

# OpenScape Business V2

## How to Configure SIP Trunk for COSMOTE

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## Table of History

Date	Version	Changes
26-09-2016	1.0	First version
02-10-2016	1.1	Final version

## Configuration Data

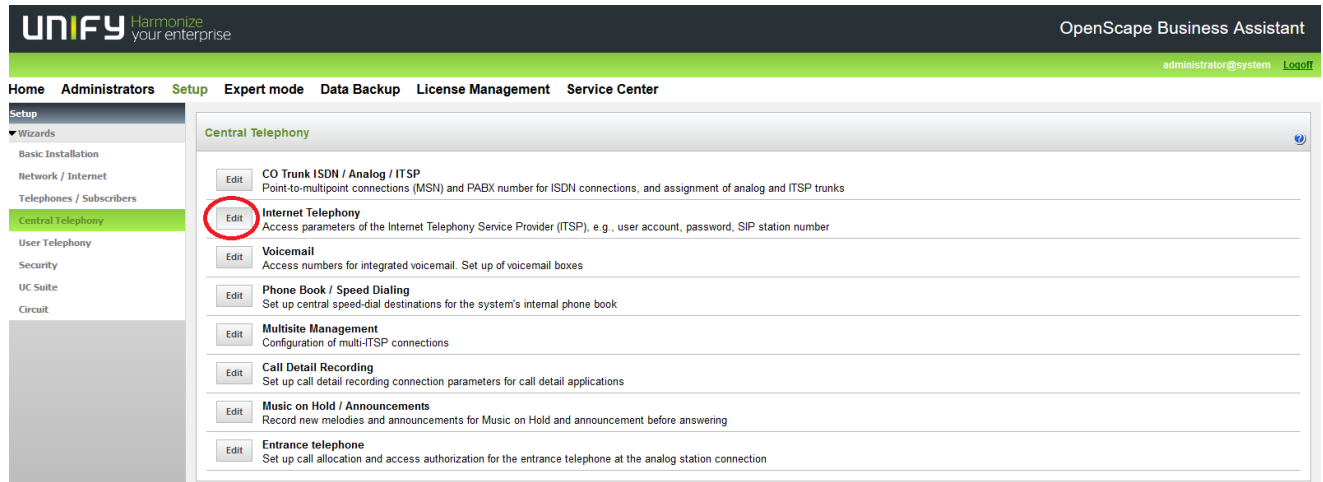
Information from ITSP COMOTE GR provided:

Name	Example
Call Number:	2142163500 - 09
Number of DID digits:	3
SIP Domain:	ims.otenet.gr
SBC_IP:	n/a
digest Auth.:	Yes
SIP Username:	+302142163500@ims.otenet.gr
SIP Password:	*****
Clip no Screening:	yes
Number of voice-channels:	4

# Configuration Wizard

## Internet Telephony

Go to „Central Telephony – Internet Telephony“



The overview page appears for entering the location data. The most flexible type of configuration is to enter the Country code only.

Setup - Wizards - Central Telephony - Internet Telephony

Overview

Note: changes done in expert mode must be reviewed/repeated after running through the wizard.  
Note: At least the configuration of the 'Country code' is needed for features such as 'Internet telephony' and 'MeetMe conference'.

PABX number

Country code:  (mandatory)  
Local area code:  (optional)  
PABX number:  (optional)

Click [OK & Next].

Provider configuration and activation for Internet Telephony -> No call via Internet -> uncheck  
Use Country specific view: Greece and select COSMOTE.

Setup - Wizards - Central Telephony - Internet Telephony

Provider configuration and activation for Internet Telephony

No call via Internet: ☐  
Country specific view:

Note: changes done in expert mode must be reviewed/repeated after running through the wizard.

