A MITEL
PRODUCT
GUIDE

OpenScape Business V3

Unify Phone

Connect Unify Phone to OpenScape Business

12/2024

Mitel
Powering connections

Contents

History of Changes **3**

1 Introduction **4**

1.1 General Setup 5

2 Configuration of Unify Phone **6**

2.1 Request the Unify Phone Tenant 6
2.2 API key 6
2.3 Telephony Connector 7
2.4 Unify Phone for OpenScape 7
2.5 Unify Management Center (UMC) 9

3 Configuration of OpenScape Business **10**

3.1 Basic Installation 10
3.2 Unify Phone Connectivity wizard 11
3.3 Unify Phone User instance wizard 15
3.3.1 Create new Unify Phone User 16
3.3.2 Add Unify Phone User 18
3.3.3 Edit configured Unify Phone User 20
3.4 Twinning with Desk Phone 23
3.5 3rd-pty CTI control 25
3.6 Licenses 26
3.7 Configuration in Expert Mode 27
3.7.1 LCR 27
3.7.2 Trunks/Routing 27
3.7.3 Mailbox 29
3.7.4 Alternative number 30
3.7.5 Unify Phone User without DID 31
3.7.6 Directory/Journal interconnection 32

4 Firewall Rules **33**

4.1 Stateful Firewall Configuration and NAT 33
4.2 Stateful Firewall Configuration and NAT supporting Direct Media feature 34
4.3 General info 35

5 OpenScape Business Serviceability **36**

5.1 Required trace settings for error reporting 36
5.2 Unify Phone log file 36
5.3 FAQ 37

6 Best Practice **38**

6.1 JWT creation portal 38
6.2 Firewall considerations 40

7 References **41**

History of Changes

Date	Issue	Summary
28.06.2022	1.0	Unify Phone for Unify Video initial version for OpenScape Business V3R2
14.09.2022	1.1	JWT update
18.04.2023	1.2	Unify Phone for OpenScape
12.09.2023	1.3	update on • OpenScape Business V3R3 • UP user w/o DID • FAQ
16.02.2024	1.4	update on • OpenScape Business V3R3.1 • numbering schema for UP users • wizard for UP user w/o DID • directory/journal interconnection
11.03.2024	1.4.1	update on V3R3.1 • sizing, firewall rules
16.09.2024	1.4.2	update on V3R3.2 • control Unify Phone from OpenScape Business UC clients • editorial changes
26.11.2024	1.5	update on OpenScape Business V3R4 • UMC • secure and direct media • control Unify Phone from UC clients: myAgent, myPortal for Teams
17.12.2024	1.5.1	update on OpenScape Business V3R4 • remove Unify Video • update on Firewall for secure and direct media

Comments and corrections are welcome, please contact: osbiz-certification@mitel.com

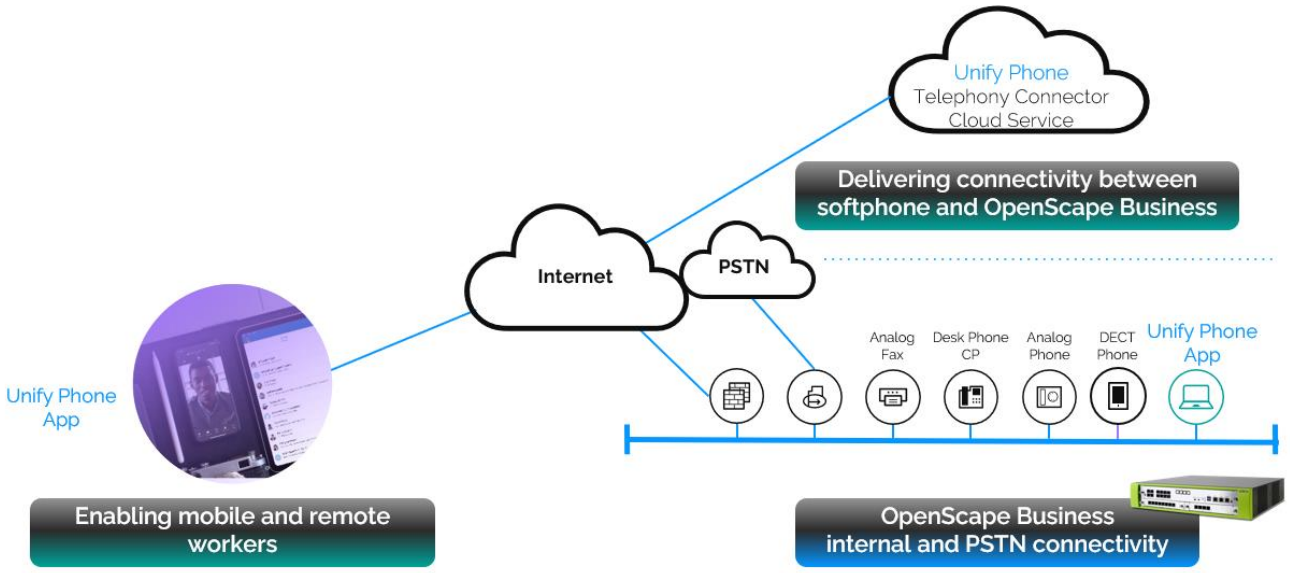
1 Introduction

To provide the Unify Phone solution with OpenScape Business several components are used and need to be configured. The solution consists of the Unify Phone telephony connector acting as the bridge between the OpenScape Business communication system and Unify Phone, enabling users to make and receive phone calls on their business phone number using the Unify Phone app.

The Unify Phone telephony connector is in the cloud. The connection between the Unify Phone telephony connector and the OpenScape Business system is a native SIP trunk connected through the public internet.

Unify Phone for OpenScape

Unify Phone is used as a stand-alone OpenScape communication system telephony client.



Multiple OpenScape Business systems can be connected to one Unify Phone telephony connector Tenant by using the same API key for each OpenScape Business system. Each OpenScape Business system will get automatically configured an own trunk after running the wizard.

For the Unify Phone solution, two configuration steps are necessary:

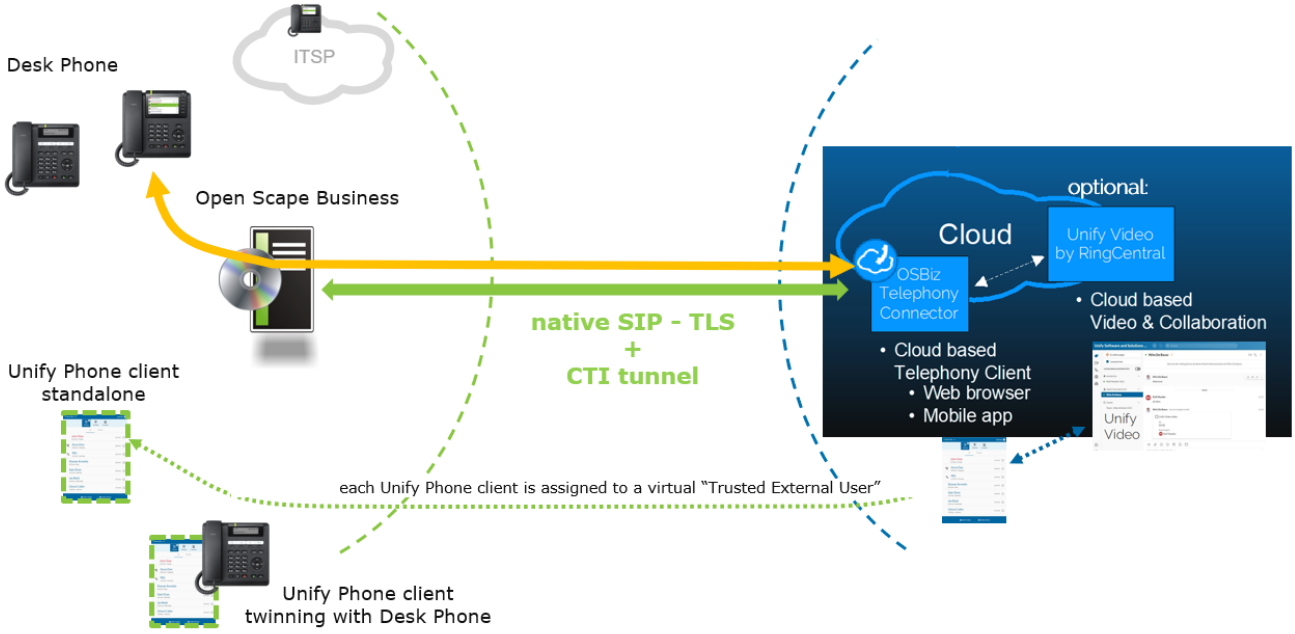
1. configuration of the Unify Phone environment
2. configuration of the OpenScape Business system

1.1 General Setup

Unify Phone telephony connector: our bridge on the client side between OpenScape Business and Unify Phone as WebRTC softphone for desktop and mobile devices:

- cloud-based operated by Unify DevOps
- Headset integration
- cross-launch between Unify Video and Unify Phone app (optional)
- access to OpenScape Business capabilities
  - Basic Call, Hold/Retrieve, Call Transfer, DTMF, …
  - parallel ringing (MULAP) – One Number Service
  - Alternative number (ONS)
  - Call forwarding
  - Voicemail integration via OpenScape Business Call Management

by **Virtual Stations** of type: **Trusted External User** - each Unify Phone client is assigned to a User within OpenScape Business



- Unify Phone: Call Control capabilities for Unify Phone calls (standalone)

- Desk Phone: Unify Phone CTI Control of the connected Desk Phone (optional scenario)

From OpenScape Business point of view Unify Phone requires the following licenses:

- valid OpenScape Business Software Support
- OpenScape Business IP User (Mobility User) licenses
- OpenScape Business Unify Phone licenses
- Twinning with Desk Phone: IP User license per Desk Phone (optional)
- OpenScape Business Voicemail licenses (optional)

2 Configuration of Unify Phone

	This Product Guide highlights the most important configuration steps for Unify Phone. For detailed instruction please refer to Unify Phone Administration, Administrator Documentation [5].

2.1 Request the Unify Phone Tenant

To connect OpenScape Business with Unify Phone you need an active Unify Phone Tenant.

If you are an administrator of your company's Unify Video account, you can register your company for Unify Phone via the Unify Phone administration app:
https://phoneapp.unify.com/tenant/

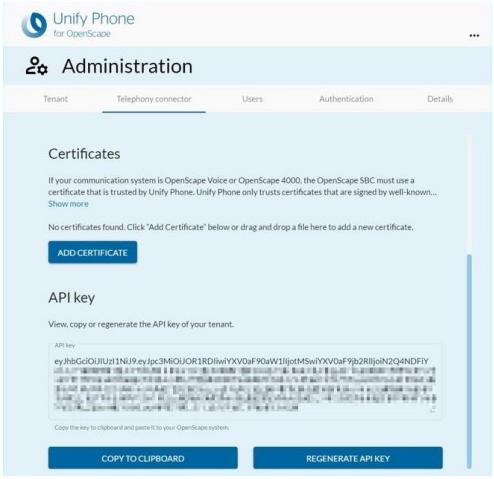
Please enter the requested data. At the end sign up in Unify Phone and login as administrator.

Herby an **API key** is generated to be entered in your OpenScape Business system.

2.2 API key

The API key of your tenant can be accessed and regenerated via the **API key** section within the **Telephony connector** tab.

Click **Copy to keyboard** for further OpenScape Business configuration.

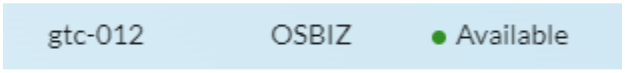


Unify Phone for OpenScape

	Multiple OpenScape Business systems can be connected to one Unify Phone telephony connector Tenant by using the same **API key** for each OpenScape Business system.

2.3 Telephony Connector

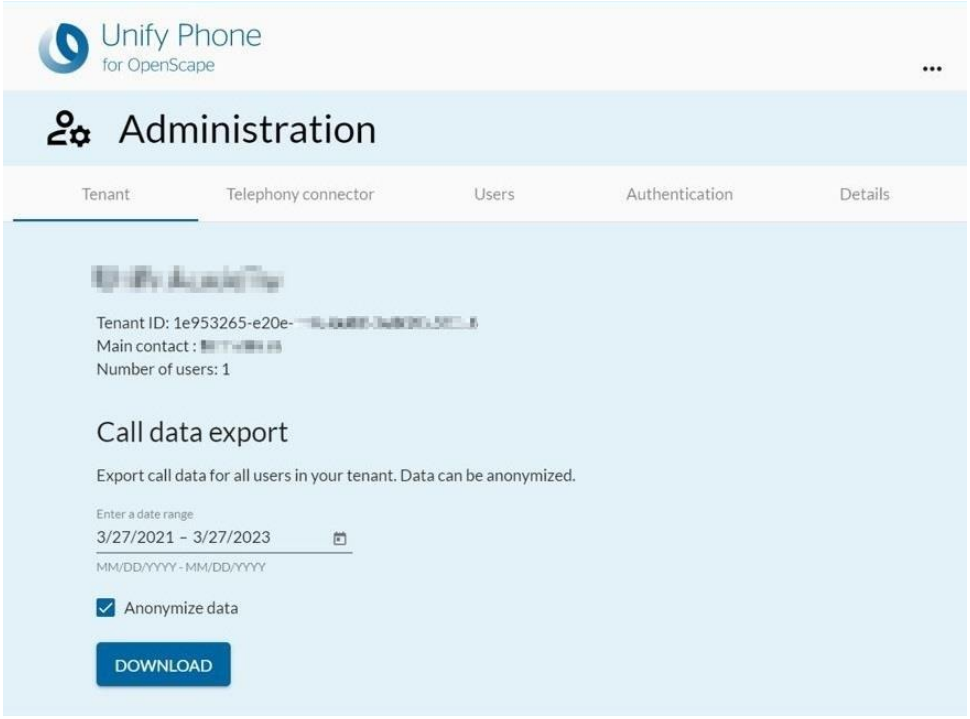
Under the section **Telephony status** you can view the name, the type and the status of the telephony connector. The status of the telephony connector should be `Available`.



