OpenScape Business V2

How to Configure SIP Trunk for ITSP Orange Business Services

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Table of History

Date	Version	Changes
20.02.2018	0.1	First version
22.02.2018	0.2	Internal editorial changes
03.03.2018	1.0	Update with final comments from ORANGE

Information

The “Orange Business Services SIP Trunking” profile delivered with the OpenScape Business system is used for 2 SIP trunking offers:

- Business Talk IP (BTIP), for French market
- Business Talk (BT) for international market

The present document describes the configuration of Business Talk IP (BTIP) with OpenScape Business for the French market. The configuration steps are similar if Business Talk (BT) for international market is used but the configuration for country specific settings may be different if Business Talk (BT) is used in other countries.

The minimal OSBiz software version is osbiz_v2_R4.1.0

Certification valid for all OpenScape Business systems X3/X5/X8/S.

Trunk Configuration Data provided by Orange Business Services

The configuration data (IP addresses etc.) needed to setup the SIP trunk can be found on the Orange Business Services document you will receive by Orange.

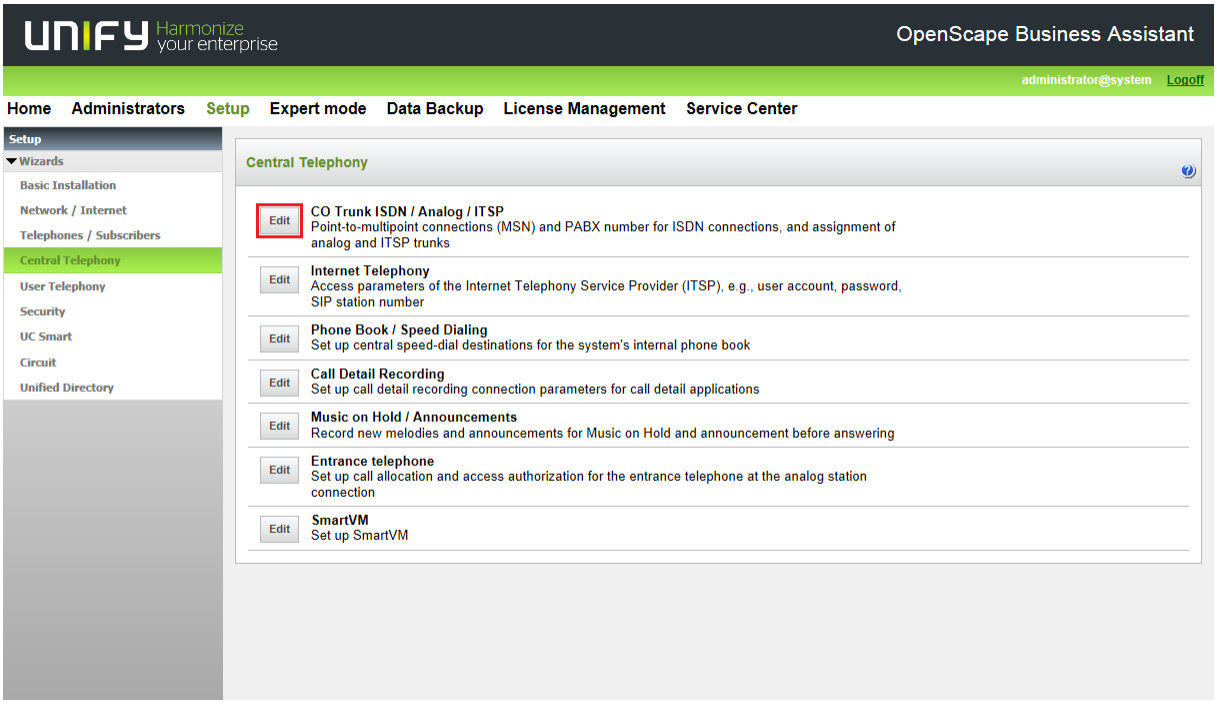
As an example:

Items	Example
Orange Nominal SBC IP	10.25.200.73 UDP 5060
Orange Backup SBC IP	10.25.200.83 UDP 5060
Codecs	G711a, G711u, G729a, 20ms
Fax	T.38
DTMF Transmission	RFC 2833
Recommended Number format	E.164 (ex: + 33 2 96 08 21 83)