	Activate Provider	Internet Telephony Service Provider
<input type="button" value="Add"/>		Other Provider
<input type="button" value="Edit"/>	<input type="checkbox"/>	COLT UK & Europe
<input type="button" value="Edit"/>	<input type="checkbox"/>	COLT VPN
<input type="button" value="Edit"/>	<input checked="" type="checkbox"/>	cosmote
<input type="button" value="Edit"/>	<input type="checkbox"/>	Skype Connect
<input type="button" value="Edit"/>	<input type="checkbox"/>	Verizon
<input type="button" value="Edit"/>	<input type="checkbox"/>	Vodafone Anlagenanschluss R3

Activate Provider and click on [Edit].

On the next page the predefined servers for COSMOTE are displayed, no changes are needed here.

Setup - Wizards - Central Telephony - Internet Telephony

### Internet Telephony Service Provider

Provider Name:	cosmote
Enable Provider:	<input checked="" type="checkbox"/>
Domain Name:	ims.otenet.gr
Transport protocol:	udp
Transport security:	traditional (udp or tcp)

Provider Registrar

Use Registrar:	<input checked="" type="checkbox"/>
IP Address / Host name:	ims.otenet.gr
Port:	0
Reregistration Interval at Provider (sec)	600

Provider Proxy

IP Address / Host name:	ims.otenet.gr
Port:	0

Provider Outbound Proxy

Use Outbound Proxy:	<input type="checkbox"/>
IP Address / Host name:	0.0.0.0
Port:	0

Provider Inbound Proxy

Use Inbound Proxy:	<input type="checkbox"/>
IP Address / Host name:	0.0.0.0

Click [OK & Next].

In this dialog the specific customer SIP Userdata will be configured.

Setup - Wizards - Central Telephony - Internet Telephony

### Internet Telephony Stations for COSMOTE

	Name of Internet Telephony Station
Add	New Internet Telephony Station

Click on [Add].

Data provided by ITSP COSMOTE is inserted here.

Internet telephony station: SIP Username without domain name is inserted here (e.g: +302142163500)

Authorization name: SIP Username is inserted here (e.g: +302142163500@ims.otenet.gr)

Password: Password provided by COSMOTE

Default number: Main number of connection. The default number is used as outgoing number when no DDI number is assigned to a station. (e.g: +302142163500)

Setup - Wizards - Basic Installation - Basic Installation

Internet Telephony Station for COSMOTE

Internet telephony station: +302144163500

Authorization name: +302144163500@ims.otenet.gr

Password: \*\*\*\*

Confirm Password: \*\*\*\*

Default Number: +302144163500

MEX Number:

**Default Number**  
ITSP as primary CO access  
Enter one of the call numbers supplied by your network provider here. This will be used in outgoing calls as the calling party number in case no other number is available for the respective call. All call numbers supplied by your network provider are to be entered within the trunk and telephones configuration (DID field) primary CO access.

**MEX Number**  
To use the feature Mobile Extension (MEX) you have to enter a MEX number here. An entered MEX number will only be stored if the ITSP is marked as 'active'. For use of MEX it is also necessary to configure a DISA number.

Enter the relevant data and click [OK & Next].

Setup - Wizards - Basic Installation - Basic Installation

Call Number Assignment for COSMOTE

Name of Internet Telephony Station	Internet Telephony Phone Number	Direct inward dialing	Use as PABX number for outgoing calls
------------------------------------	---------------------------------	-----------------------	---------------------------------------

In order to complete the configuration please verify that the relevant user DIDs are set in stations.(Telephones / Subscribers configuration)

Help Abort Back OK & Next

Click [OK & Next] (no input needed)

Setup - Wizards - Central Telephony - Internet Telephony

Provider configuration and activation for Internet Telephony

No call via Internet: ☐

Country specific view:

Note: changes done in expert mode must be reviewed/repeated after running through the wizard.