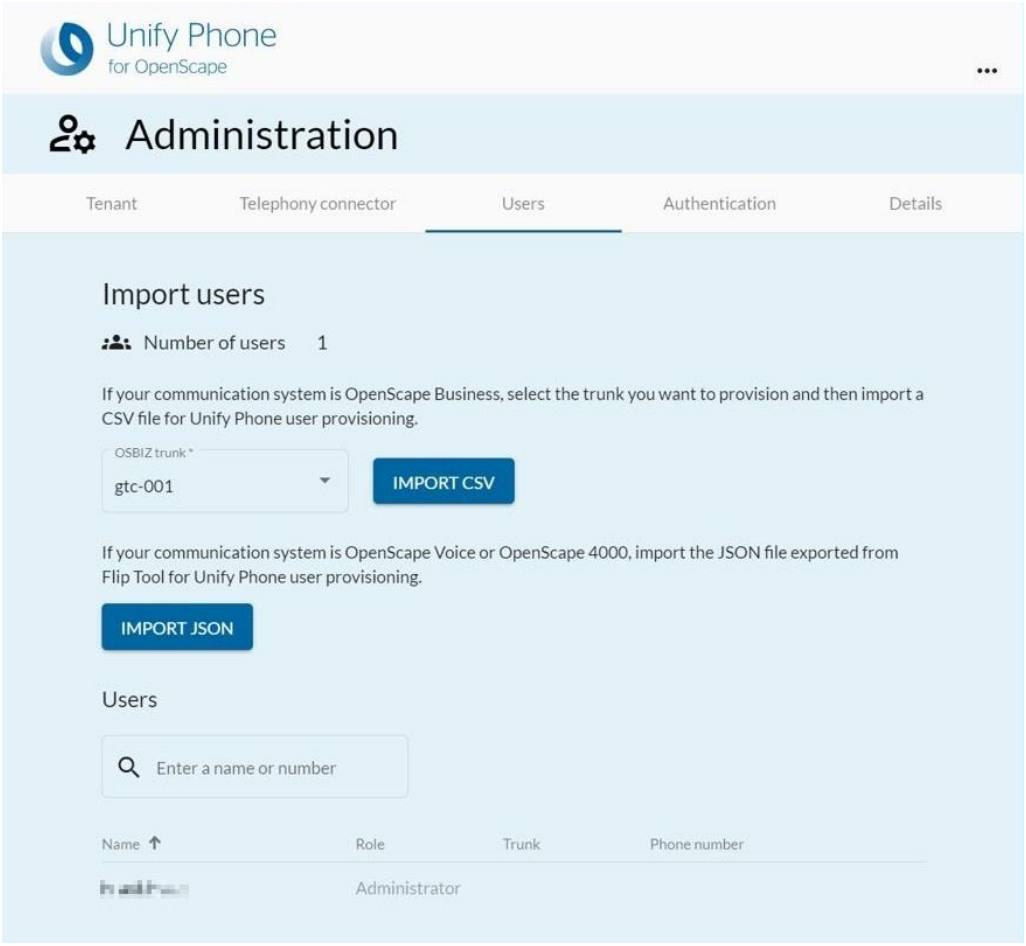
An active connection requires the configuration of the SIP Trunk within OpenScape Business by using the customer's individual **API key** – please refer to chapter 3.

2.4 Unify Phone for OpenScape

The access to the tenant is available via the administrator portal.



	User provisioning requires: • an available Telephony Connector • a CSV import or OpenScape Business wizard (see chapt. 3.3)



You must use camel case notation for the entries in the Excel Header. In Excel, go to **File** > **Save as**. Change the file type to **CSV UTF-8 (Comma delimited) (*.csv)** and click **Save**.

	A	B	C	D
1	emailAddress	firstName	lastName	locale
2	albert.admin@aptg.info	Albert	Admin	de-DE
3	maria.may@aptg.info	Maria	May	en-US
4	max.maxxis@aptg.info	Max	Maxxis	fr-FR
5	robert.rodman@aptg.info	Robert	Rodman	it-IT
6				

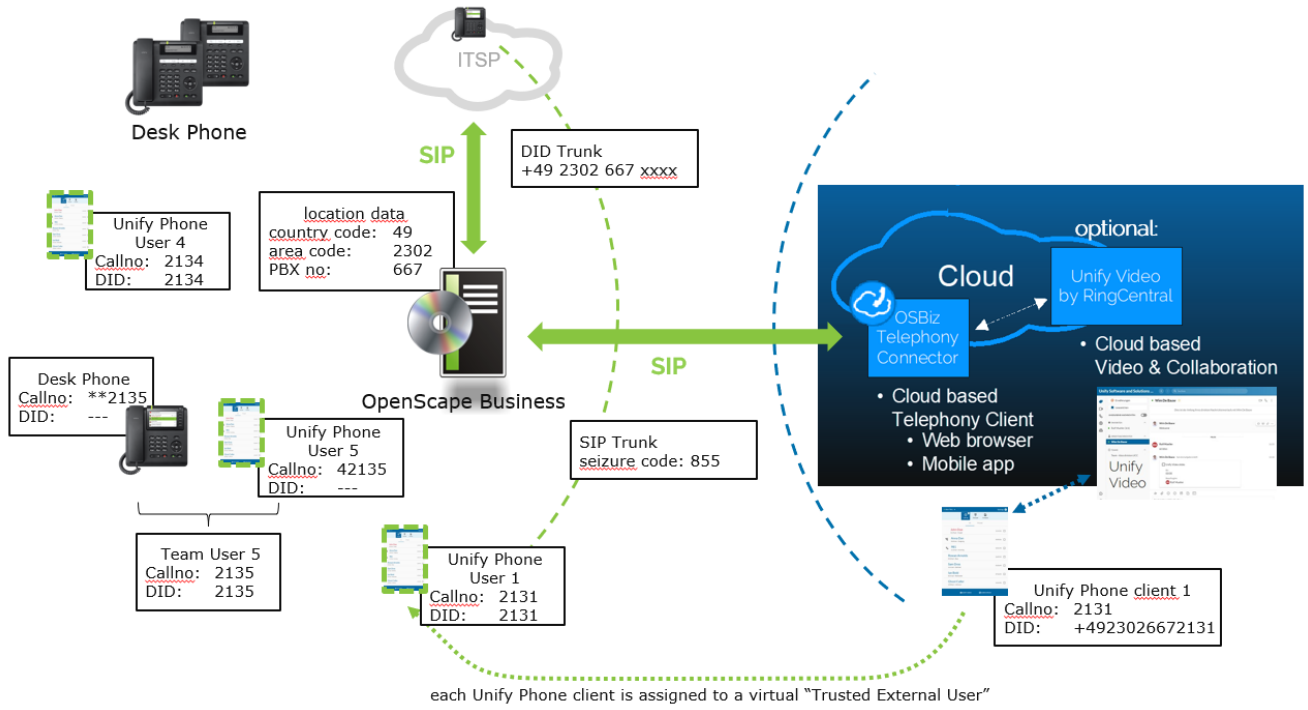
New in OpenScape Business V3R3 FR1: create Unify Phone User via OpenScape Business wizard (see chapt. 3.3).

2.5 Unify Management Center (UMC)

	Only the **OpenScape Business Unify Phone user instance wizard** allows to edit the Unify Phone Clients configuration inluding the deletion of a Unify Phone User instance. Changes via the **UMC** will either not be handled, must be reconfigured in the OpenScape Business, or corrupt the OpenScape Business database.

3 Configuration of OpenScape Business

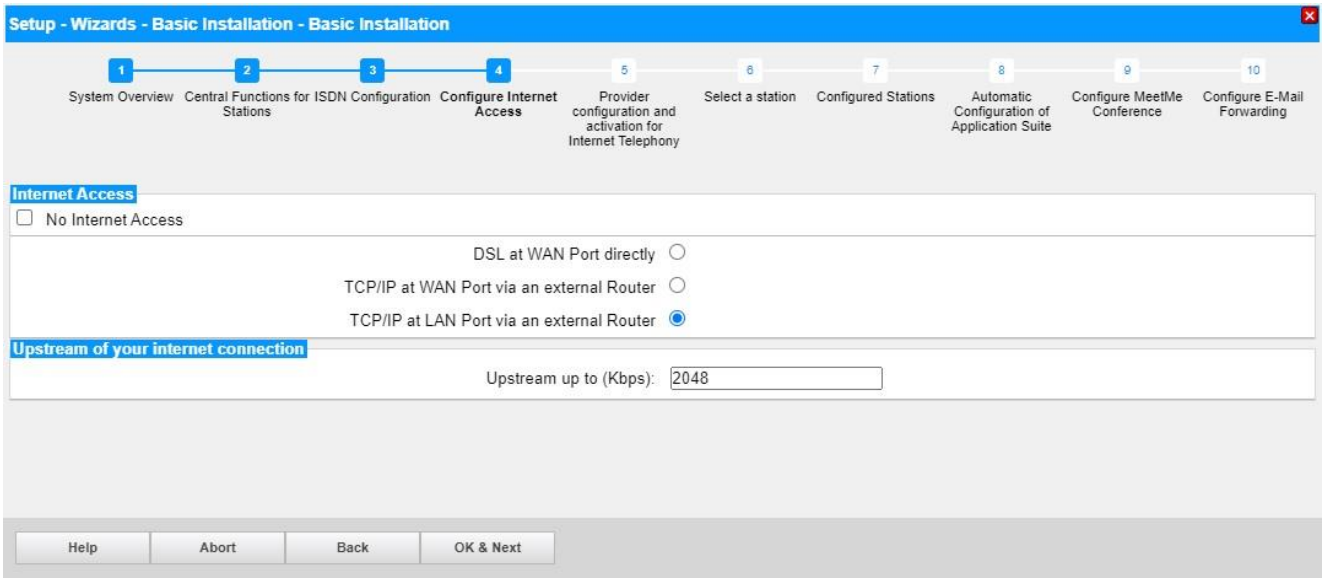
The following picture gives an overview of the example topology.



3.1 Basic Installation

As Unify Phone is connected via the internet, you must configure the internet connection of the OpenScape Business. Enter the correct upstream value, this is used later to calculate the max amount of concurrent internet calls.

The Connectivity to Unify Phone is permitted only via an external Router.

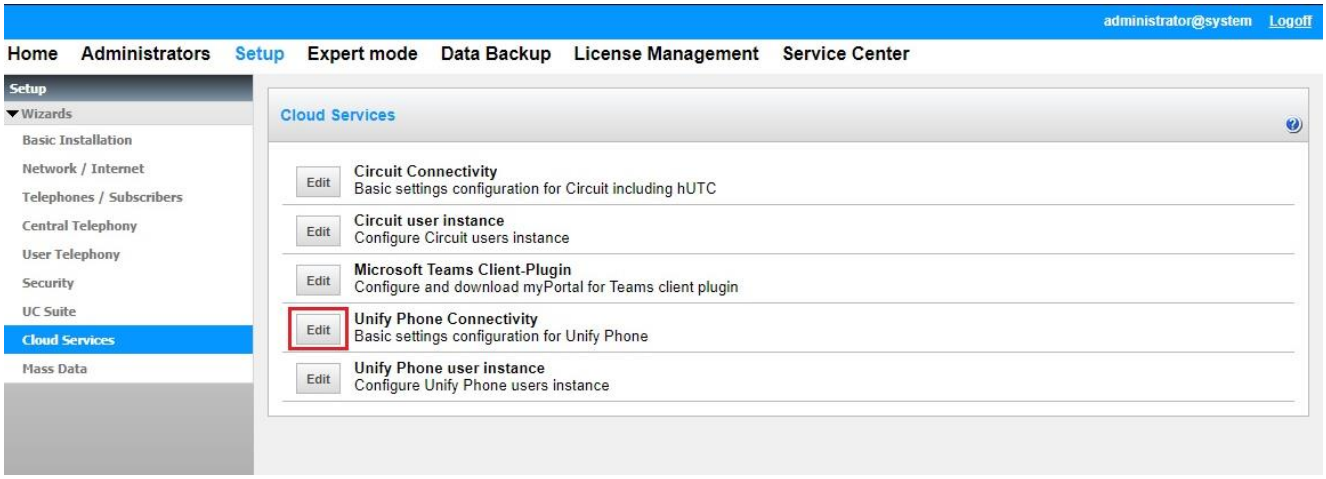


Connecting Unify Phone via WAN interface is possible as well [6].

3.2 Unify Phone Connectivity wizard

	Only the **Unify Phone Connectivity** wizard configures and establishes the connection to the Unify Phone Tenant. Changes via the Expert Mode will either not be handled or must be reconfigured after the wizard has been executed.

Go to Cloud Services – **Unify Phone Connectivity**

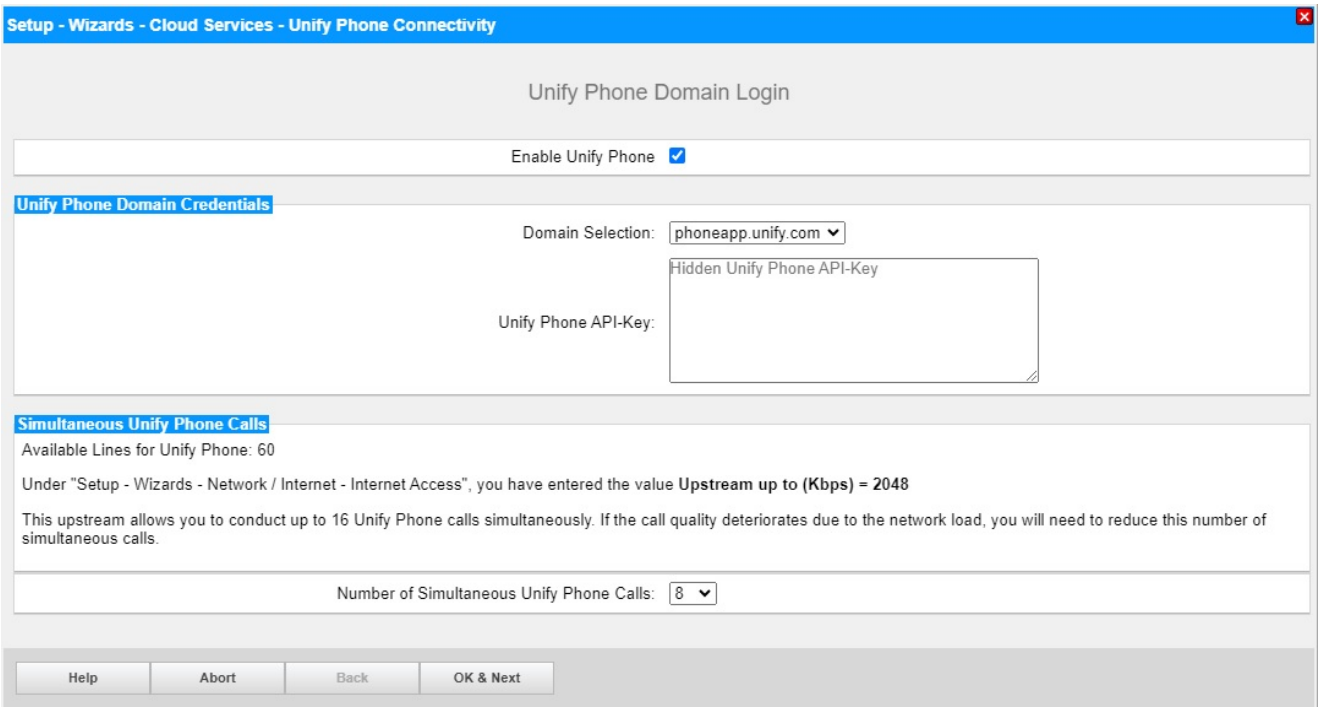


Click [Edit].

Actions:

- check "Enable Unify Phone"
- select Domain phoneapp.unify.com
- insert the API Key via copy and paste
  (get the API Key from Unify Phone tenant Administrator)
- select Number of simultaneous circuit calls.

The "upstream up to (Kbps)" value defines the overall bandwidth, which can be used for voice calls to the internet. This includes Unify Phone calls as well as ITSP and/or Device@Home calls.