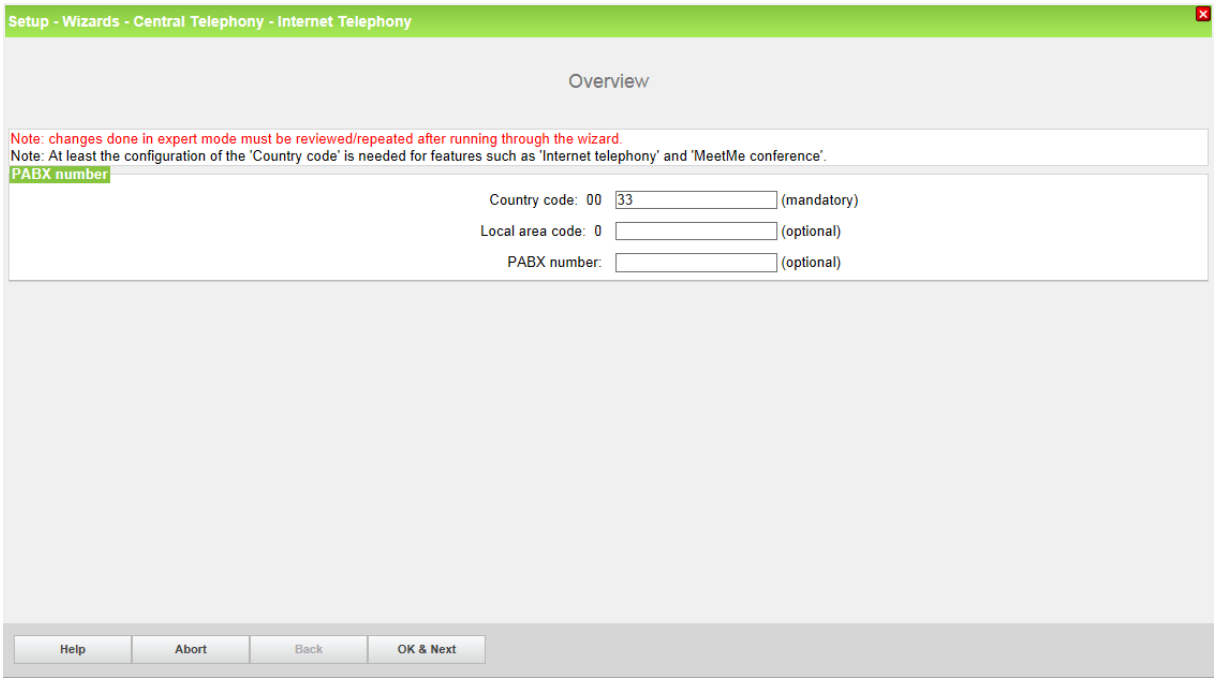
Configuration Wizard

Internet Telephony

Go to Central Telephony – “Internet Telephony“

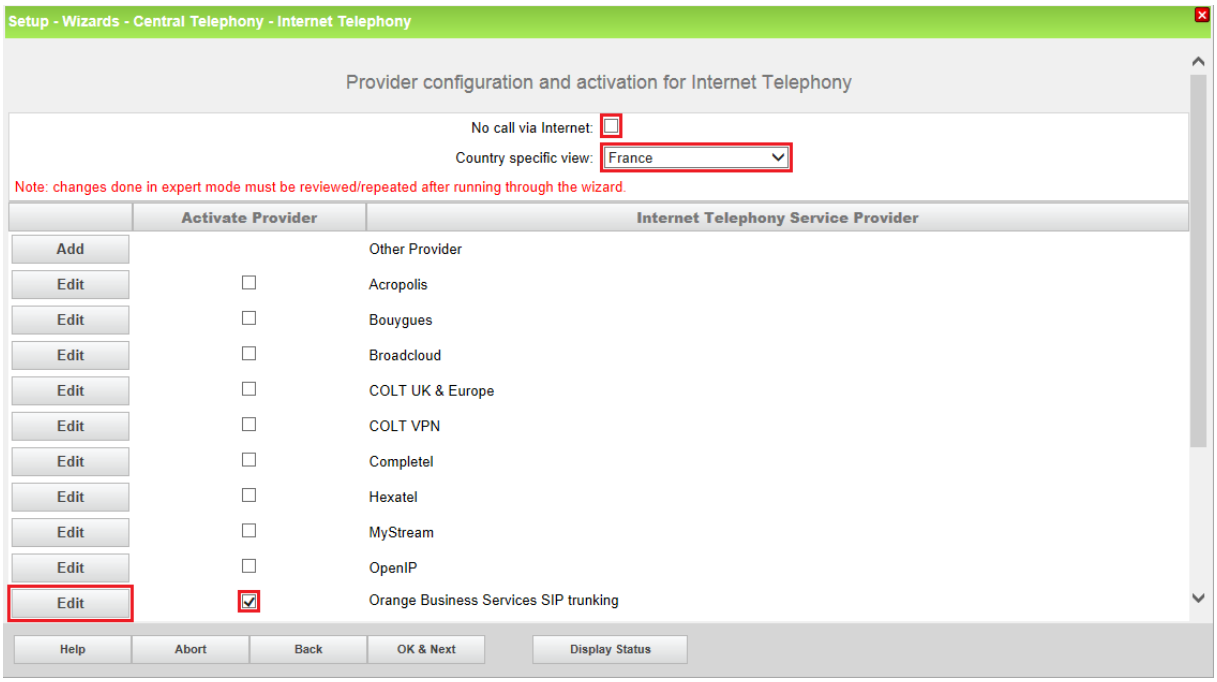


The overview page appears for entering the location data. The most flexible type of configuration is to enter the Country code only (suggestion for French market). If at a later stage extra DID numbers are