "Client-Trunk" for the PBX!



VARIANT 2: REGISTERED PSTN INTERCONNECTION

- ▶ A PBX can register with any number of PSTN carriers or peering SIP equipment.
 - ▶ Incoming calls from the PSTN are accepted by all gateways of the client-trunks.
 - ▶ Outgoing calls to the PSTN are sent randomly via the gateways of the client-trunks.



VARIANT 2: PREPARE THE CLIENT-TRUNK PARAMETERS

► Prepare the PSTN interconnection client-trunk parameters:

Topic	Example	Value	Description
Client Trunk			
Name	Carrier-A-PA-PBX-0AX89001	.....	These are the SIP-credentials delivered by the PSTN carrier.
Password	*****	.....
Registration Number	0222000	.....	This is the public phone number that must be registered at the PSTN carrier. <div style="background-color: #ffff00; padding: 5px; margin-top: 5px;"> Note It is assumed that all other public phone numbers of this PBX are registered automatically too. </div>
Proposed Expiry	1780	.....	Re-registration timeout in seconds
Gateway	Carrier A	.....	Select the Gateway that points to the SIP trunk of the PSTN carrier.

VARIANT 2: CONFIGURE AND MANAGE THE CLIENT-TRUNK

- ▶ Configure and activate the client-trunk for the interconnection with the PSTN Carrier.

- > Menu: PBX Administrator
- > Sub-Menu: PBX Settings
 - > Configure the Client Trunk parameters
 - > Activate the Client Trunk

- ▶ All configured client-trunks of the PBX are listed and can be managed individually.

	Name	Registration Number	Proposed Expiry in seconds, eg. 3600	Gateway	Status	Expiration
<input type="checkbox"/>	Carrier-A-PA-PBX-0AX89001	022000	1780	Carrier A	●	00:00:00
<input type="checkbox"/>	Carrier-B-PA-PBX-0AX89001	0222000	1780	Carrier B	●	00:00:00

- ▶ The registration status and time out at the peering SIP device, e.g. of the PSTN Carrier, are displayed.

CHECK WITH THE PSTN CARRIER

- ▶ Make sure that the PSTN carrier is ready for incoming and outgoing call routing for **all** public phone numbers of the new PBX.
- ▶ Make sure that number porting is finalized until the activation time of the PBX (latest "Valid from").

TEST A NEWLY CREATED PBX

- ▶ If possible, it may be a good idea by an Operator to test the initial configuration of a PBX.
- ▶ This make sure that the new PBX is interworking correctly with the PSTN.
- ▶ After the testing remove all test PBX extensions and PBX call routing configurations.

TEST THE PBX CALL ROUTING TO AND FROM THE PSTN

- ▶ It may make sense to test the PSTN call routing when the PBX has new PSTN telephone numbers.
 - ▶ In the case that the public telephone numbers are in use by the customer at another telephony provider then an initial testing may be impossible until the numbers are ported to the new provider.
- ▶ Test preparations:
 - ▶ Create a test PBX Extension e.g.: 5555
 - ▶ Associate a SIP-phone to it



Note

The configuration of anSwitch V7 PBX extension and attaching a SIP-Phone to it are handled in detail in the training presentations:

training_as7_403_pbx_department_extension
training_as7_701_phone_configuration

TEST LIST OF THE PBX CALL ROUTING

▶ Outgoing call test :

▶ **A → B:**

A calls any public number in the PSTN, e.g. B

▶ Expected Result:

- A: Alerting tone
- B: Ringing (displaying the A number)
- B hooks off: A-B are connected and have bidirectional audio
- B hooks off: A hears disconnect tone

▶ Incoming call test :

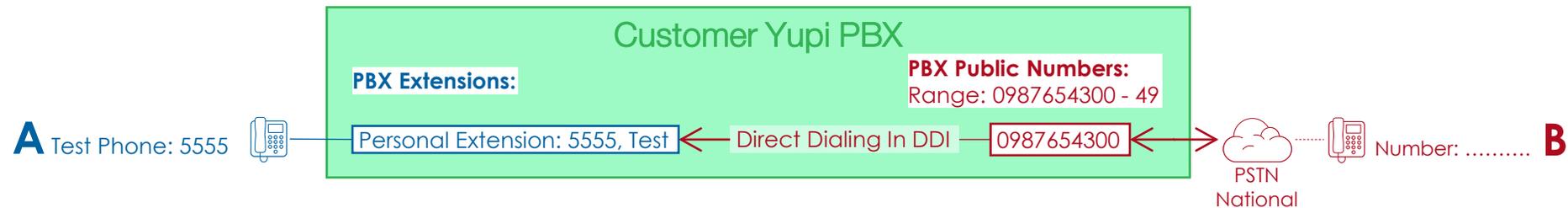
▶ **B → A:**

B calls the public numbers of the PBX:

- ▶ From a number range call at least the first and last number
- ▶ Test all single numbers (that are not in a range)

▶ Expected Result:

- B: Alerting tone
- A: Ringing (displaying the B number)
- A hooks off: A-B are connected and have bidirectional audio
- B hooks off: A hears disconnect tone



▶ In case of problems → Check the 'SIP Trace' and/or 'Call Statistics' of the call :

▶ Outgoing call:

- Check if the call is routed toward the PSTN Carrier
→ If not: contact the PSTN Provider support
- In case of audio problems check the calls 'Call Statistics'

▶ Incoming call:

- Check if the call is received from the PSTN Carrier
→ If not: contact the PSTN Carrier support
- Check if the PBX DDI configuration is correct
- In case of audio problems check the calls 'Call Statistics'

5 TASK 4: INFORM THE PBX OWNER

OVERVIEW OF THE PBX OWNER INFORMATION

- ▶ **Task 4: Inform the PBX Owner**
 - ▶ About the finalized setting up of the customer PBX on the anSwitch V7
 - ▶ The activation date/time of the telephony service
 - ▶ The access information for the PBX Administrator for configuring the PBX internals.

ACCESS INFORMATION FOR THE PBX ADMINISTRATOR

- ▶ The PBX Administrator needs the following access information for starting the detailed PBX configuration:

- ▶ URL of the Portal UI:

`https://IP-ADDRESS/portal/`

`https://DOMAIN-NAME/portal/`

- ▶ Username of the PBX administrator e.g.:

`john.deer@yupi.com`

- ▶ Password:

The PBX administrator must create the password at the first contact with the login dialog.

To do this, he must start the password recovery process.

> Click on link: Password forgotten?



Username
john.deer@yupi.com

Password
[password field]

Login

[Password forgotten?](#)

6 MANAGE FURTHER PBX RESOURCES

MANAGE PUBLIC TELEPHONE NUMBERS: ADD NUMBERS

▶ Public numbers are managed by an Operator

- ▶ Add new single numbers or number ranges
- ▶ Multiple entries are comma separated, e.g.
 - ▶ Single number: 0600,0605
 - ▶ Ranges: 0650-3
This generates 4 numbers → 0650,0651,0652,0653

> Menu: PBX

> Sub-Menu: Public Numbers

> Click button: + New

> In dialog: Public numbers

- ▶ Number range: Comma separated single numbers and/or number ranges

> Click button: Save

Public Numbers: PA-PBX-0AX89001

Dashboard

+ New × Delete

1 2 3 > > 25

Public Number	Name to Display	Tags	Extension	Public Number to display for
0449980105			311	311, 330, 51

Public numbers ×

Save

Number range

0600,0605,0650-3

MANAGE PUBLIC TELEPHONE NUMBERS: DELETE NUMBERS

▶ Delete public numbers

▶ Delete single public numbers

- > Menu: PBX
- > Sub-Menu: Public Numbers
- > Select the numbers one by one
- > Click button: × Delete

Public Numbers: PA-PBX-0AX89001

Dashboard

+ New × Delete

Public Number	Name to Display	Tags	Extension	Public Number to display for
<input type="checkbox"/> 0449980105			311	311, 330, 51
<input type="checkbox"/> 0550			315	
<input checked="" type="checkbox"/> 0551				
<input type="checkbox"/> 0552			888	
<input checked="" type="checkbox"/> 0553				
<input type="checkbox"/> 0554				

▶ Delete a range of public numbers

- ▶ Prepare a regex for filtering the public numbers, e.g.:
 $\wedge 06.*$ → match all numbers that begin with 06 and any number of following digits
- > Click the filter icon
- > Insert the filter pattern
 - ▶ Public Number: Insert the matching regex
 - > Click button: Apply
 - > Click the "all" selector
 - > Click button: × Delete

Public Number: $\wedge 06.*$

Public Number: $\wedge 06.*$

Apply

Public Number: $\wedge 06.*$ ×

Public Number	Name to Display
<input type="checkbox"/> 0600	
<input type="checkbox"/> 0605	
<input type="checkbox"/> 0650	
<input type="checkbox"/> 0651	
<input type="checkbox"/> 0652	
<input type="checkbox"/> 0653	

Public Number: $\wedge 06.*$ ×

Public Number	Name to Display
<input checked="" type="checkbox"/> 0600	
<input checked="" type="checkbox"/> 0605	
<input checked="" type="checkbox"/> 0650	
<input checked="" type="checkbox"/> 0651	
<input checked="" type="checkbox"/> 0652	
<input checked="" type="checkbox"/> 0653	

MANAGE PBX SPECIFIC MUSIC ON HOLD

▶ Upload a PBX specific Music on hold audio file.