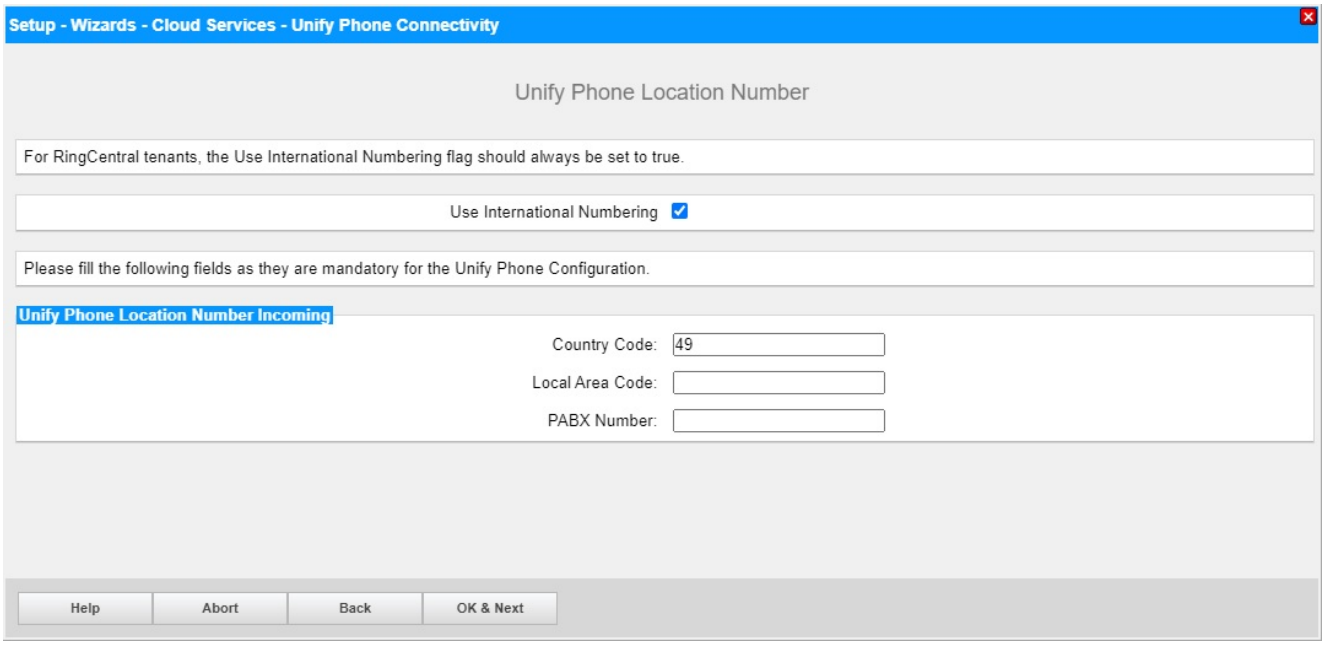


Click [OK & Next].

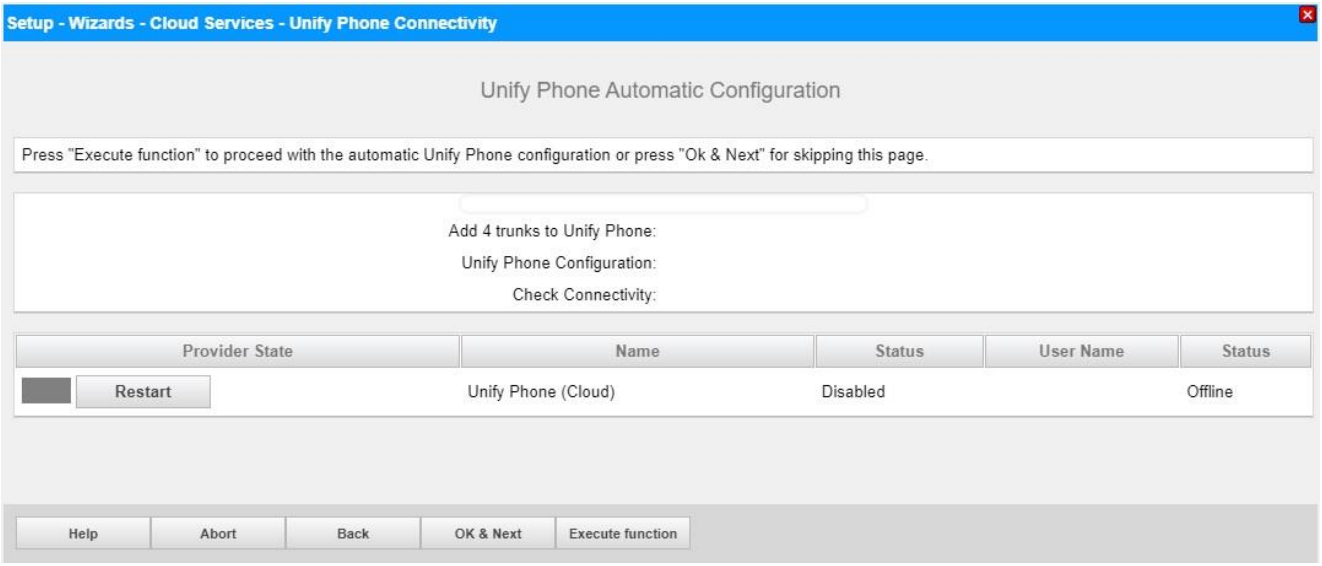
New in OpenScape Business V3R3 FR1 - on next page select the numbering schema of the Unify Phone user call number:

- international numbering (default): E.164 format
- internal numbering: short format

	For international numbering it is mandatory to fill in the **Unify Phone route location number incoming** which **can be different from the Gateway location number** (usage of Country Code is mandatory).

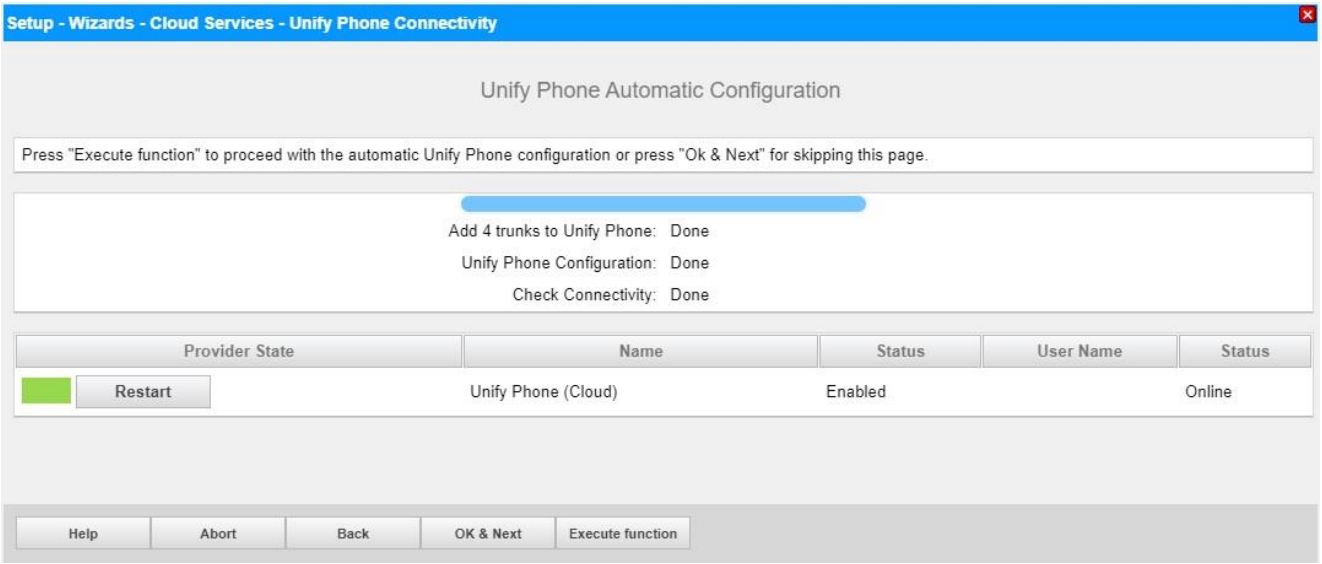


Click [OK & Next].



Click [Execute Function].

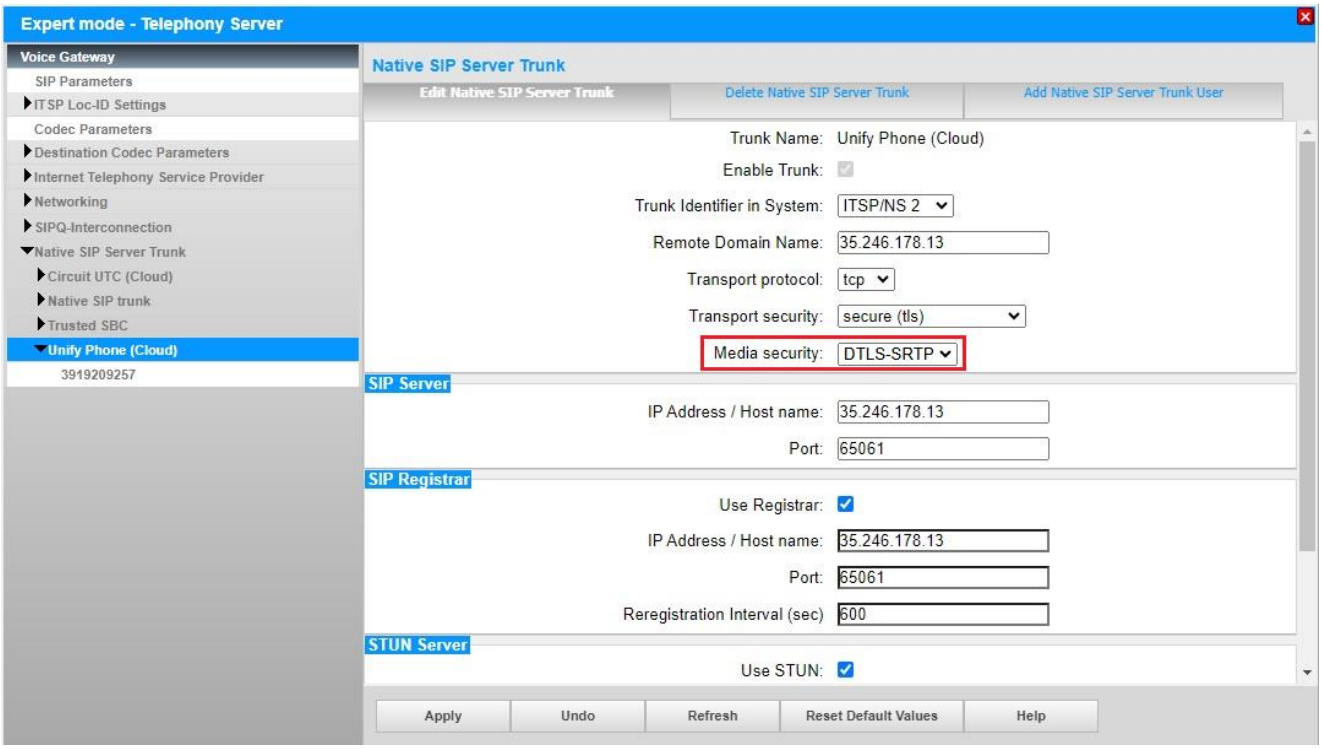
The wizard automatically configures the trunks, the according route and establishes the connection to Unify Phone.



Click [OK & Next].

	If you want to connect multiple OpenScape Business Systems to one tenant, you must run on each system the wizard and use the same API key for each system. Each System will create an own trunk to Unify Phone.

New in OpenScape Business V3R4: support of secure Media (DTLS-SRTP) and direct Media between the Unify Phone Client and the OpenScape Business is available by default in new deployments. Existing installations must be updated to new functionality via Expert Mode by activating "DTLS-SRTP" manually and restart the trunk.



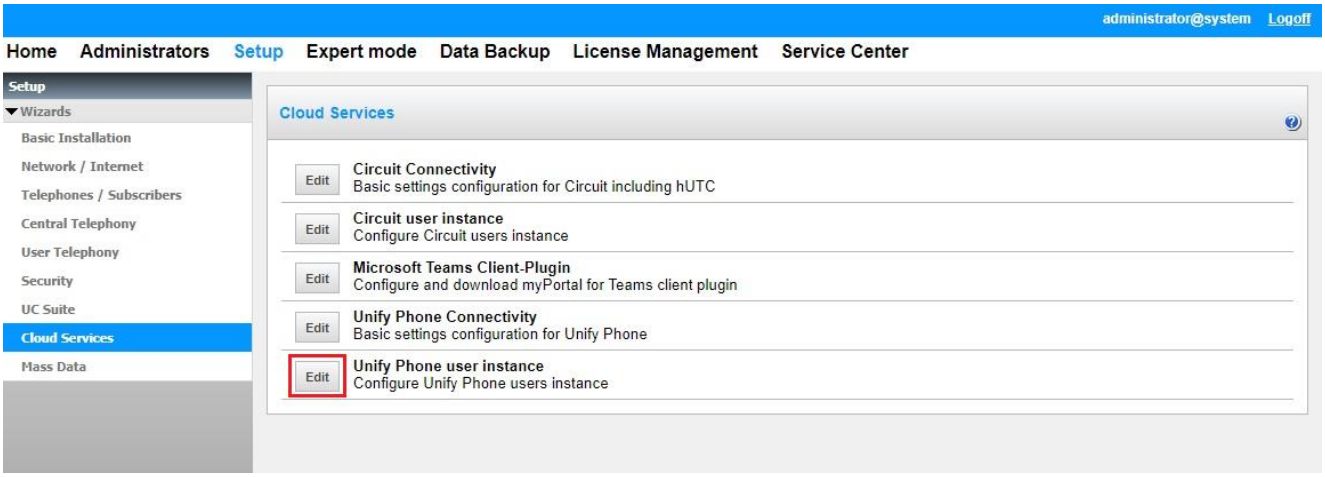
Close the window and restart the ITSP.

	Restrictive firewall settings may cause sporadic or permanent voice payload issues. In that case, disable the "DTLS-SRTP" option (change back to "RTP only").

3.3 Unify Phone User instance wizard

	Only the **Unify Phone user instance** wizard creates (**new in OpenScape Business V3R3 FR1**), configures, and assigns existing Unify Phone Clients to the OpenScape Business Users.

Go to Cloud Services – **Unify Phone user instance**



Click [Edit].

Note: for each Unify Phone User Instance you need a free internal call number to address the virtual station, which represents the Unify Phone User in the OpenScape Business system.

- OpenScape Business V3 mainboard family systems
  - X1W/R, X3, X5 and X8 up to 150/500 User - model dependent (basic/advanced)

- OpenScape Business V2 mainboard family systems
  - X1 up to 30 User
  - X3, X5 and X8 up to 50 User

- OpenScape Business S
  - model dependent up to 500 User (basic/standard/advanced)

3.3.1 Create new Unify Phone User

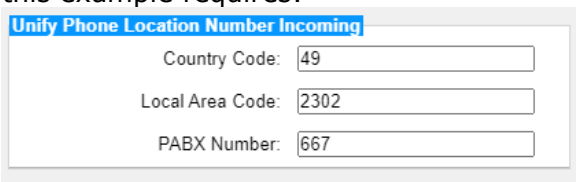
Action: Create new Unify Phone User (**new in OpenScape Business V3R3 FR1**)

Click [Create].