added, which have a different local area, then the impact is minimal, since the local area code is part of the DID number of the user.



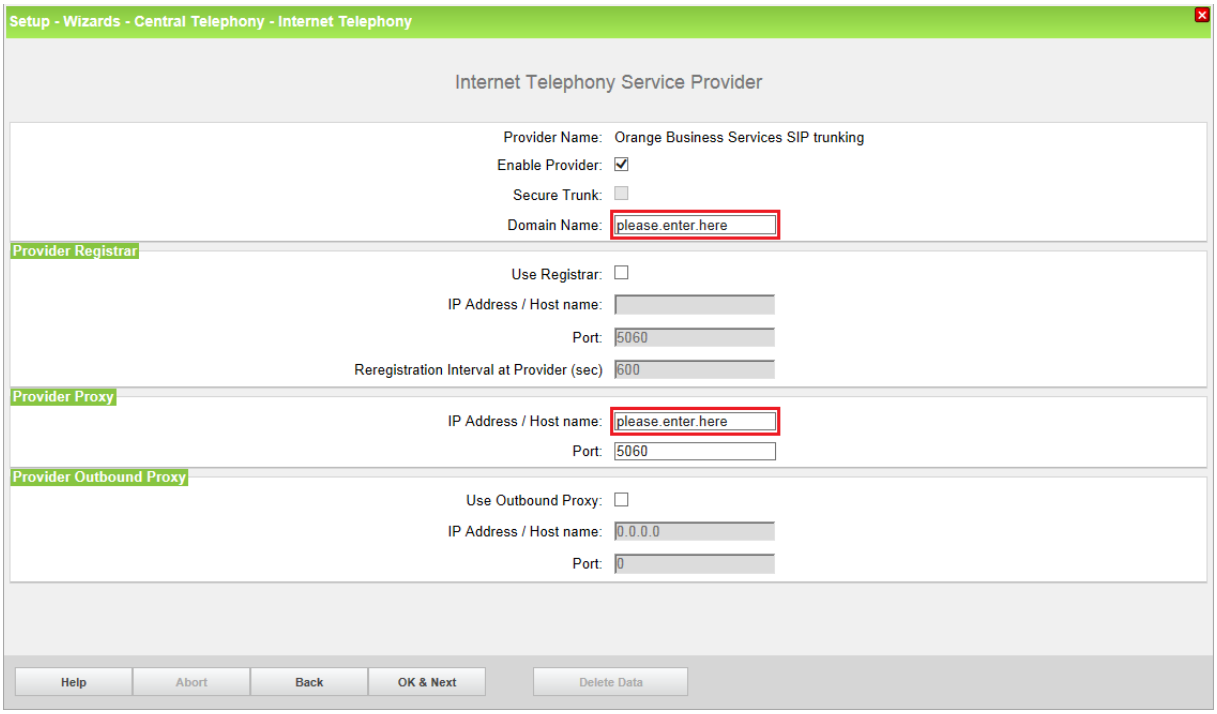
Click [OK & Next].

Provider configuration and activation for Internet Telephony -> No call via Internet -> uncheck
Use County specific view: France and select “Orange Business Services SIP trunking”.



