

# OpenScape Business V2

## How to Configure SIP Trunk for Telia Denmark

---

**Table of Contents**

Table of History ..... 3

Configuration Data ..... 4

Mail you will receive from ITSP ..... 5

Mandatory Expert mode Configuration ..... 6

    DTMF Payload type ..... 6

    ITSP settings ..... 6

Configuration Wizard ..... 7

    Internet Telephony..... 7

    Simultaneous internet calls and upstream. .... 9

    Special phone numbers ..... 9

    Status for the Internet Telephony Service provider (ITSP)..... 9

    Exchange Line Seizure ..... 10

    DID configuration ..... 11

Additional manual Configuration ..... 12

    LCR..... 12

## Table of History

Date	Version	Changes	Changed by
20-11-2016	1.0	Version 1	
01-12-2016	1.1	Created document	tmj@jansson.dk
01-12-2016	1.2	Pictures	tmj@jansson.dk
12-12-2016	1.3	Document update	tmj@jansson.dk
13-12-2016	1.4	Document update	tmj@jansson.dk
18-01-2017	1.5	DTMF payload added. Telia document removed	tmj@jansson.dk
09-02-2017	1.6	Information on COLP and 112	tmj@jansson.dk
14-03-2017	1.7	Information on CLIP no screening	tmj@jansson.dk
04-04-2017	1.8	Mail from ITSP	tmj@jansson.dk
25-04-2017	1.9	Screenshot corrections	UNIFY
25-04-2017	2.0	Final layout for release	UNIFY

## Configuration Data

Information from ITSP Telia Denmark provided:

Name of Customer Related Data	Example	Used in Field of OSBiz-WBM	Needs to be configured
Call Number:	88804090-99		
Number of DIDs	10		
SIP Domain	VPN IP provided by ITSP	SIP Domain Name:	x
Registrar	VPN IP provided by ITSP	SIP Provider Registrar	
		SIP Provider Proxy	x
Account:	88804090	Internet Telephony Station	x
SIP Username:	88804090	Authorization Name:	
SIP Password:		Password & (Confirm Password)	
Number of voice-channels:	8	Assigned Lines	x

Important information:

COLP is NOT supported by ITSP (This can be changed by the ITSP in the future)

ITSP need to have +45 I front of 112 and other service numbers (This can be changed by the ITSP in the future)

CLIP no screening is deactivated by default, so Telia may invoices on DID numbers level, this has the consequence that a-number does not appear when making an external enquiry or transfer of calls, and you cannot show number unknown to the ITSP.

If CLIP no screening is needed, you need to disable Diversion: PAI contains original Calling Party Number and activate CLIP no screening, billing of calls will then be at the ITSP account number.

## Mail you will receive from ITSP

*Hi,*

*Your SIP Trunk is now ready for test:*

*IP address to be used for SIP signalling and RTP: ...*

*(Please note that this IP address will not answer ping and that it is only to be used for SIP phone traffic with Telia)*

*IP address to be used for ping test: ...*

*(Please note that this IP address is only used for ping test)*

*We kindly ask you to ping test the SIP Trunk and to let us know whether the test was successful.*

*After that, you may test outgoing and incoming calls with your test number range 88XXXXXX – 88XXXXXX, which we have reserved for this SIP Trunk.*

*Attached you find a document containing the technical specifications for Telias SIP Trunk. The last page of that document is a form to be used for testing the various call scenarios which we recommend to test.*

*Please let us know in advance when you are going to do your test calls, so our technical department can be ready to make traces of your calls.*

*After that, we will let you know whether your calls are setup in accordance with the specifications of the SIP Trunk, and whether it can be taken into use with your “real” number ranges.*

*Billing for this SIP Trunk will start 5 days from now.*

## Mandatory Expert mode Configuration

### DTMF Payload type

Go to Expert Mode → Telephony Server → Voice Gateway → Codec Parameters  
RFC2833 → Payload Type for RFC2833: **MUST** be set to 101.

The screenshot shows the 'RFC2833' configuration window. It contains the following settings:

- Transmission of Fax/Modem Tones according to RFC2833:
- Transmission of DTMF Tones according to RFC2833:
- Payload Type for RFC2833:
- Redundant Transmission of RFC2833 Tones according to RFC2198:

### ITSP settings

Go to Expert Mode → Telephony Server → Voice Gateway → Internet Telephony Server Provider  
And select the provider Telia Denmark

Then fill in Domain Name and Provider proxy, this is provided by ITSP in a mail.  
{IP address to be used for SIP signalling and RTP}

The screenshot shows the 'Internet Telephony Service Provider' configuration window for 'Telia Denmark'. The settings are as follows:

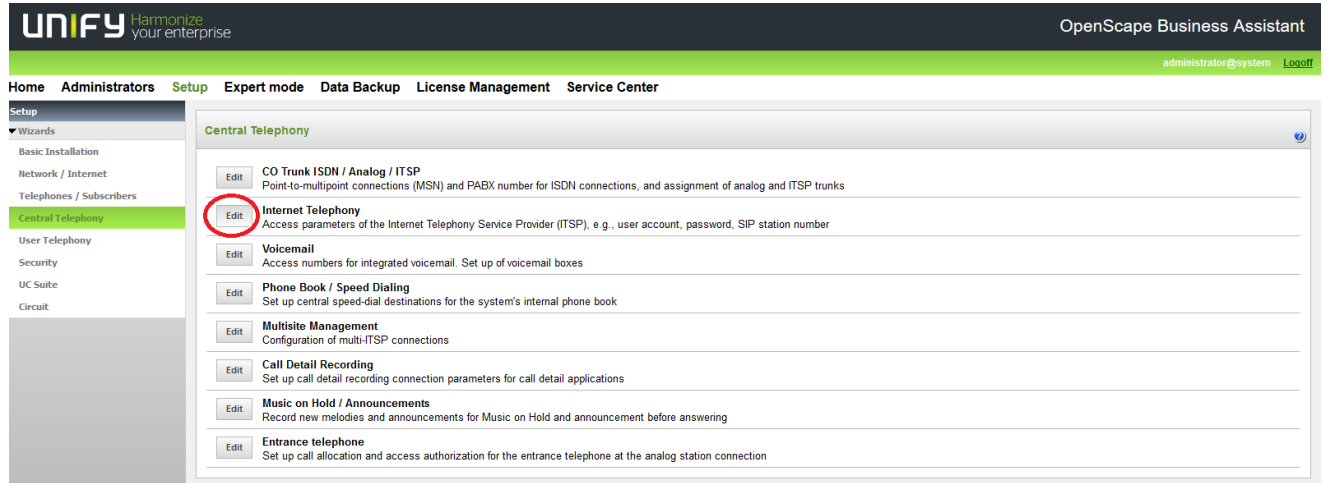
- Provider Name:
- Enable Provider:
- Provider Identifier in System:
- Domain Name:
- Transport protocol:
- Transport security:
- Media security:
- Use Registrar:
- IP Address / Host name:
- Port:
- Reregistration Interval at Provider (sec):
- Use Outbound Proxy:
- IP Address / Host name:
- Port:
- Use Inbound Proxy:
- IP Address / Host name:
- Port:
- Use STUN:
- IP Address / Host name:
- Port:

Buttons at the bottom: Apply, Undo, Restart ITSP, Help.

# Configuration Wizard

## Internet Telephony

Go to Setup - Central Telephony - Internet Telephony – Click Edit



### Enter Country code

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** og **Next**

Uncheck **No call via Internet**

Use **County specific view**, choose **Denmark** and **Activate Provider - Telia Denmark**.

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"/>	1_ipnordic A/S
Edit	<input checked="" type="checkbox"/>	Telia Denmark
Edit	<input type="checkbox"/>	COLT UK & Europe
Edit	<input type="checkbox"/>	COLT VPN
Edit	<input type="checkbox"/>	Global Connect
Edit	<input type="checkbox"/>	Skype Connect
Edit	<input type="checkbox"/>	Uni-tel A/S
Edit	<input type="checkbox"/>	Verizon
Edit	<input type="checkbox"/>	Vodafone Anlagenanschluss R3

Press the **Edit** button to configure your account.

Setup - Wizards - Central Telephony - Internet Telephony

### Internet Telephony Service Provider

Provider Name: Telia Denmark  
 Enable Provider:   
 Secure Trunk:

Press **OK & Next**

Enter the data provided by Telia Denmark.

For Internet Telephony Station use the first number from the range of pool Telia Denmark has provided you. Default Number must be set in E.164 format only (e.g.+4588804090)

*Authorization name, Password and Confirm Password are left empty*

Setup - Wizards - Central Telephony - Internet Telephony

### Internet Telephony Station for Telia Denmark

Internet telephony station: 88804080  
 Authorization name:   
 Password:   
 Confirm Password:

**Call number assignment**

Use public number (DID)   
 Use internal number (Callno) / Single entries   
 Use internal number (Callno) / Range entry

If using 'configurable clip' you have to change the configuration to 'Use public number (DID)' here!  
 Changing trunk parameters in case of internal subscriber no. is not allowed!

Default Number: +4588804090  
 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.

Help Abort Back **OK & Next** Delete Data

Click **OK & Next** four times



## Simultaneous internet calls and upstream.

Enter the Upstream up to (Kbps) and Number of Simultaneous Calls, remember to assign lines.