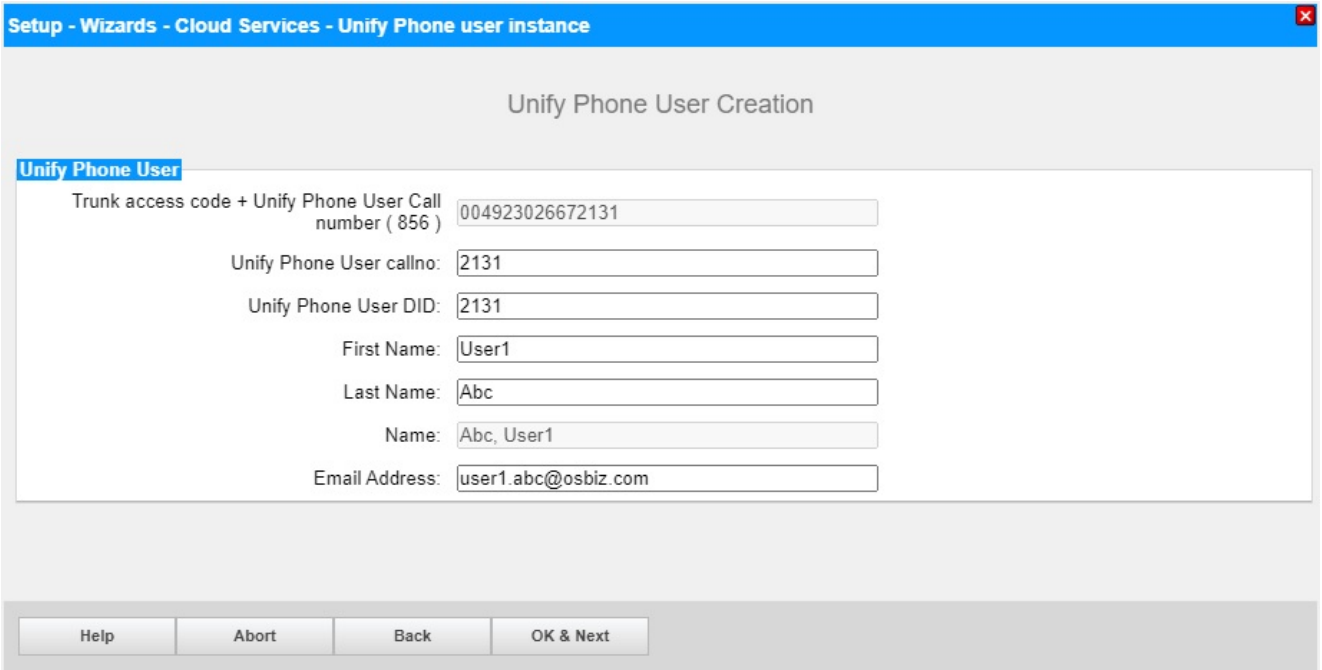
a) International number schema

Actions – standalone User:

- add the internal call number (callno)
- add the User's DID (optional)
- Unify Phone User call number is created automatically
  - using selected numbering schema and location information
  - this example requires:



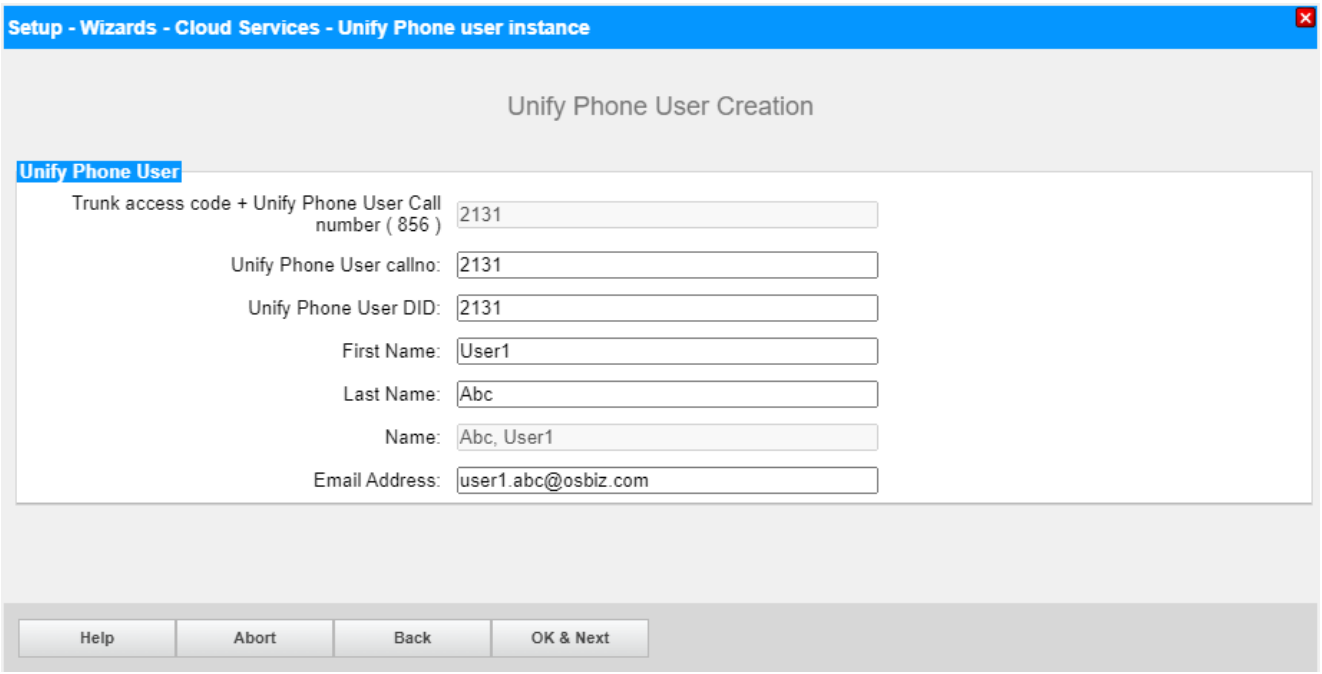
- configure the First Name and Last Name
- Name is created automatically
- assign the E-mail address



Click [OK & Next].

b) Internal number schema

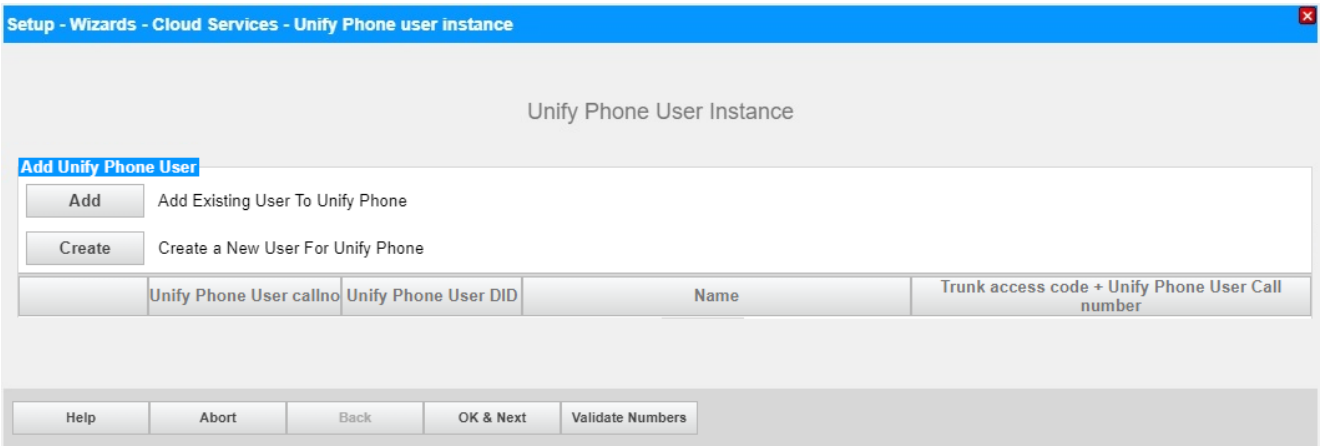
Actions as for International number schema.



Click [OK & Next].

3.3.2 Add Unify Phone User

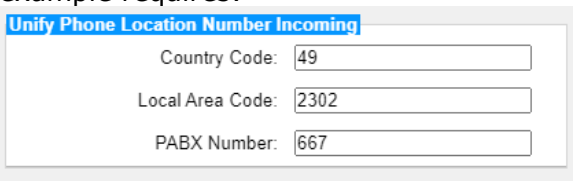
Action: Add new Unify Phone User



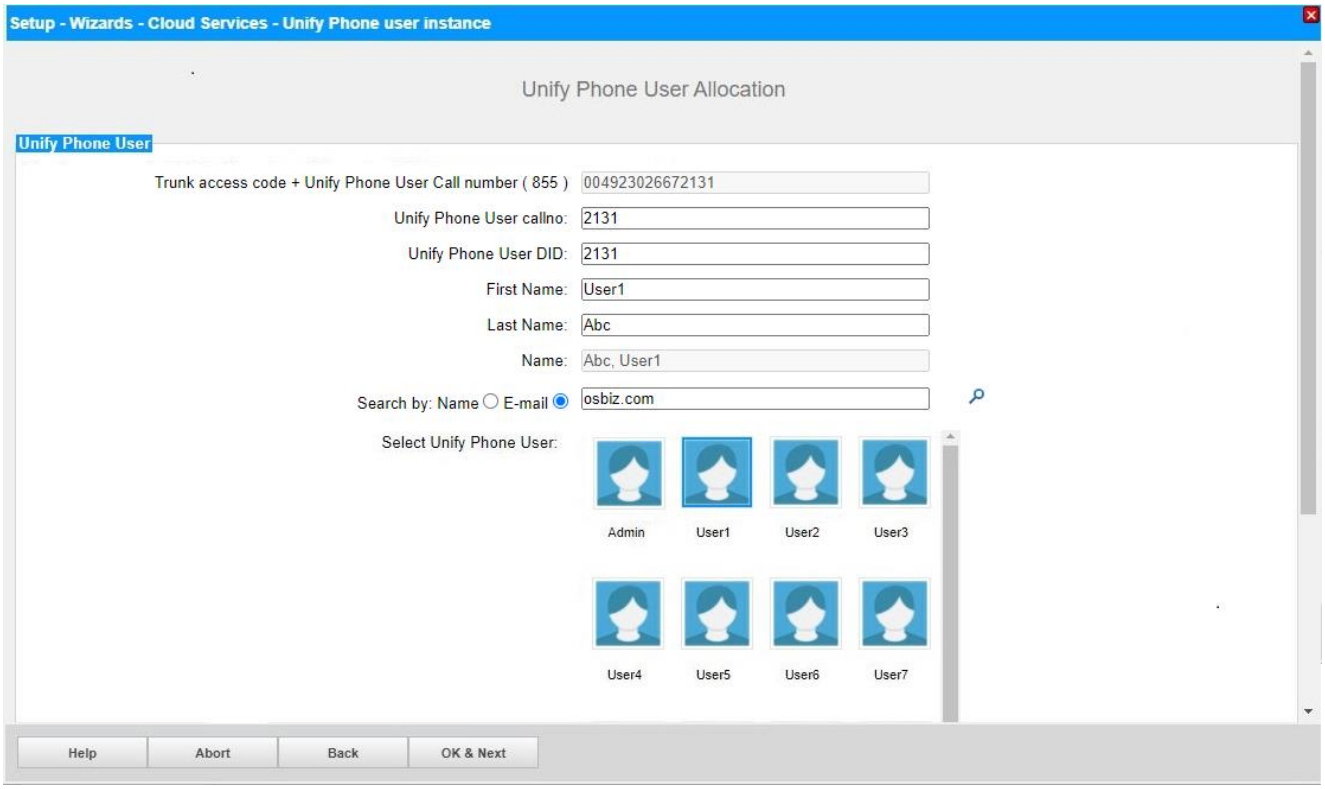
Click [Add].

Actions – standalone User:

- search for available Unify phone User by Name or E-mail
- select an available Unify phone User – already assigned user are marked by a red frame
- add the internal call number (callno)
- add the User's DID (optional)
  - Unify Phone User call number is created automatically by selected numbering schema
  - example requires:



- configure the First Name and Last Name
- Name is created automatically



Click [OK & Next].

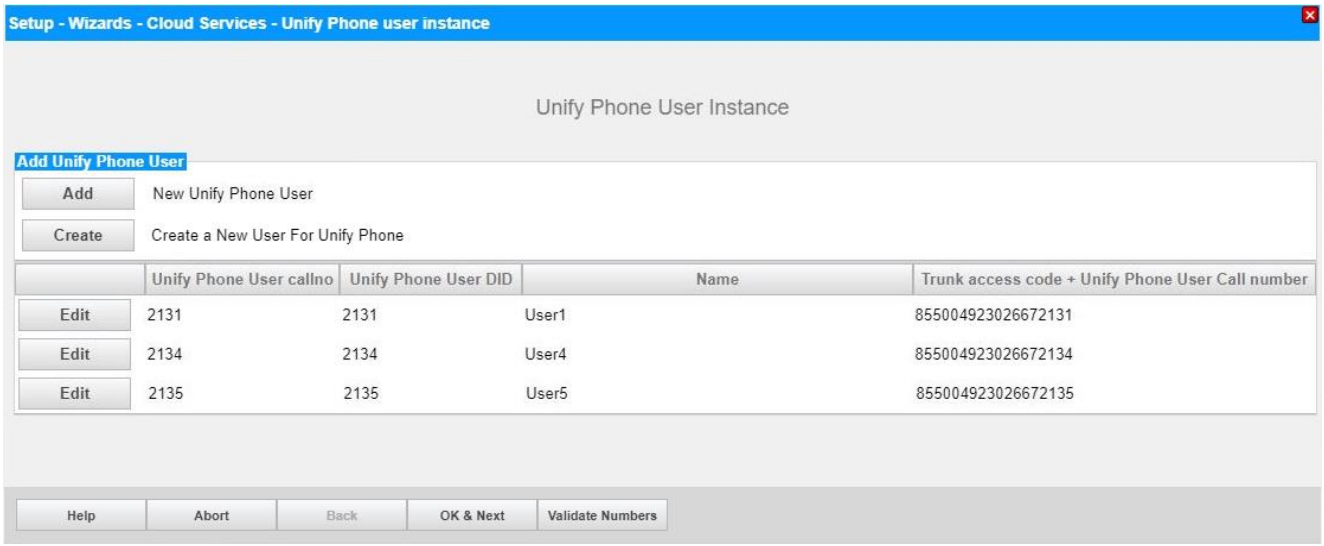
3.3.3 Edit configured Unify Phone User

Only the **Unify Phone user instance** wizard allows to edit the Unify Phone Clients configuration. Changes via the Expert Mode will either not be handled or must be reconfigured after the wizard has been executed.

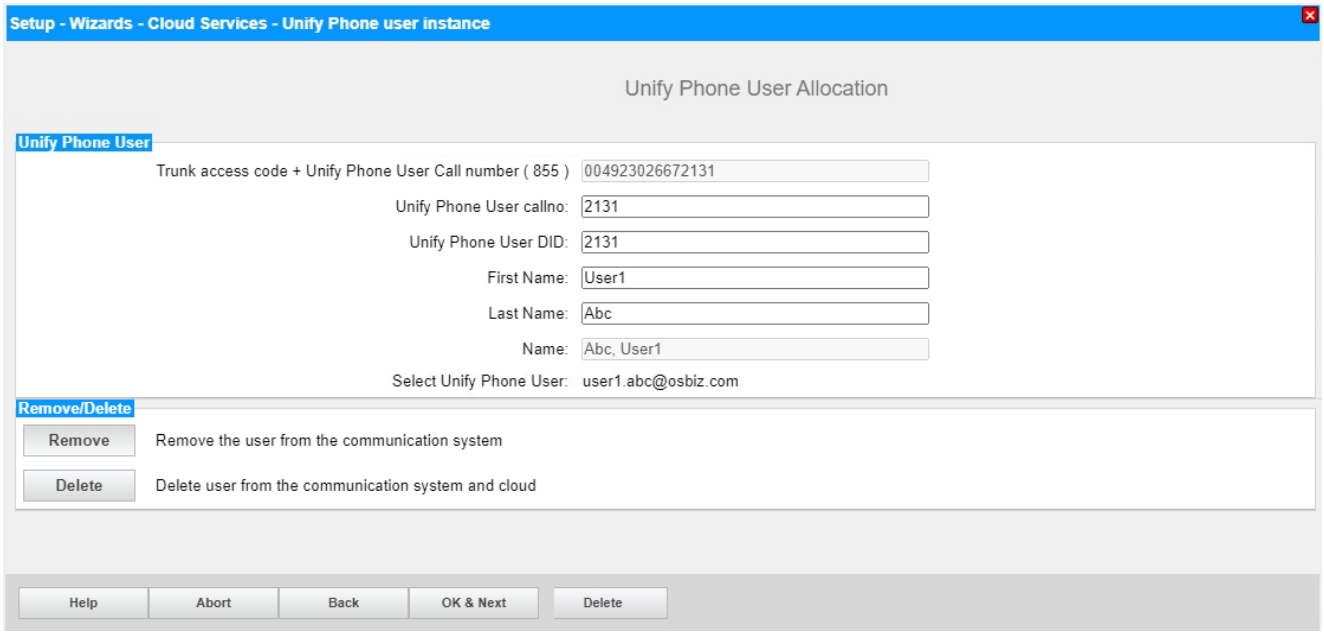
For updating and validation of entire Unify Phone User Call number(s) including network view to the selected numbering schema click [Validate Numbers].