	Activate Provider	Internet Telephony Service Provider
Add		Other Provider
Edit	<input type="checkbox"/>	COLT UK & Europe
Edit	<input type="checkbox"/>	COLT VPN
Edit	<input checked="" type="checkbox"/>	cosmote
Edit	<input type="checkbox"/>	Skype Connect
Edit	<input type="checkbox"/>	Verizon
Edit	<input type="checkbox"/>	Vodafone Anlagenanschluss R3

Help Abort Back OK & Next **Display Status**

On the next page you can check the status of the ITSP. Click [Display status]

Setup - Wizards - Central Telephony - Internet Telephony

Status for the Internet Telephony Service Provider (ITSP)

	Provider		User
	COLT UK & Europe	Disabled	
	COLT VPN	Disabled	
	cosmote	Enabled	+302144163500 registered

Restart

Click [Next] (no input needed)

You return to the previous screen. Click [OK & Next] (no input needed)

## Define bandwidth (# Trunks)

In the next part the number of simultaneous calls via the SIP trunk will be defined. The calculation of the number of trunks is done by the wizard automatically depending on the bandwidth. For each 128K, one trunk is created.

Setup - Wizards - Central Telephony - Internet Telephony

Settings for Internet Telephony

**Simultaneous Internet Calls**

Available Lines for ITSP: 204

Under 'Setup - Wizards - Network / Internet - Internet Access', you have entered the value **Upstream up to (Kbps) = 16384** in the 'Change Feature -> Internet Telephony' Assistant. This upstream allows you to conduct up to 60 Internet phone calls simultaneously. If the call quality deteriorates due to the network load, you will need to reduce this number of simultaneous calls. The number of simultaneous Internet Calls also depends on the licensing.

Number of Simultaneous Internet Calls:  **Distribute Lines**

**Line assignment**

Internet Telephony Service Provider	Configured Lines	Assigned Lines
cosmote	4	<input type="text" value="4"/>

Click [OK & Next]

## Special phone numbers

In this dialog it is possible to route special phone numbers. When special phone numbers are not supported over the ITSP route it is possible to change this here.

Setup - Wizards - Central Telephony - Internet Telephony

Special phone numbers

Note:  
Please make sure that all special call numbers are supported by the selected provider without fail.

Special phone number	Dialed digits	Dial over Provider
1	0C112	cosmote
2	0C100	cosmote
3	0C166	cosmote
4	0C199	cosmote
5		cosmote
6		cosmote
7		cosmote

Click [OK & Next]

On next page status of ITSP is displayed.

Setup - Wizards - Central Telephony - Internet Telephony

Status for the Internet Telephony Service Provider (ITSP)

	Provider		User	
	COLT UK & Europe	Disabled		
	COLT VPN	Disabled		
<input type="checkbox"/>	cosmote	Enabled	+302144163500	registered
<input type="button" value="Restart"/>	Skype Connect	Disabled		
	Verizon	Disabled		
	Vodafone Anlagenanschluss R3	Disabled		
	Circuit UTC (Cloud)	Disabled		

Help Abort Back Next

After this status page two more dialogs with „Exchange Line Seizure“ and an overview with all configured „Outside line Seizure“ are displayed.



Setup - Wizards - Central Telephony - Internet Telephony

Exchange Line Seizure

Exchange Line Seizure

Trunk Access Code 0

Dial over Provider

Help Abort Back OK & Next

Setup - Wizards - Central Telephony - Internet Telephony

Seizure Code for the 'Outside line Seizure'

Seizure code for 'Outside line Seizure'	
cosmote	855

Help Abort Back OK & Next

## DID configuration

In general the DID has to be configured in long format

The country code 30 has to be configured as described before. The DID must always be the number without the country code (e.g: 210xxxxxxx).