Setup - Wizards - Central Telephony - Internet Telephony

Settings for Internet Telephony

**Simultaneous Internet Calls**

Available Lines for ITSP: 195

Please enter in field 'Upstream up to (Kbit/sec)' the Upstream of your Internet connection communicated by your Provider. You have typed in **Upstream up to (Kbps) = 1024**

In the 'Change Feature -> Internet Telephony' Assistant. This upstream allows you to conduct up to 8 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.

Upstream up to (Kbps):

Number of Simultaneous Internet Calls:

**Line assignment**

Internet Telephony Service Provider	Configured Lines	Assigned Lines
Telia Denmark	4	4

Click **OK & Next**

## Special phone numbers

Enter special phone numbers here if necessary.

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	<input type="text" value="0C112"/>	<input type="text" value="Uni-tel A/S v"/>
2	<input type="text"/>	<input type="text" value="Uni-tel A/S v"/>
3	<input type="text"/>	<input type="text" value="Uni-tel A/S v"/>

Click **OK & Next**

## Status for the Internet Telephony Service provider (ITSP)

Check the status of the provider

Setup - Wizards - Central Telephony - Internet Telephony

Status for the Internet Telephony Service Provider (ITSP)

	Provider		User
<input type="checkbox"/>	COLT UK & Europe	Disabled	
<input type="checkbox"/>	COLT VPN	Disabled	
<input type="checkbox"/>	Global Connect	Disabled	
<input type="checkbox"/>	Skype Connect	Disabled	
<input type="checkbox"/>	TDC DK	Disabled	
<input checked="" type="checkbox"/>	Telia Denmark	Enabled	88804090 registered
<input type="checkbox"/>	Verizon	Disabled	
<input type="checkbox"/>	Vodafone Anlagenanschluss R3	Disabled	
<input type="checkbox"/>	Circuit UTC (Cloud)	Disabled	

Click **Next**

## Exchange Line Seizure

Check if it's correct

Setup - Wizards - Central Telephony - Internet Telephony

Exchange Line Seizure

Exchange Line Seizure

Trunk Access Code 0

Dial over Provider

Click **OK & Next**

Setup - Wizards - Central Telephony - Internet Telephony

Seizure Code for the 'Outside line Seizure'

	Seizure code for 'Outside line Seizure'
Telia Denmark	0

Click **OK & Next**

Setup - Wizards - Central Telephony - Internet Telephony

The changes for the feature 'Internet Telephony' are completed

The Internet Telephony is switched on and configured.

For your own security, you should save the configuration data. To do this, upon completion of the wizard, choose 'Backup' in the main menu, and follow this by choosing 'Backup Immediately'.

Click **Finish**

# DID configuration

**IMPORTANT:** DID needs to be 8 digits.

Setup - Wizards - Telephones / Subscribers - IP Telephones

Select a station -LAN Phones/WLAN Phones

Take DID from changed call number

Box	Slot	Callno	First Name	Last Name	Display	DID	Type	Fax Callno	Fax DID	Class of service	Call pickup
1	0	198				88804091	System Client	298	88804098	International	Call pickup group 1
1	0	199				88804092	System Client	-	-	International	Call pickup group 1
1	0	200				88804093	SIP Client	-	-	International	Call pickup group 1

# Additional manual Configuration

## LCR

Change Routing Table								
Routing Table: 2 en-bloc sending								
Index	Dedicated Route	Route	Dial Rule	min. COS	Warning	Dedicated Gateway	GW Node ID	
1	<input type="checkbox"/>	1_Telia DK	Add_cc_to_Cano →	15	Display	No		
2	<input type="checkbox"/>	None	None	15	None	No		
3	<input type="checkbox"/>	None	None	15	None	No		

Change Routing Table								
Routing Table: 3 en-bloc sending								
Index	Dedicated Route	Route	Dial Rule	min. COS	Warning	Dedicated Gateway	GW Node ID	
1	<input type="checkbox"/>	1_Telia DK	Internat_to_Can →	15	Display	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		

16	Services	0CZ	2 →	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
17	National	0C0-Z	2 →	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
18	Local	0C1Z	2 →	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
19	Local	0CNZ	2 →	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
20	International	0C00-Z	3 →	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Change Dial Rule				
	Rule Name	Dial rule format	Network access	Type
1	CO	A	Main network supplie	Unknown
2	SIP	A	Main network supplie	Country code
3	SIP local	HE2A	Main network supplie	Unknown
4	MEB	E1A	Corporate Network	PABX number
5	IP-Network	A	Corporate Network	Unknown
6	Multi-Location	BA	Corporate Network	Unknown
7	Gateway call	E1A	Corporate Network	Unknown
8	COInternat	E4A	Main network supplie	Unknown
9	Add_cc_to_Canoni	D45E2A	Main network supplie	Country code
10	National_to_Cano	D45E3A	Main network supplie	Country code
11	Internat_to_Can	E3A	Main network supplie	Country code
12	SIP local_Canoni	HE2A	Main network supplie	Country code
13			Unknown	Unknown