Hint: if an existing number schema does not fit into the E.164 format length restriction, please update the Unify Phone route location number and update the numbering schema by click [Validate Numbers].

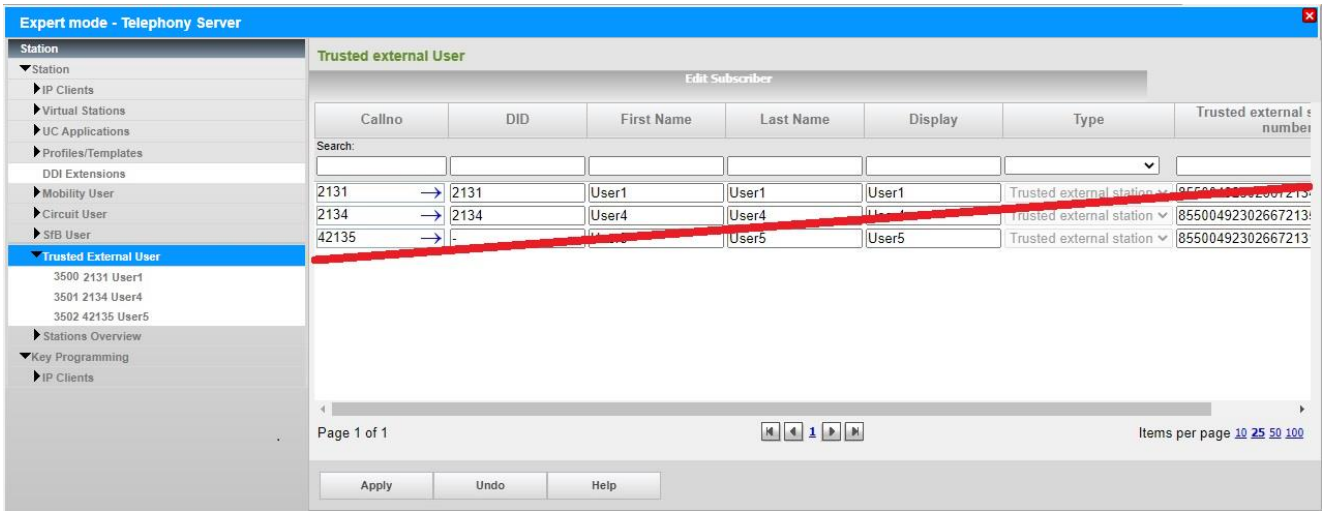
Action: Edit configured Unify Phone User



Select user and click [Edit].



Change needed parameter(s). Click [OK & Next].



A configuration of the **Trusted External User** via Expert Mode is not possible and would not update the Unify Phone Telephony Connector at all.

3.4 Twinning with Desk Phone

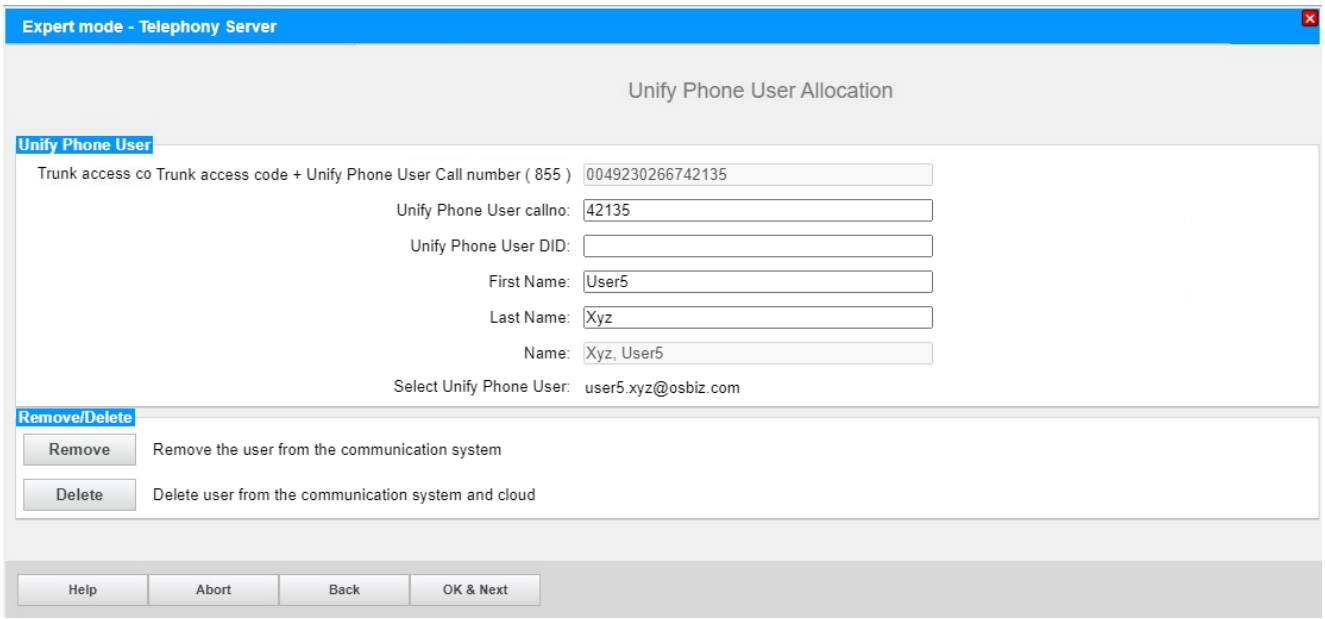
For the twinning with Desk Phone a Team configuration (MULAP) consisting out of a Unify Phone user and a Desk Phone is required within OpenScape Business. When integrating the Unify Phone user into a Team, please note:

- Only one IP or TDM desk phone can be included in the Team configuration with the Unify Phone User. The routing function in Unify Phone is used to determine which end device should be used to signal an incoming call.
- The desk phone in the team with Unify Phone can still be controlled by external applications via TAPI, WSI or CSTA.
- Cordless subscribers are not approved in connection with Unify Phone.

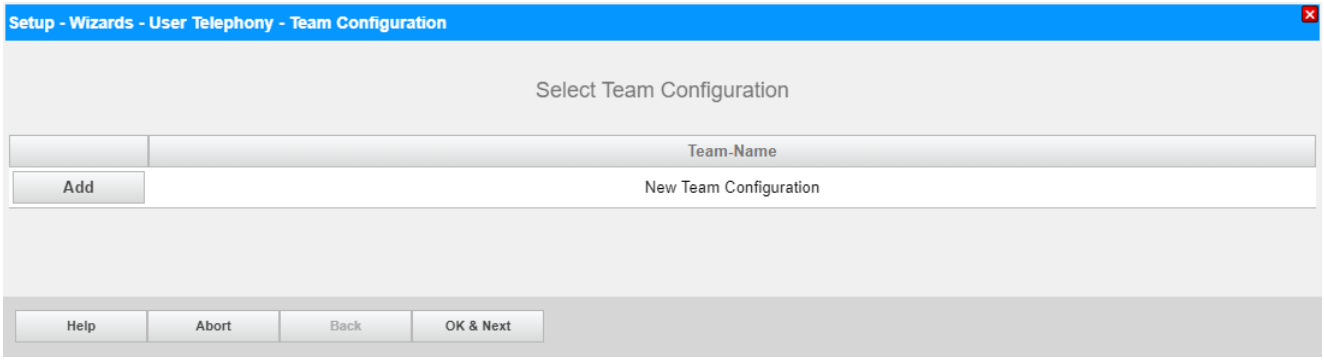
	The Team wizard will update the Unify Phone User call number fitting to the Team internal Call Number (callno). Please log off the Unify Phone client before integrating the client into a Team or MULAP.

Actions – Team (MULAP) User:

- Create, Add or Edit Unify Phone User as described in chapt. 3.3
- leave DID empty
- configure the Name (optional)

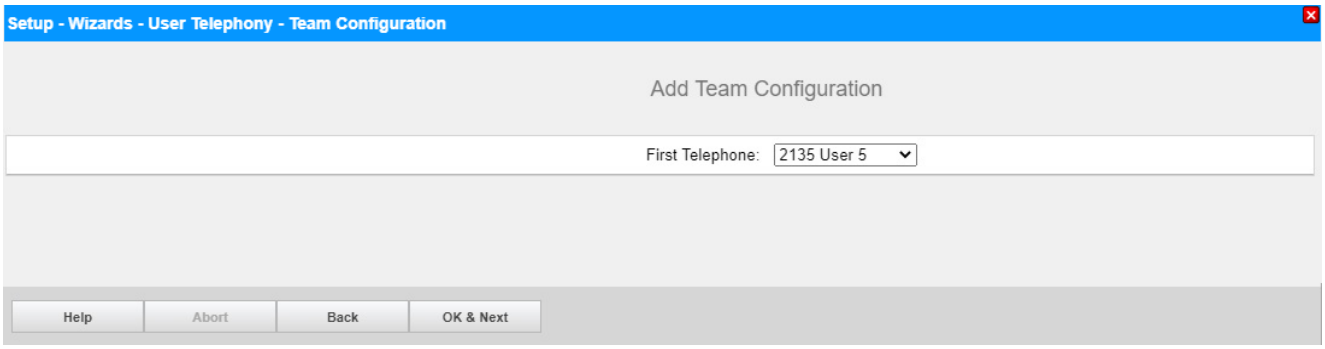


Go to User Telephony – **Team Configuration**



Click [Add].

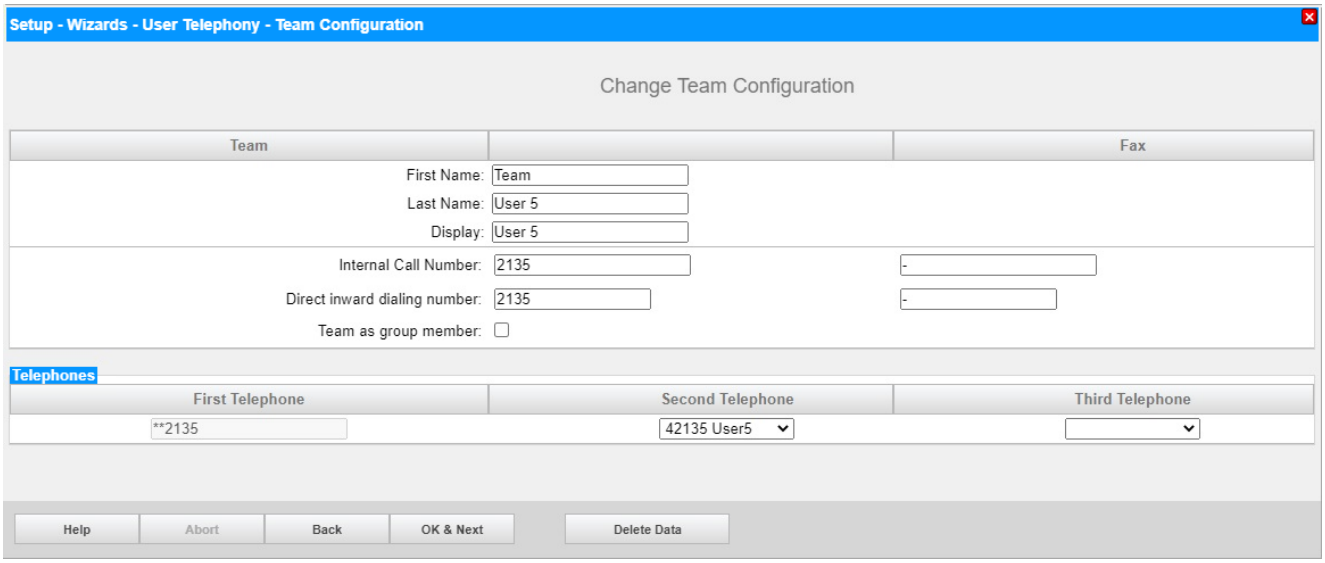
Select the first telephone (IP or TDM Desk Phone).



Click [OK & Next].

Add the Unify Phone mobility User as second telephone

- add the internal call number
- add the DID
- configure the names



Click [OK & Next].

3.5 3rd-pty CTI control

From OpenScape Business V3R3 FR2 on 3rd-pty CTI control for Unify Phone is available for the following onboard UC Clients:

- UC Smart mode: myPortal @work
- UC Suite mode: myPortal @work, myPortal for Desktop, myPortal for Outlook, myAttendant
  new in OpenScape Business V3R4: myAgent and myPortal for Teams

and requires OpenScape Business UC User license.