### Attention:

*You MUST NOT use other number configurations in the DID because that will cause problems in different call scenarios and UC functionality. (e.g: for the DID-number 2142163501 do NOT configure 2142163 as Local Area Code and PABX number and then 3 digits 501 as DID)*

<input type="checkbox"/> Take DID from changed call number											
Box	Slot	Callno	First Name	Last Name	Name	DID	Type	Fax Callno	Fax DID	Class of service	Call pickup
	-	100				2144163500	System Client			International	
	-	101				2144163501	System Client			International	
	-	102					No Port			International	
	-	103					No Port			International	
	-	104					No Port			International	
	-	105					No Port			International	
	-	106					No Port			International	
	-	107					No Port			International	
	-	108					No Port			International	
	-	109					No Port			International	

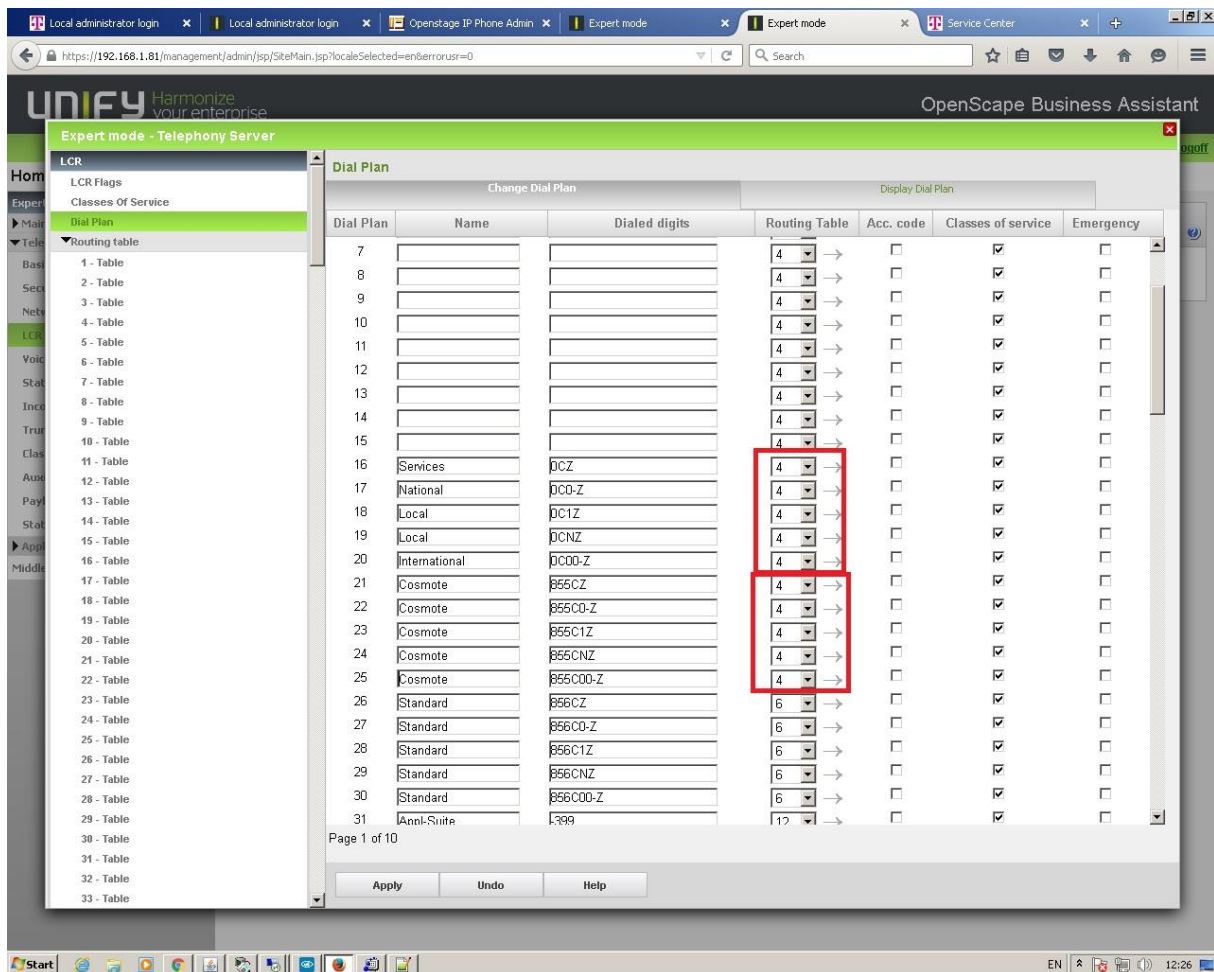
## Additional manual Configuration

### LCR changes ( mandatory)

In expert mode , Telephony Server, LCR , - change the “Routing Table” in the way that **all Dial plans related to SIP (COSMOTE) route should follow the Routing Table 4.**