- > Menu: PBX
 - > Sub-Menu: PBX Settings
 - > In file: On Hold Music
 - > Click button: Upload
- > Start the upload process by clicking button:
 - + Choose new on hold music file
- > Check the uploaded audio file, click: ▶

▶ The following audio formats and limits are allowed for audio files:

- ▶ WAV (PCM coded)
- ▶ MP3
- ▶ Max. duration is limited to 5 minutes
- ▶ The max. file size is limited to 50MByte

Settings: PA-PBX-0AX89001

Dashboard PBX List

Save

PBX	Public numbers	Properties
Name PA-PBX-0AX89001	Number range 0449980105,0550-9,0650-9,0800654310,0800654340,098765	Extensions 20
Description Yupi Inc, Honolulu, 0987654300 – 49, 0800654310 080065434	Valid from 20.04.2021 06:00	Service Extensions 20
Member of Provider A	Valid until	External channels 20
Teams Domain		Public Prefix
CTI Device ID:		Time Zone Europe/Zurich
		Date Format dd.MM.yyyy
		Time Format 24 Hours
		Time mode Timetable

On Hold Music

anCall

Public Call Permission

Upload

0:00

Upload

+ Choose new on hold music file

7 THE PBX DASHBOARD

OVERVIEW OF THE PBX DASHBOARD

- ▶ After the creation of the PBX the PBX Dashboard displays the most important information of the PBX.
 - ▶ Usage of the assigned PBX resources.
 - ▶ Usage of limited resources.
 - ▶ Active internal connections.
 - ▶ TopStop status
 - ▶ PBX Client-trunk supervision

- ▶ After PBX Extensions and phone are added to the PBX their vital information are displayed too:
 - ▶ Active connections with and call forwards of the PBX Extension.
 - ▶ Registration status of the phones.

- ▶ Direct access to configuration and information of a PBX Extension and a phone.

The screenshot shows the aarenet PBX Dashboard interface. It features a sidebar menu on the left with options like Dashboard, Settings, Departments, Public Numbers, Extensions, Users, Add-ons, Phones, Holidays, Timetables, Calls, Live Calls, Call Analytics, Contacts, and Blocked Numbers. The main content area is divided into several sections:

- Information:** A table showing PBX resource usage:

Registered accounts for PBX	53
Registered phones actual/max.	107 / 219
VoiceMail filling level (new / old / all)	17 / 18 / 35
TopStop status	●
- Connections:** A table showing call statistics:

Internal calls actual/(max. limit)	4
External calls actual/(max. limit)	0 / 10
Inbound calls actual/(max. limit)	0
Outbound calls actual/(max. limit)	0
- Extensions Overview:** A grid of phone icons representing extensions. Extension 26 is highlighted with a green box.
- Phone Information:** A detailed view for extension 26, showing fields for Phone Name (Webphone), Internal Number (14), and Registration Status (red dot).

Annotations and callouts provide further details:

- Information about used resources of the PBX:** Points to the 'Information' section.
- Information about the actual PBX connections:** Points to the 'Connections' section.
- Click the phone icon or 'Internal Number' name and access directly its 'Extension Related Features' page.** Points to extension 26 in the Extensions Overview.
- Click the 'Phone Name' name and access directly its 'Phone Related Features' page.** Points to 'Webphone' in the Phone Information section.
- Click the status bullet icon and access directly its 'Phone Related Status' page.** Points to the red dot in the Registration Status field.

Legend for extension and phone states:

- Information about PBX Extension's state:**
 - ☎ The extension has no phones assigned.
 - ☎ No active connection to a phone of this extension.
 - ☎ One or more active connection to this extension.
 - ☎ The extension has active call forwards.
- Information about the phone's state:**
 - The phone has not registered yet.
 - The phone is registered.
 - The phone was once registered.

LAST PAGE

Date	Doc-ID	Description	Changes
12.9.2023	training_as7_401_pbx_creation_managing_e13	V7.13: New feature hidden TopStop	Pages: 8, 19, 25
26.1.2024	training_as7_401_pbx_creation_managing_e14	V7.14: Dashboard	Chapter: 7