Functional Requirements

- activating DND on UC client is not visible at Unify Phone
  the DND is activated but Presence states sync between OpenScape Business and Unify Phone is part of the roadmap and not yet available

- for MULAP the initial CTI control (MakeCall, AnswerCall) is handled via the Deskphone, the call can afterwards be moved to the Unify Phone client

- 3rd-pty CTI control shall not be used for the mobile App and Alternative number

3.6 Licenses

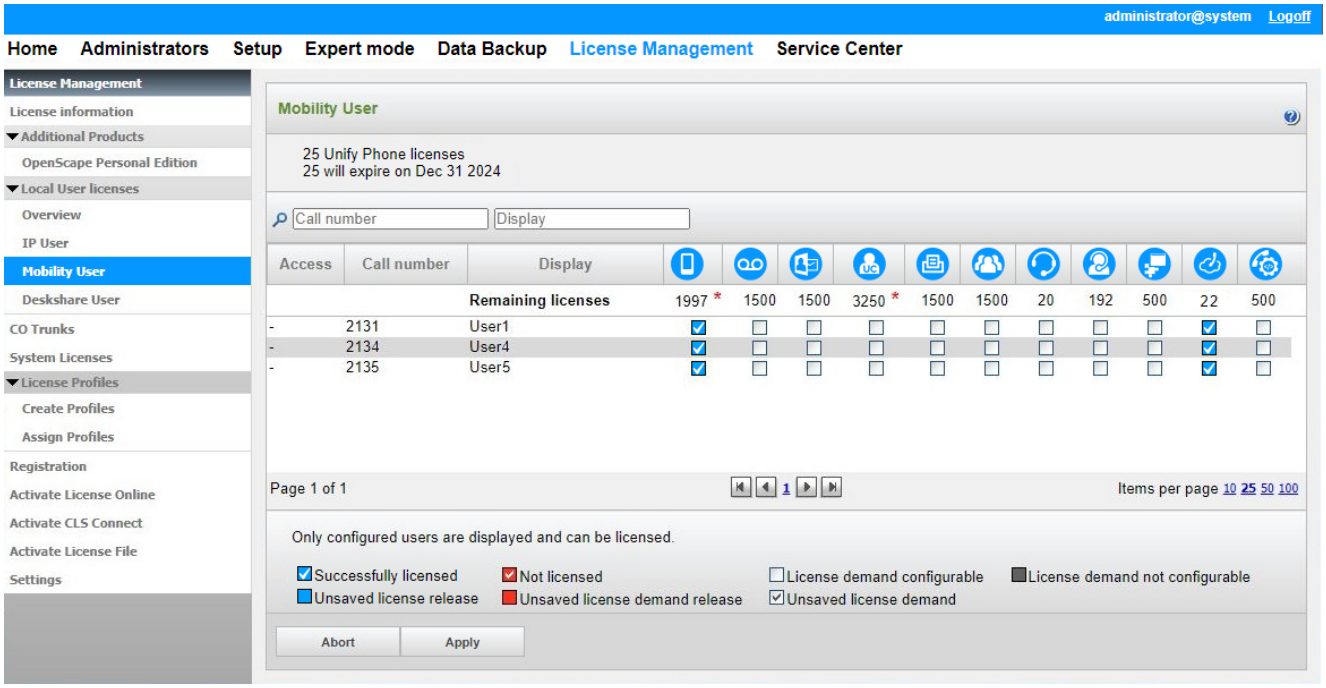
Unify Phone requires the following OpenScape Business licenses:

- valid OpenScape Business Software Support
- OpenScape Business IP User (Mobility User) licenses
- OpenScape Business Unify Phone licenses
- Twinning with Desk Phone: IP User license for Desk Phone (optional)
- OpenScape Business Voicemail licenses (optional)
- OpenScape Business UC User licenses (optional)

Go to License Management – Local User licenses – **Mobility User**

Actions – standalone User example:

- activate needed IP User (Mobility User) licenses
- activate needed Unify Phone licenses
- Twinning with Desk Phone: IP User license for Desk Phone (optional)
- activate needed Voicemail licenses (optional)
- activate needed UC User licenses (optional)

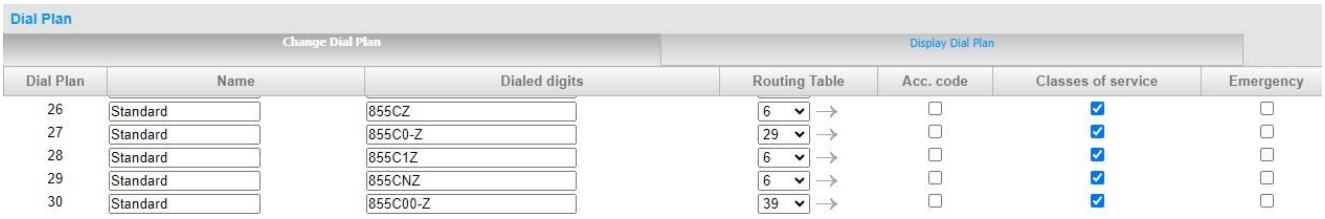


Click [Apply].

3.7 Configuration in Expert Mode

3.7.1 LCR

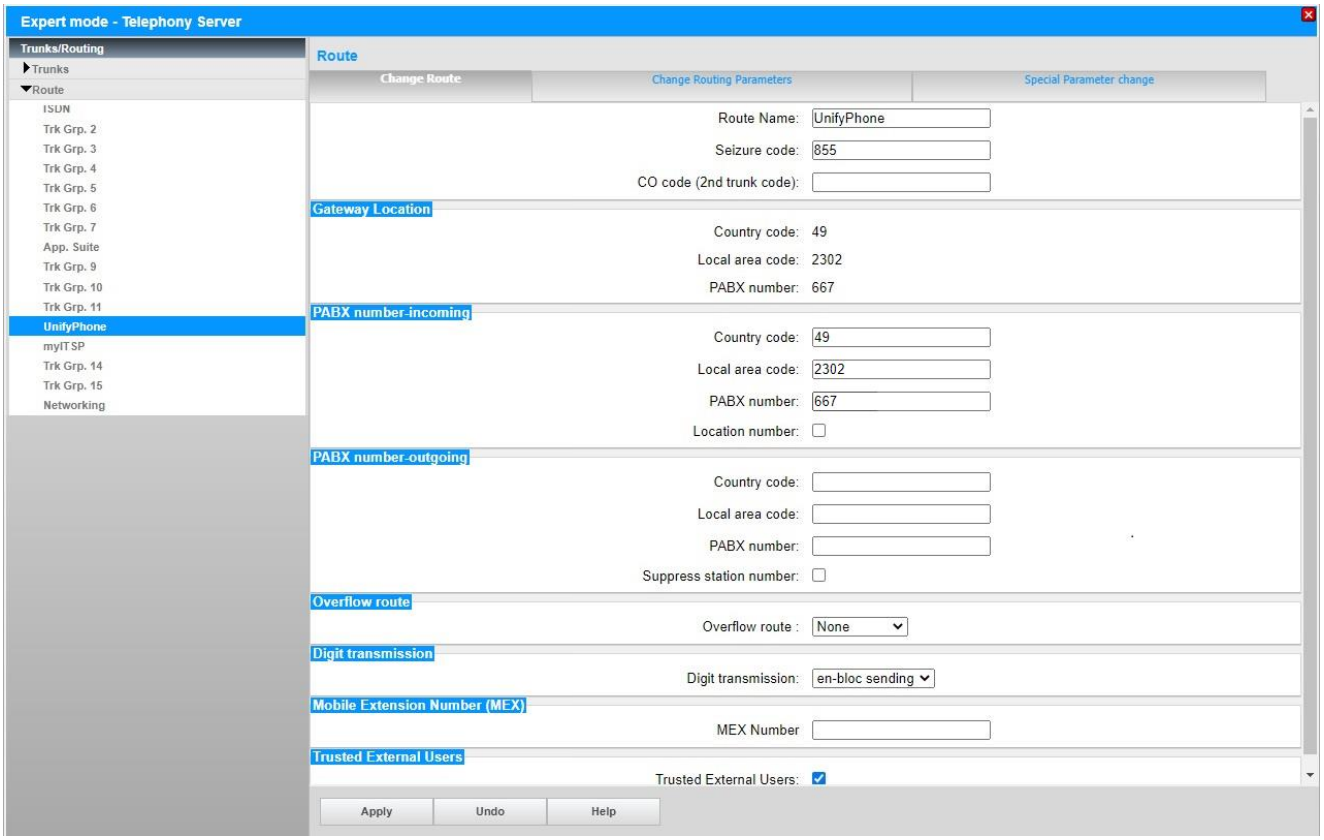
In general, no additional manual configuration in LCR is required to reformat the dial string to E.164 format. Everything is prepared by the wizard and looks like this:



Unify Phone User without DID are included in this mechanism as well.

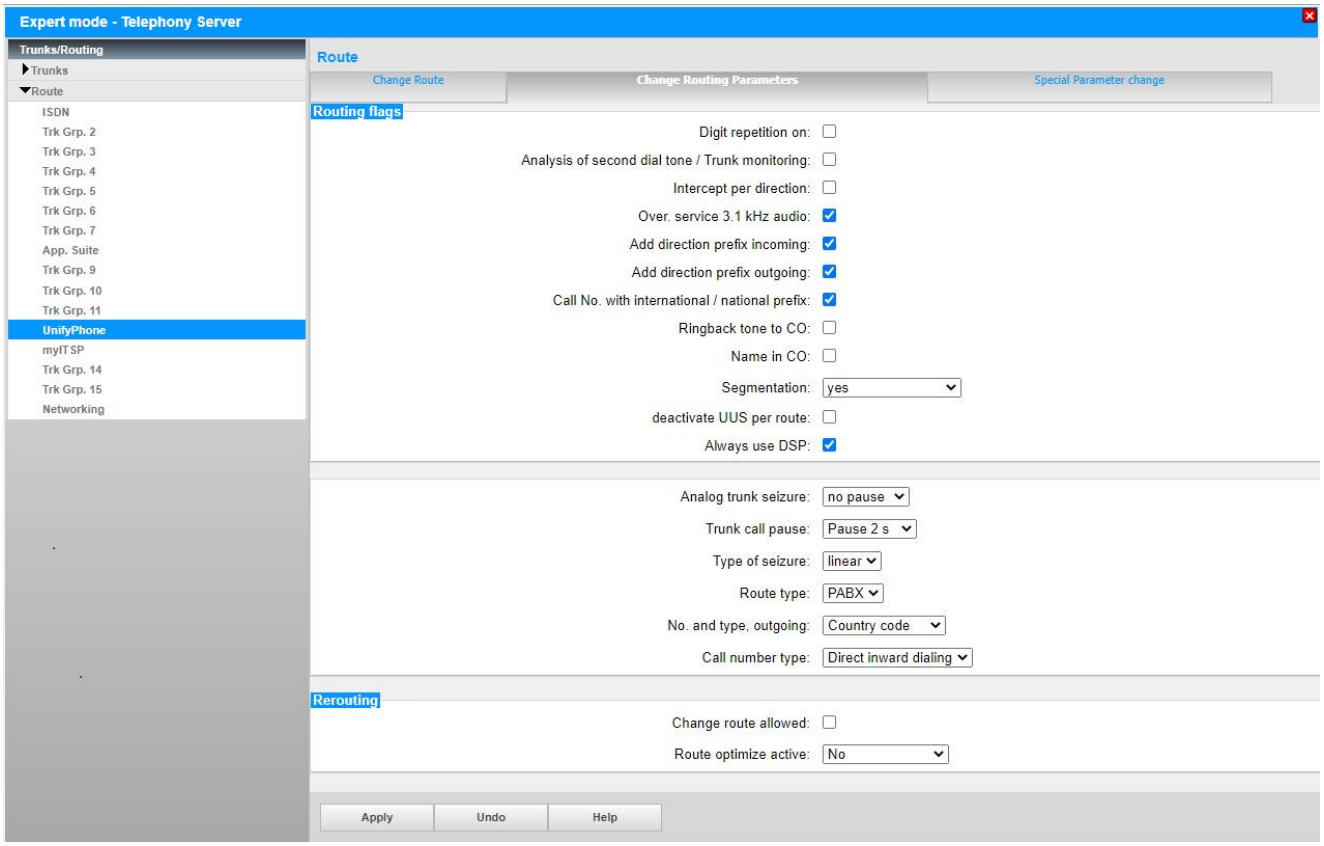
3.7.2 Trunks/Routing

The wizard activates automatically the **Trusted External Users** mode for the Unify Phone route



	The Gateway location and the Unify Phone route PABX number incoming can be different (e.g. users without DID).

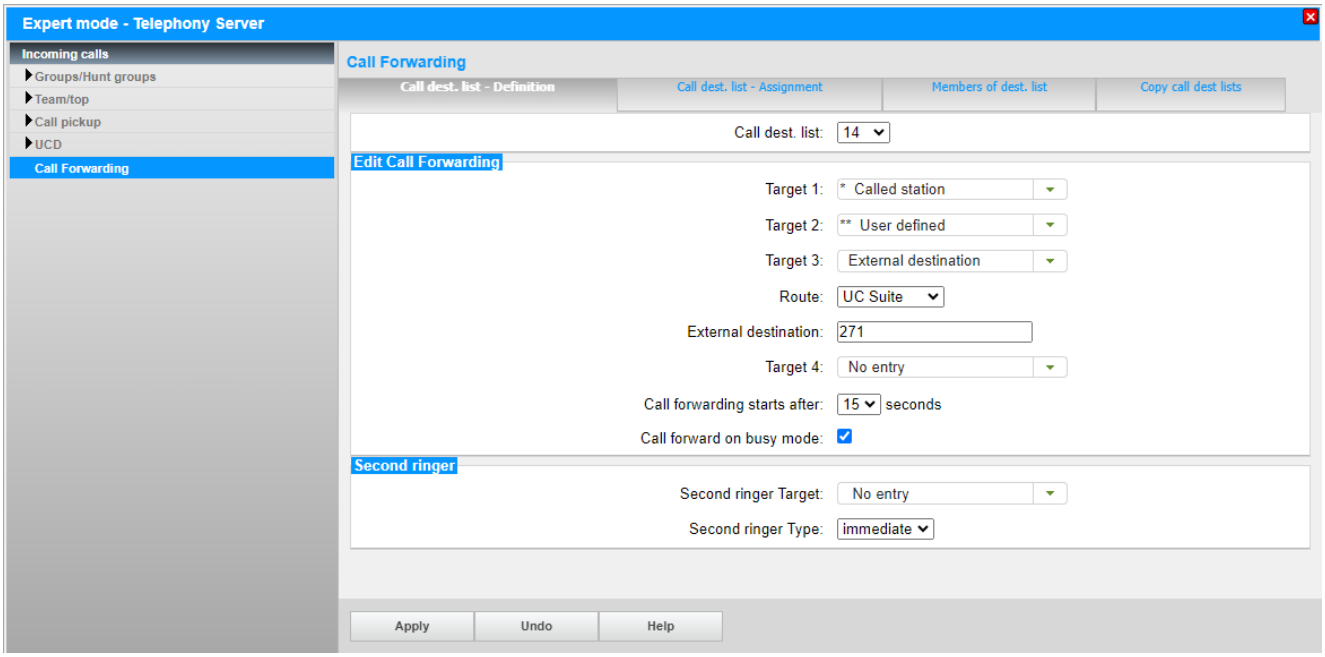
and other parameters like “route type”.



Selection of the parameters reflect to the selected numbering schema (here: International format).

3.7.3 Mailbox

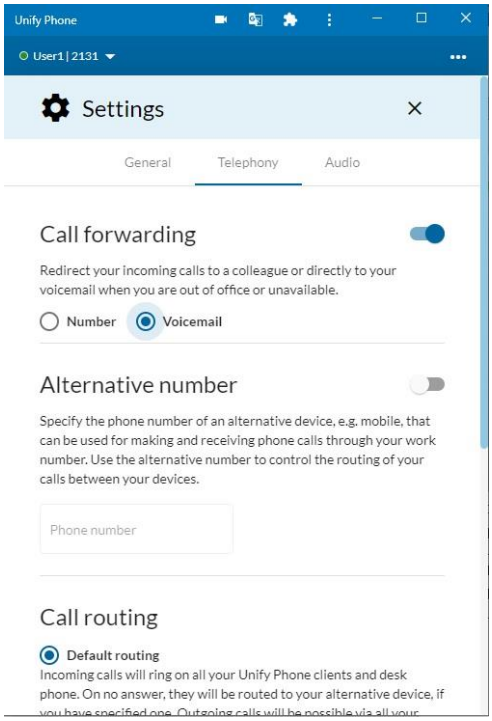
Unify Phone user can use the Open Scape Business **Voicemail**. For this purpose, an appropriate call destination list is needed. The following example shows the usage of the UC Suite voicemail system.



Click [Apply].