If not changed manually, the Routing table 4 uses the Dial Rule ‘SIP’ which by default has the Dial Rule format= ‘A’, Network Access=‘Main Network Supplier’ and Type=‘Unknown’ .

In case of a system with sw >=V2R2 the LCR should look like



In case of sw <V2R2 the LCR should look like

16	Standard	PCZ	4
17	Standard	PC1Z	4
18	Standard	PCNZ	4
19	Cosmote	855CZ	4
20	Cosmote	855C1Z	4
21	Cosmote	855CNZ	4
22	Standard	856CZ	6

Expert mode - Telephony Server

LCR  
 LCR Flags  
 Classes Of Service  
 Dial Plan  
 Routing Table

1 - Table  
 2 - Table  
 3 - Table  
 4 - Table  
 5 - Table  
 6 - Table  
 7 - Table  
 8 - Table  
 9 - Table  
 10 - Table  
 11 - Table  
 12 - Table  
 13 - Table  
 14 - Table  
 15 - Table  
 16 - Table  
 17 - Table  
 18 - Table  
 19 - Table  
 20 - Table  
 21 - Table  
 22 - Table  
 23 - Table  
 24 - Table  
 25 - Table  
 26 - Table  
 27 - Table  
 28 - Table

Routing Table

Change Routing Table

Routing Table: 4 en-bloc sending

Index	Dedicated Route	Route	Dial Rule	min. COS	Warning	Dedicated Gateway	GW Node ID
1	<input type="checkbox"/>	cosmote	SIP	15	None	No	
2	<input type="checkbox"/>	None	None	15	None	No	
3	<input type="checkbox"/>	None	None	15	None	No	
4	<input type="checkbox"/>	None	None	15	None	No	
5	<input type="checkbox"/>	None	None	15	None	No	
6	<input type="checkbox"/>	None	None	15	None	No	
7	<input type="checkbox"/>	None	None	15	None	No	
8	<input type="checkbox"/>	None	None	15	None	No	
9	<input type="checkbox"/>	None	None	15	None	No	
10	<input type="checkbox"/>	None	None	15	None	No	
11	<input type="checkbox"/>	None	None	15	None	No	
12	<input type="checkbox"/>	None	None	15	None	No	
13	<input type="checkbox"/>	None	None	15	None	No	
14	<input type="checkbox"/>	None	None	15	None	No	
15	<input type="checkbox"/>	None	None	15	None	No	
16	<input type="checkbox"/>	None	None	15	None	No	

Apply Undo Help

## Route configuration

You only need to setup the country code (30) for the route occupied for COSMOTE, if not exists already.

As recommended above, Local area code and PABX number must be empty.

The route parameters:

- Call No. With International/national prefix : unchecked
- No and type outgoing: Country code
- Call number type: DID

are automatically configured when the profile of COSMOTE is enabled by relevant wizard.

Consequently, you don't need to change/edit anything else here.

Expert mode - Telephony Server

Trunks/Routing

Trunks  
 Route

ISDN  
 Trk Grp. 2  
 Trk Grp. 3  
 Trk Grp. 4  
 Trk Grp. 5  
 Trk Grp. 6  
 Trk Grp. 7  
 UC Suite  
 Trk Grp. 9  
 Trk Grp. 10  
 Trk Grp. 11  
 cosmote  
 Trk Grp. 13  
 Trk Grp. 14  
 Trk Grp. 15  
 Networking  
 QSIG-Feature  
 MSN assign  
 ISDN Parameters

Route

Change Route

Change Routing Parameters

Special Parameter change

Route Name: cosmote

Seizure code: 855

CO code (2nd trunk code):

Gateway Location

Country code: 30

Local area code:

PABX number:

PABX number-incoming

Country code: 30

Local area code:

PABX number:

Location number: ☐

PABX number-outgoing

Country code:

Local area code:

PABX number:

Suppress station number: ☐

Overflow route

Overflow route: None

Digit transmission

## Cosmote Profile Settings used at certification process

### Expert Mode-Telephony Server-Internet Telephony Server Provider

You don't need to change/edit anything in the profile of COSMOTE since the settings are already preconfigured.