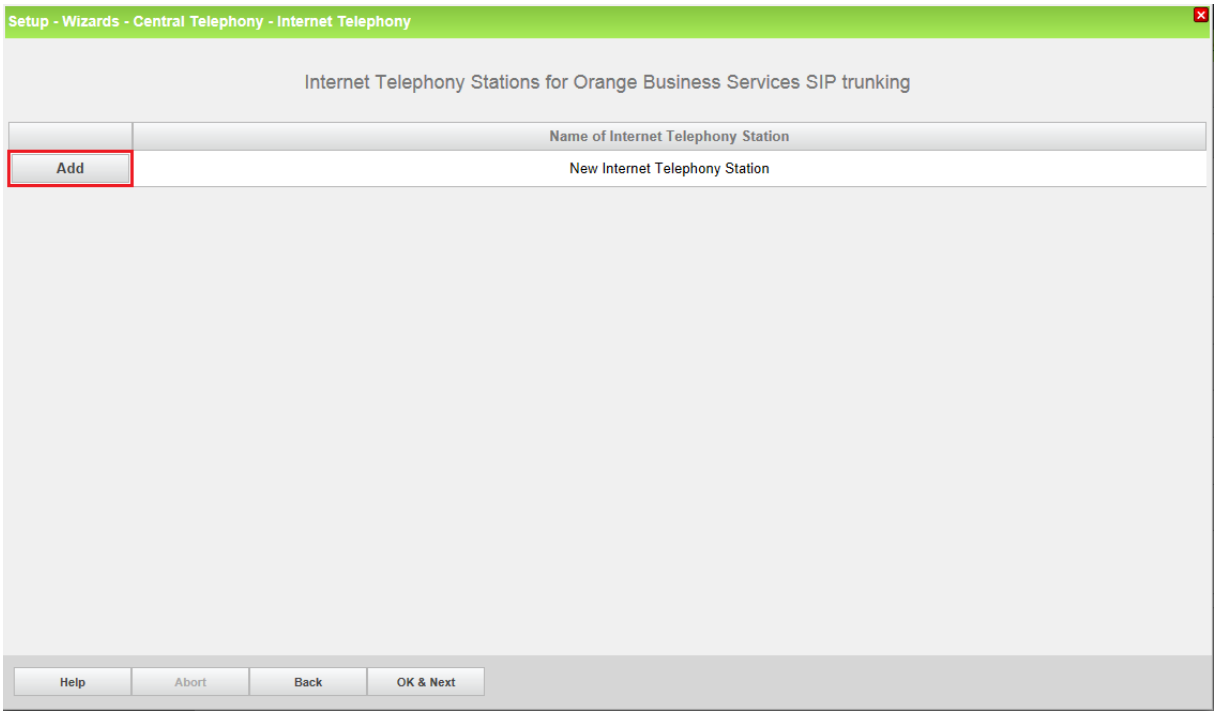
Activate Provider and click on [Edit].

On the next page, the IP address of the **Orange Nominal SBC** must be entered in the **Domain Name** field and in the **Provider Proxy** field (different for each customer and in our example, they would be 10.25.200.73 for both fields).



Click [OK & Next].

In the next dialog the customer SIP user data will be configured.