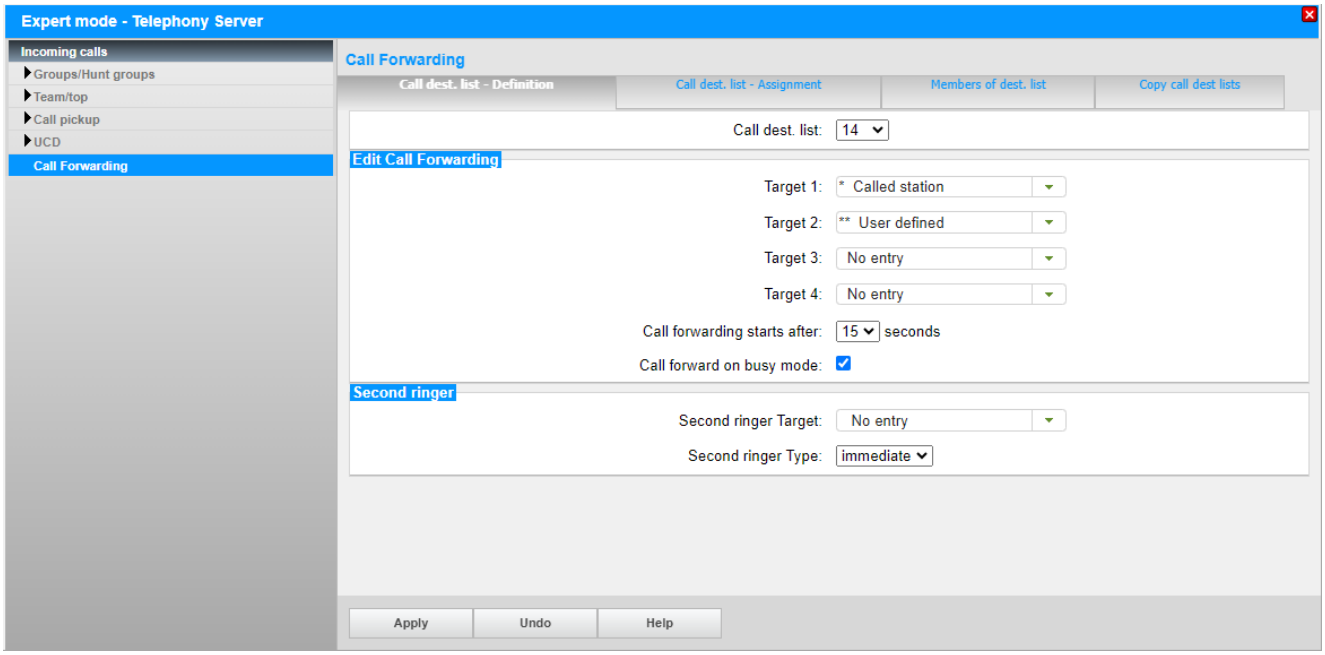
Hint: for the usage of the Unify Phone feature **Alternative Number** target 2 must be set to "** User defined".

The User can activate call forwarding to the OpenScape Business **Voicemail** via the Unify Phone Client.



3.7.4 Alternative number

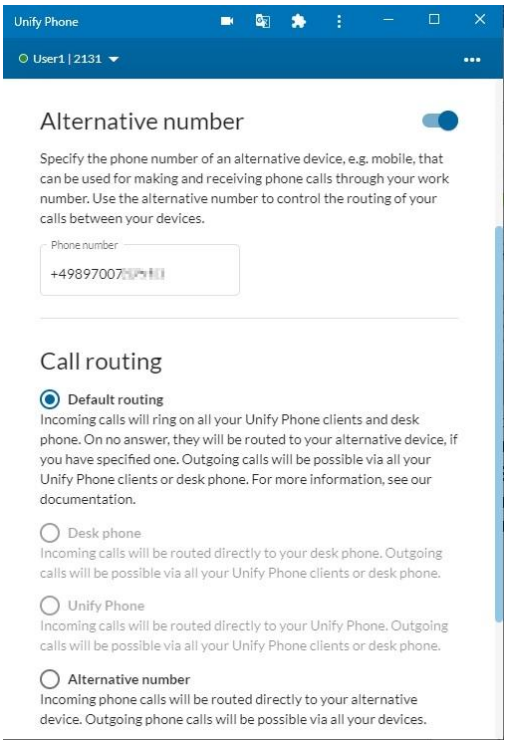
Any external number can be configured in the Unify Phone Client that can be used for making and receiving phone calls through your work number. The usage of the Unify Phone feature **Alternative Number** requires target 2 must be set to "** User defined" in the call destination list.



Click [Apply].

The availability of the **Call routing** modes depends on the User configuration:

- Default routing - standalone, MULAP
- Desk phone - MULAP
- Unify phone - MULAP
- Alternative number - standalone, MULAP

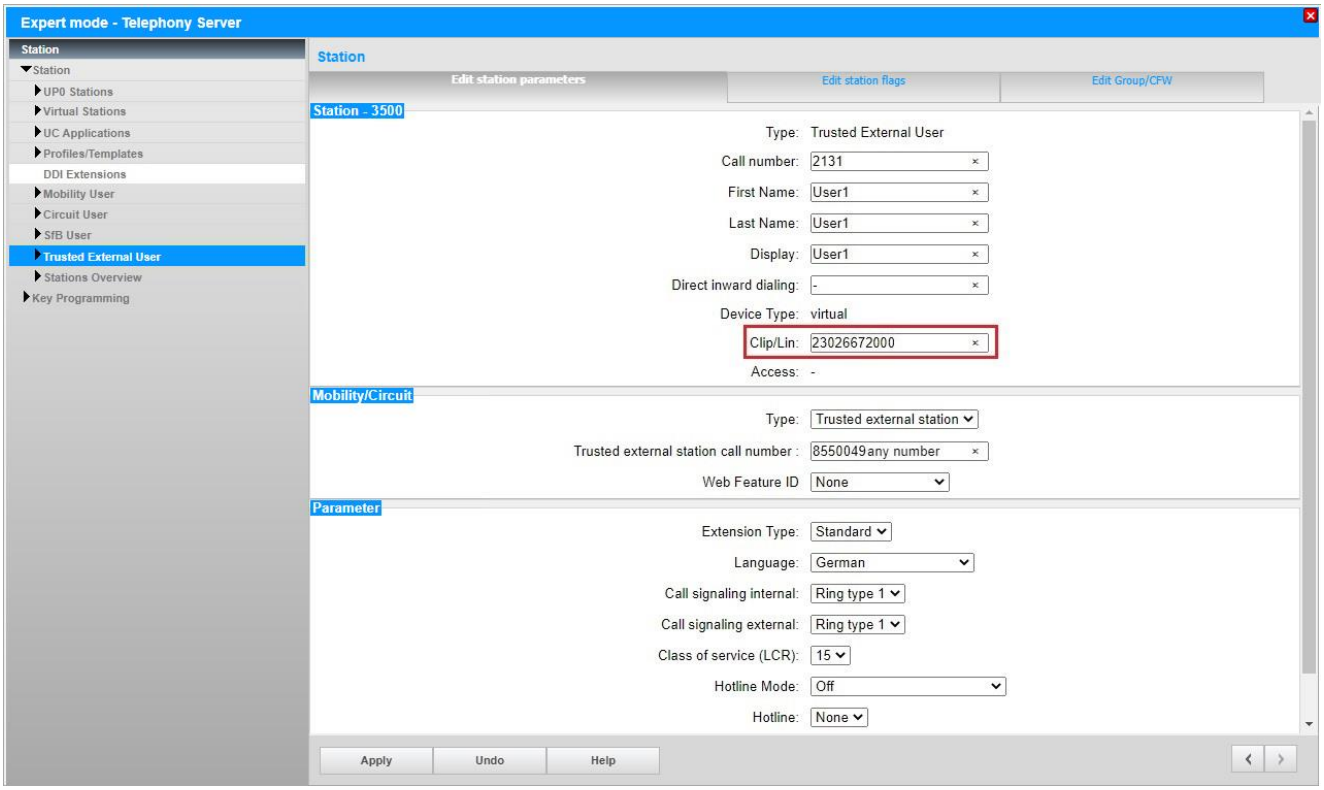


3.7.5 Unify Phone User without DID

This chapter describes the setup, if customer do not have individual DID's for each Unify Phone User and e.g., configures an auto attendant to reach out to the individual users.

	Unify Phone User without DID is supported only with **Unify Phone for OpenScape**. Please use **OpenScape Business V3R3 FR1** or later by selecting the internal numbering schema (see chapt. 3.2).

If needed, assign the according **Trusted External User** the CLIP/LIN via Expert mode:



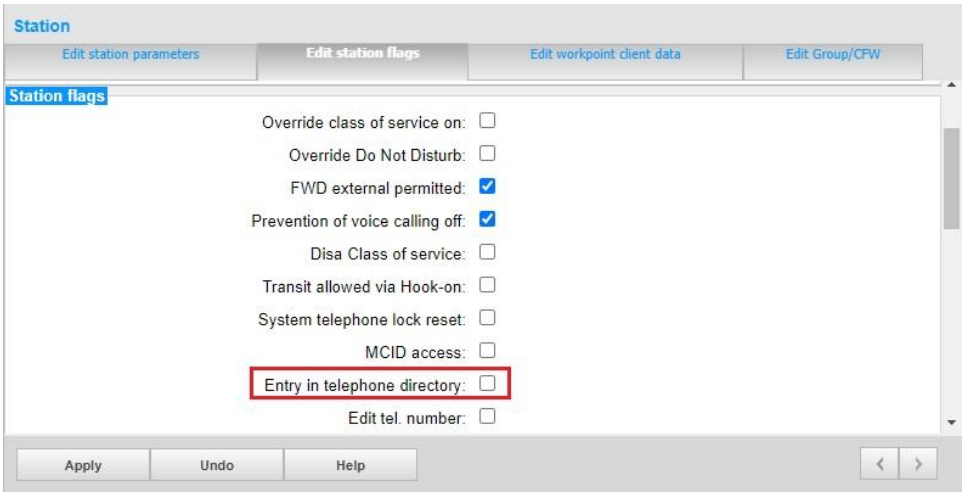
Click [Apply].

The wizard updates the according LCR Dial Plan entries and Route parameters like "No and Type outgoing" and "Call Number Type" of the Unify Phone route automatically.

3.7.6 Directory/Journal interconnection

Starting with **OpenScape Business V3R3 FR1** directory and journal info of OpenScape Business is available at the Unify Phone clients.

In first drop, unwanted directory results such as MULAP members or Fax numbers can be switched off by disabling the station flag: “Entry in telephone directory”.



4 Firewall Rules

Unify Phone is a cloud-based Software-as-a-Service. Your organization's network must satisfy some connectivity requirements to allow Unify Phone to work properly.

	source IP	source port	destination IP	destination port	comment
TURN for clients	Client IP	any (1024-65535)	34.159.228.55 turn.phoneapp.unify.com	3478 (TCP/UDP)	Web/Mobile/Desktop Clients need to connect to TURN server thus the firewall should allow connection towards the TURN server.
HTTPS for clients	Client IP	any (1024-65535)	34.117.105.255 phoneapp.unify.com	443 (TCP)	If your organization's network uses a proxy server, the browser will establish the connection via the proxy.

Table 1: Client Egress Firewall Rule Table

4.1 Stateful Firewall Configuration and NAT

	destination IP	destination port	source IP	source port	comment
Unify Phone client REST API (HTTPS)	34.117.105.255	443	OpenScape Business public IP	any (1024-65535)	Unify Phone client connection to provision Unify Phone users in the OpenScape Business. Hostname is phoneapp.unify.com
Unify Phone Connector SIP over TLS	35.246.178.13	65061	OpenScape Business public IP	any (1024-65535)	Needed for SIP connectivity over TLS with Unify Phone. (allow Established Connection)
Media RTP	GCP IP source range for Europe-west3	Media RTP (UDP ports) to GCP nodes (destination): Ports 10000-49999	OpenScape Business public IP	OpenScape Business media ports	Media Path/RTP configuration to establish media stream.
TURN/STUN	34.159.228.55	3478 (TCP/UDP)	OpenScape Business public IP	any (1024-65535)	OpenScape Business should be able to establish connection to STUN/TURN server.

Table 2: Egress Firewall Rule Table

	source IP	source port	destination IP	destination port	comment
OpenScape Business (SIP/CSTA)	GCP IP source range for Europe-west3	any (1024-65535) (TCP)	OpenScape Business public IP	OpenScape Business ports	Returned SIP client connection that OpenScape Business has established with Unify Phone.
OpenScape Business Media RTP	GCP IP source range for Europe-west3	Media RTP (UDP) from GCP nodes: ports 10000-49999	OpenScape Business public IP	OpenScape Business Media ports	Media Path/RTP configuration to establish media stream.

Table 3: Ingress Firewall Rule Table

4.2 Stateful Firewall Configuration and NAT supporting Direct Media feature

	destination IP	destination port	source IP	source port	comment
Media RTP	OpenScape Business public IP	Media Server WebRTC ports	any	any (1024-65535)	Media Path DTLS/RTP configuration to establish media stream from OpenScape Business to Client.
TURN for PBX	OpenScape Business public IP	Media Server WebRTC ports	34.159.228.55 turn.phoneapp.unify.com	3478 (TCP/UDP)	OpenScape Business should be able to establish connection to STUN/TURN server.

Table 4: Egress Firewall Rule Table

	source IP	source port	destination IP	destination port	comment
OpenScape Business (SIP/CSTA)	GCP IP source range for Europe-west3	any (1024-65535) (TCP)	OpenScape Business public IP	OpenScape Business SIP ports	Returned SIP client connection that OpenScape Business has established with Unify Phone.
TURN to PBX	GCP IP source range for Europe-west3	any (1024-65535) (UDP)	OpenScape Business public IP	Media Server WebRTC Ports (DTLS /UDP)	OSBiz should be able to receive connection from Unify Phone TURN server.
OpenScape Business Media RTP	any IP	Any (1024-65535) Media RTP (UDP ports over DTLS)	OpenScape Business public IP	OpenScape Business Media Server WebRTC Ports (UDP)	Media Path/RTP configuration to establish media stream from Client to OpenScape Business Media Server. *Optional: To allow direct Path from Client to OpenScape Business Media Server

Table 5: Ingress Firewall Rule Table

4.3 General info

Further requirements are defined and detailed in Unify Phone Administration, Administrator Documentation [5].

Port 443 must not be opened for incoming data traffic to OpenScape Business [4].