However, the following pictures depict the official pre-defined profile as it is certified.

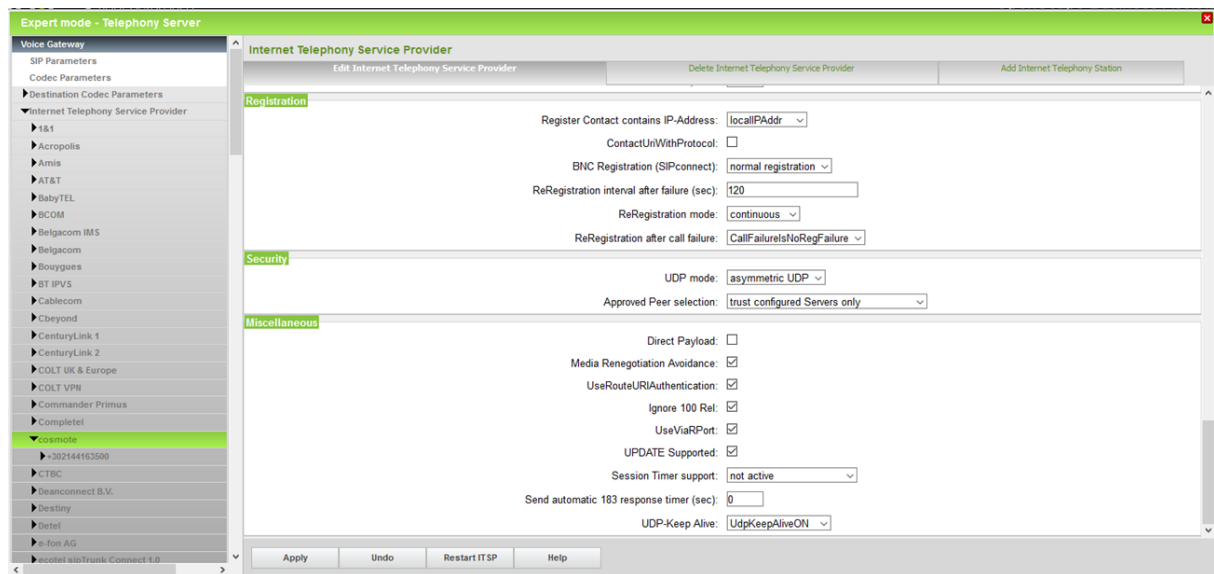
The first screenshot shows the 'Internet Telephony Service Provider' configuration window. The 'Show Extended SIP Provider Data' checkbox is checked. A red box highlights this checkbox. Below it, a red text box states: 'Attention: the following parameters are used to adapt the behavior of the SIP stack to a certain provider implementation. These parameters are defined during the certification process for the provider. Changing these parameters may result in a malfunction of the provider interface.'

The 'CLIP / CLIR' section contains the following settings:

- CLIP outgoing in From header - display part: omit
- CLIP outgoing in From header - user part: call number
- Outgoing From Header - domain/host part: domainName
- Diversion: From contains original CallingPartyNumber: ☒
- Diversion: PAI contains original CallingPartyNumber: ☐
- CLIP outgoing in P-Asserted-Id header - display part: omit
- CLIP outgoing in P-Asserted-Id header - user part: call number
- CLIP outgoing in P-Preferred-Id header - display part: omit
- CLIP outgoing in P-Preferred-Id header - user part: omit
- CLIP outgoing in Diversion header - display part: omit
- CLIP outgoing in Diversion header - user part: call number
- CLIR outgoing in From header - display part: omit
- CLIR outgoing in From header - user part: call number
- CLIR outgoing Privacy header: id
- COLP / TIP supported for outgoing calls: COLP supported

The second screenshot shows the 'Internet Telephony Service Provider' configuration window with the following settings:

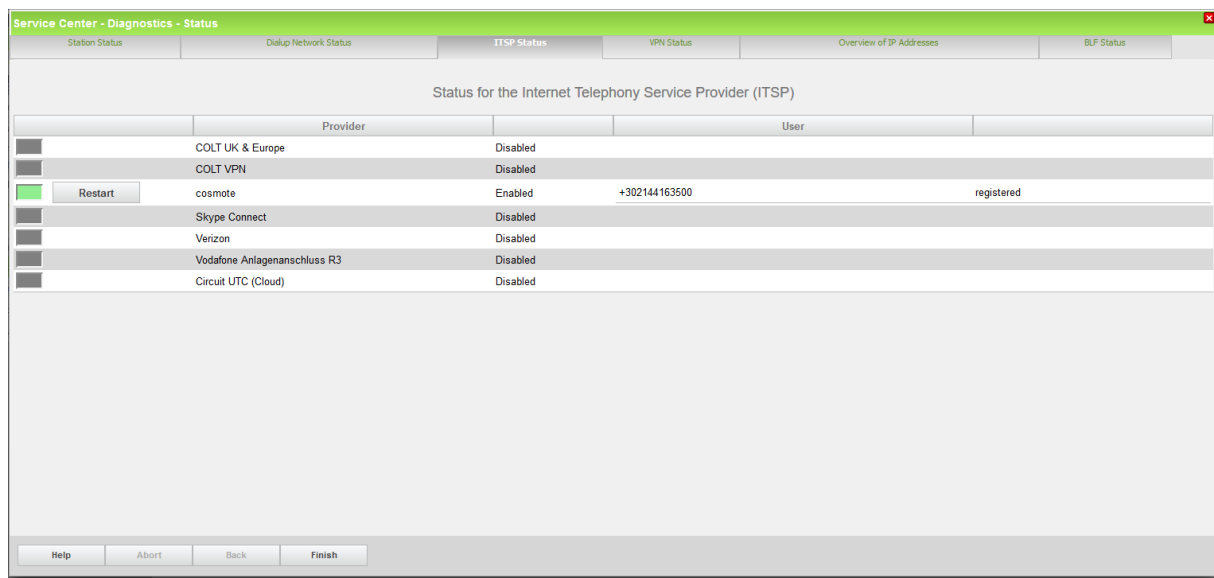
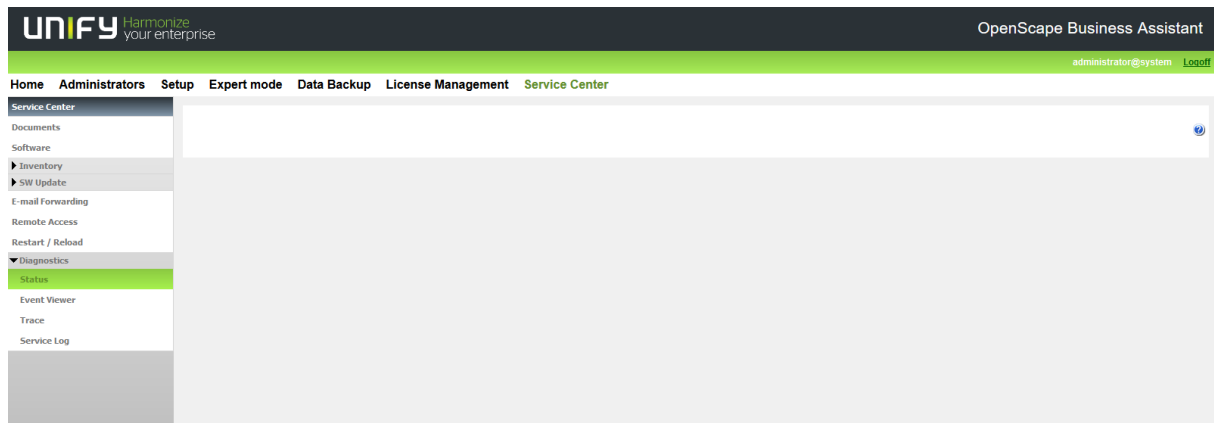
- COLP / TIP supported for outgoing calls: COLP supported
- Call number formatting**
  - Incoming call - Called party number: request line
  - Incoming call - Calling party number: From header user part
  - Incoming call - Type of number (calling): automatic
  - Incoming call - Type of number (called): automatic
  - Outgoing call - Type of number (calling): automatic
  - Mapping of provider number: off
  - CLIP no Screening support: not supported
  - Call No. with international/national prefix: no
- Registration**
  - Register Contact contains IP-Address: localIPAddr
  - ContactUnWithProtocol: ☐
  - BNC Registration (SIPconnect): normal registration
  - ReRegistration interval after failure (sec): 120
  - ReRegistration mode: continuous
  - ReRegistration after call failure: CallFailureIsNoRegFailure
- Security**
  - UDP mode: asymmetric UDP
  - Approved Peer selection: trust configured Servers only