5 OpenScape Business Serviceability

5.1 Required trace settings for error reporting

OpenScape Business Trace Profiles:

- Basic
- Voice Fax Connections
- SIP_Interconnection_Subscriber_ITSP
- SIP_Registration (for registration problems)
- License_problem (for license issues, e.g. client login)

OpenScape Business Trace Components:

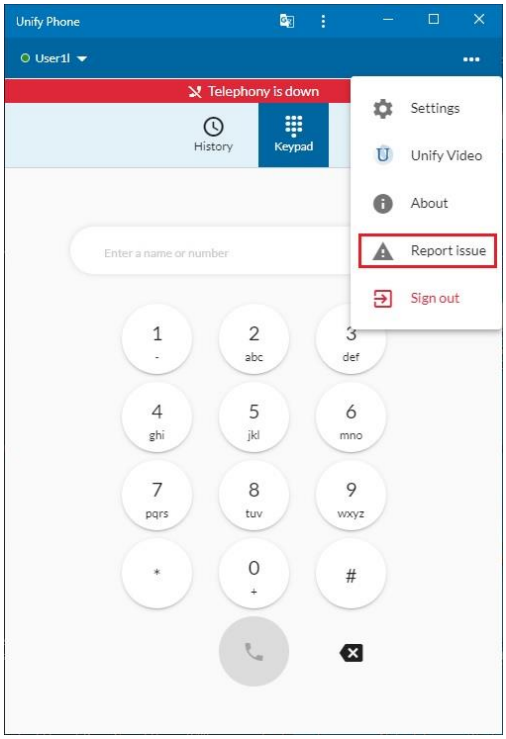
- FP_API-CTI - level 9
- FP_API_IWU - level 9
- PCC - level 9

Additional helpful data and files for error analysis are:

- OpenScape Diagnosis Logs (incl. Application Protocols)
- Wireshark traces
- OpenScape Business TCP Dump
- Diagnostic data Service Center >> Status >> ITSP >> Unify Phone (Cloud) >> Diagnose

5.2 Unify Phone log file

Client logs can be collected via the **Report issue** menu:



5.3 FAQ

Hardware replacement / reload with active Unify Phone connector

When setting up a new system by

- cloning an existing system with active Unify Phone connector as the base or restoring the configuration data of another existing system (e.g., hardware migration),
- replacing hardware (e.g., SSD / SDHC card replacement), or
- system reload

Please consider the following important hint:

If a new system is set up via cloning or via data restore (migration), where the original system had an Unify Phone connector access configured, it must be ensured that the cloned/restored system does **not** have the same Unify Phone connector configuration active.
For this reason, it is important to uninstall the Unify Phone connector **before** cloning / backing up the original system.

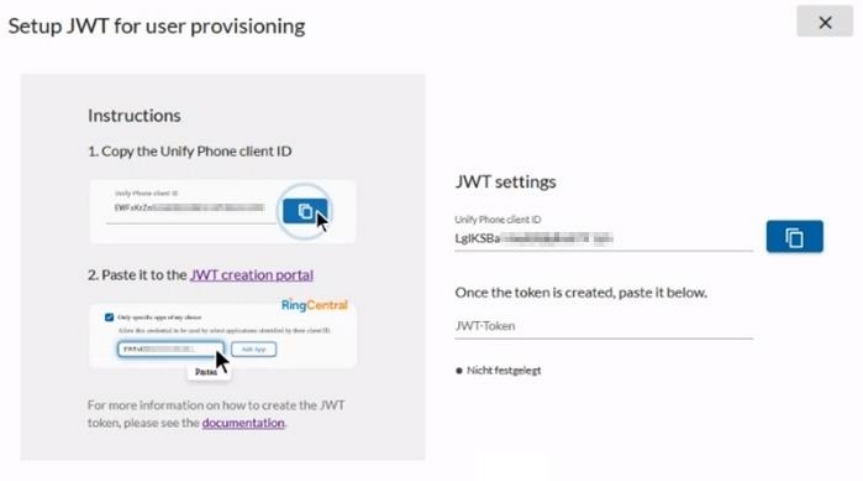
ITSP Status of Unify Phone (Cloud) • not registered	• please check for correct firewall settings
no connection to REST API	• API key invalid or regenerated • Unify Phone JWT is not configured • Unify Phone JWT expired
no calls with Unify Phone-Client possible	• OpenScape Business is not under Software support • no Unify Phone trunk lines are configured, or all Unify Phone trunk lines resp. shared trunk lines are busy • assigned Mobility User does not have a license or Unify Phone license is expired • Mobility User is not of type “Trusted external User” • Route parameter “Trusted external User” is deactivated • the Mobile call number does not match the Unify Phone numbering plan • configuration changes are applied via Expert Mode and not via the Wizard(s)
provisioning of new users is not possible	• a JSON Web Token (JWT) is needed for user provisioning in Unify Phone and the former used bot method for authenticating to RingCentral API was replaced

6 Best Practice

Information and useful hints from customer installations.

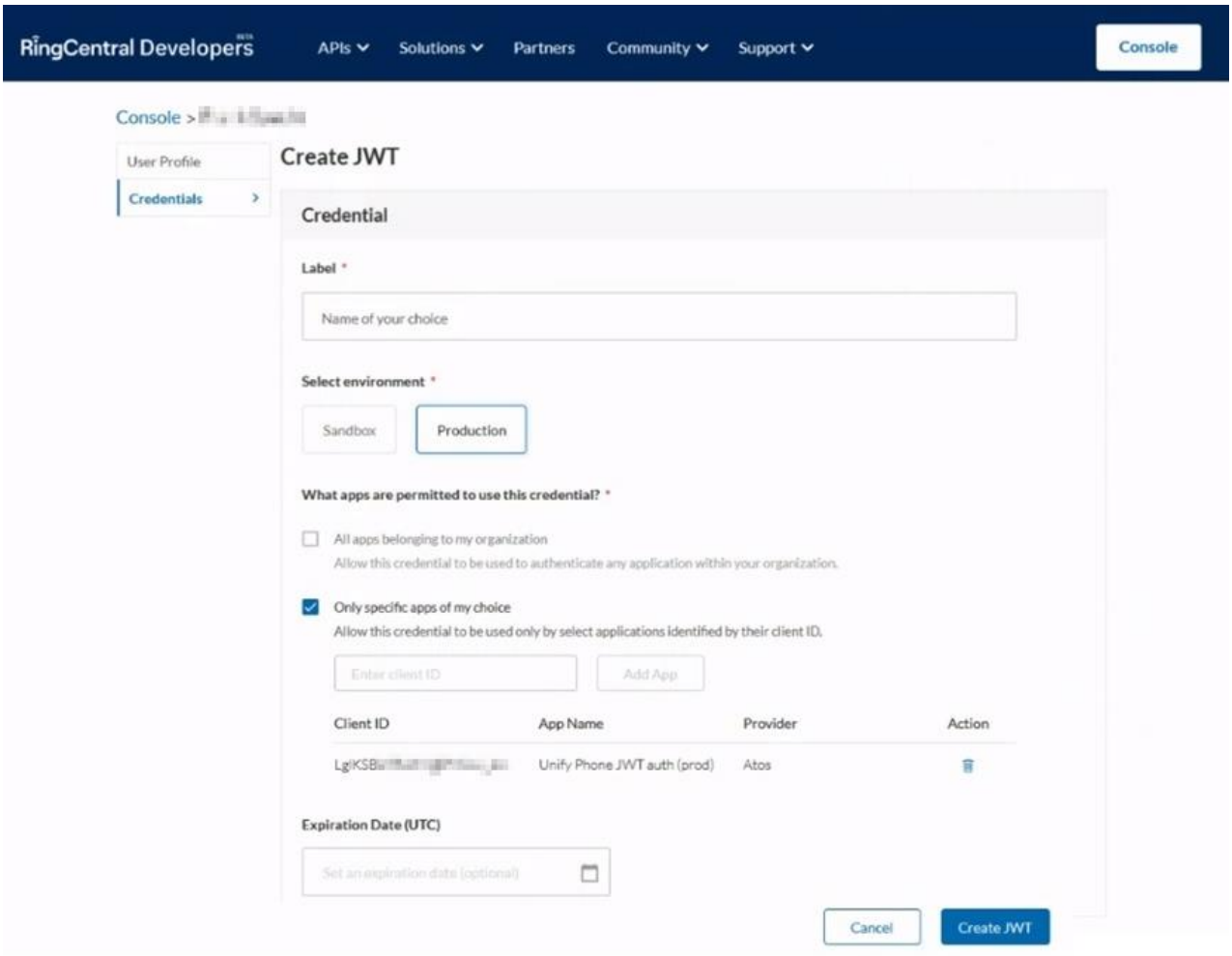
6.1 JWT creation portal

Locate the Unify Phone client ID and copy it to your clipboard.

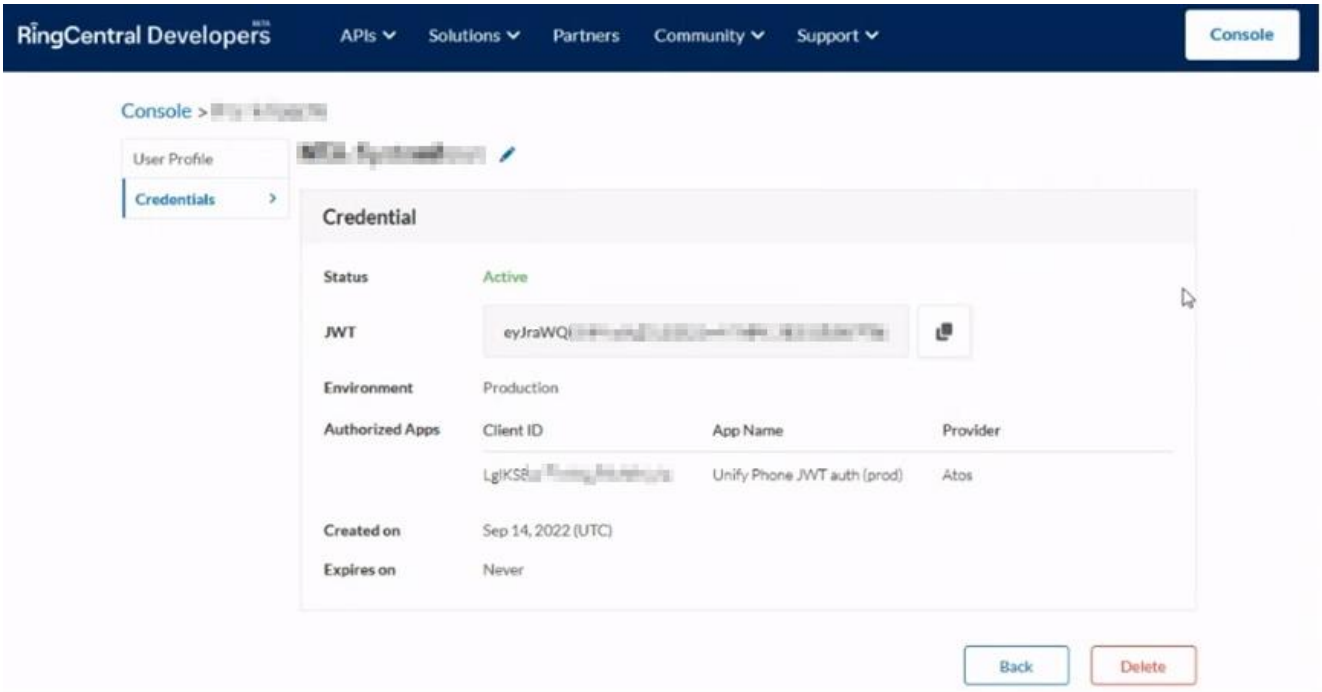


Click the JWT creation portal link to open the portal and sign in using your Unify Video administration account credentials.

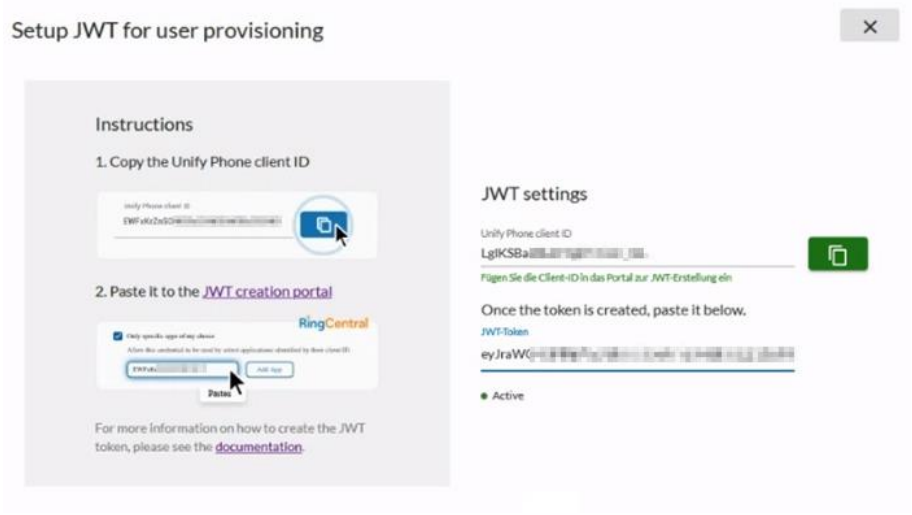
Add a name for your label of the JWT in the **Label** field and fill in the required information and create the JWT [5]:



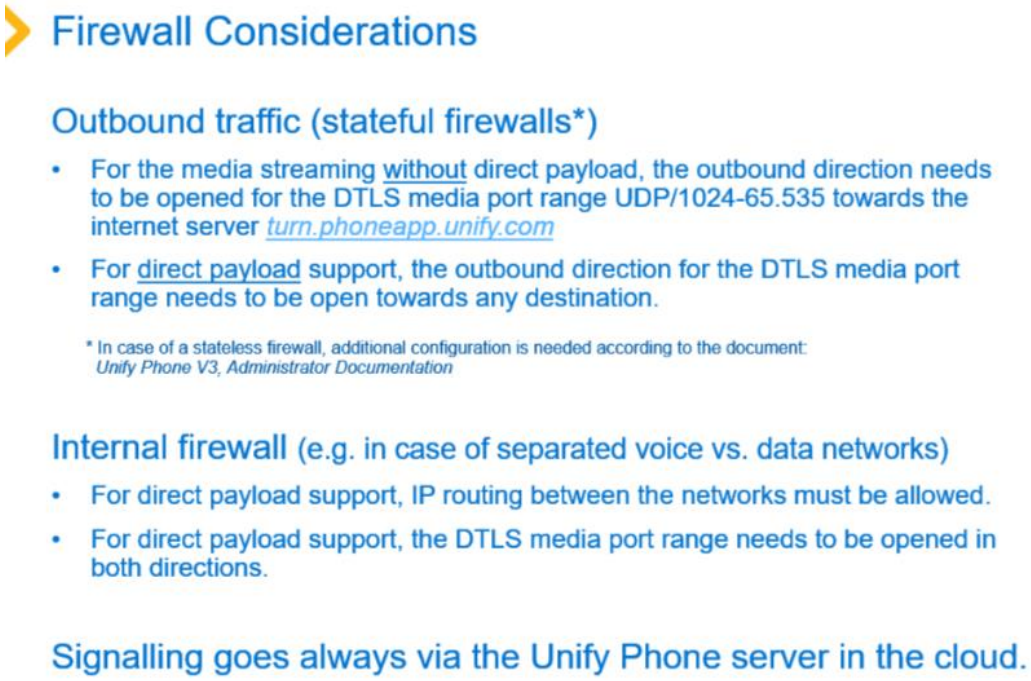
Copy the successfully created JWT to your clipboard.



Return to Unify Phone administration app and paste the JWT into the **JWT token** field and Click **Done** after the JWT validation



6.2 Firewall considerations



7 References

Further related information can be found under the following links:

Reference	Hyperlink
[1] Administration Documentation	Online Help in OpenScape Business Assistant
[2] Diagnostic hints	Administration Documentation
[3] Experts Wiki	http://wiki.unify.com/wiki/OpenScape_Business
[4] OpenScape Business Security Checklist	https://nuxeo.unify.com/nuxeo/site/proxy/nxdoc/view/raw/b2efab60-4ba8-491c-988d-870077267c4a
[5] Unify Phone Administration	https://nuxeo.unify.com/nuxeo/site/proxy/nxdoc/view/raw/8716b9e0-5db8-44be-a50f-64317b6fe923
[6] Configuration of LAN/WAN interface for VoIP	https://wiki.unify.com/images/8/8c/How_To_Configure_LAN_WAN_Interface_for_VoIP.pdf

Some of the above-mentioned links are only accessible with the right permission to Unify Partner Portal.

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