## How to check the status of SIP connection with COSMOTE

### Status OpenScope Business

“Status” provides information about the registration status of the ITSP. The ITSP registration can also be restarted here.



## How to get Traces in case of problem

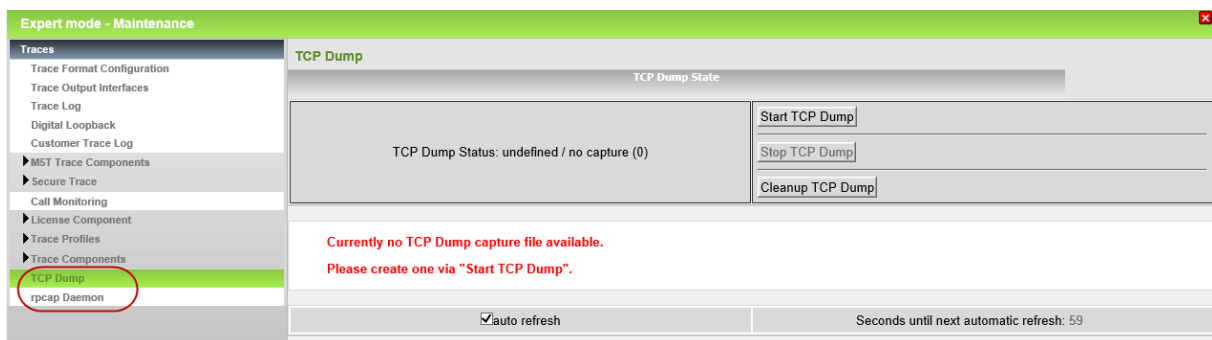
### Wireshark traces

A Wireshark trace helps you to analyse SIP issues very easily. It is possible to start traces on the system which can be analyzed via Wireshark.

Expert mode / maintenance / traces

TCP Dump: Create max. 5 files with PCAP which can be downloaded afterwards and opened in Wireshark.

Rpcap Daemon: Will start the rpcap daemon and open a server port which allows direct remote access from protocol analyzers like Wireshark.



### Internal traces

For a better analysis of problems internal system traces will be needed. Trace profiles are already pre-configured to make it easier to capture internal traces.

When issues with ITSP's occur, the following trace profiles should be activated:

- Basic
- Voice\_Fax\_Connection
- SIP\_Interconnection\_Subscriber\_ITSP

In case there are issues with the registration of an ITSP the following trace profile should also be activated.

- SIP\_Registration

The relevant traces can be downloaded via Service Center –Diagnostics-Trace menu.