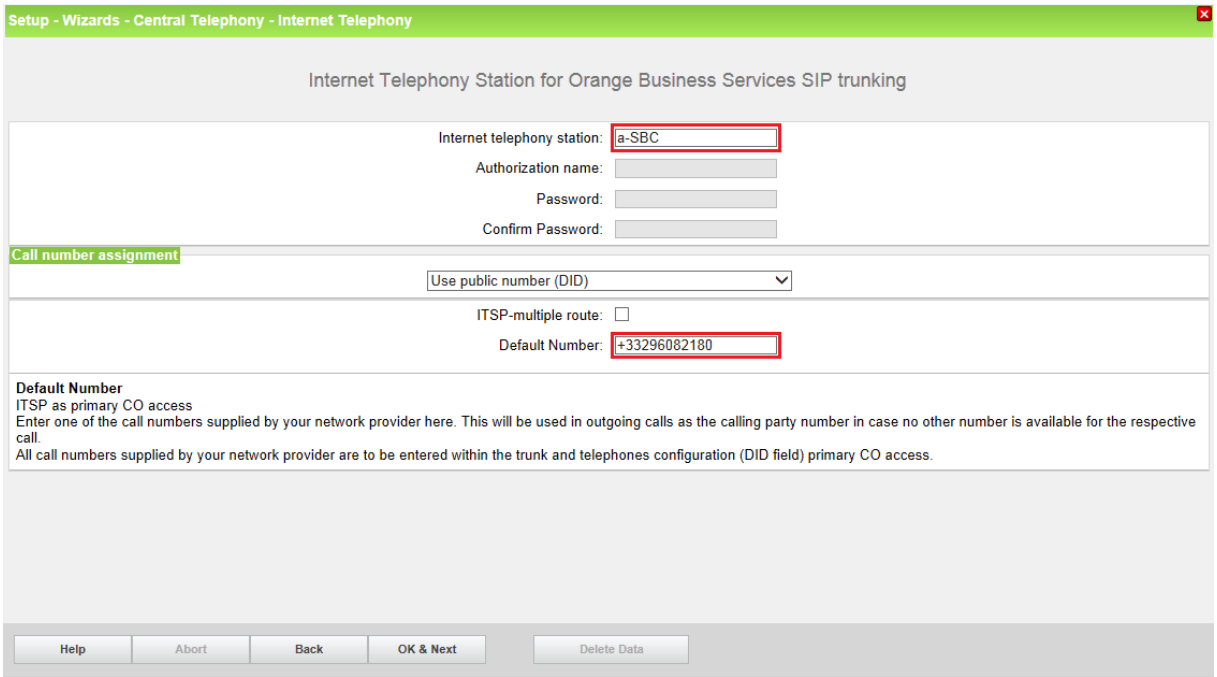


Click on [Add].

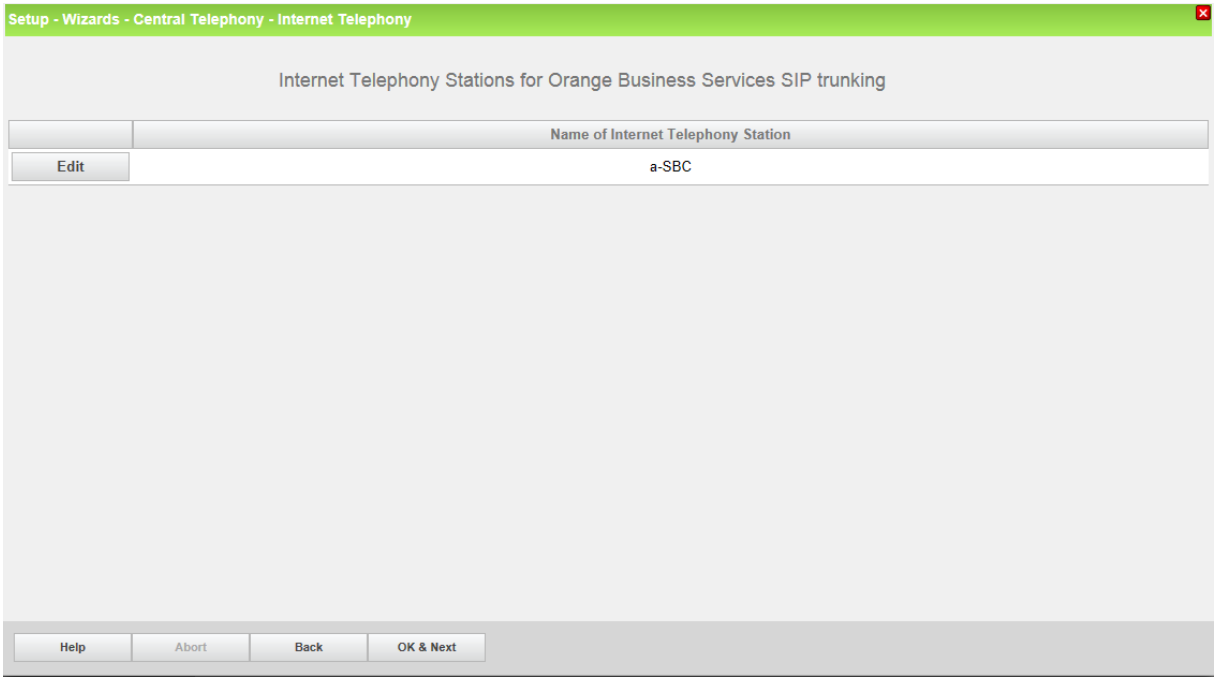
The following fields need to be configured:

Internet telephony station: A **Unique name** is assigned here (e.g: a-SBC)

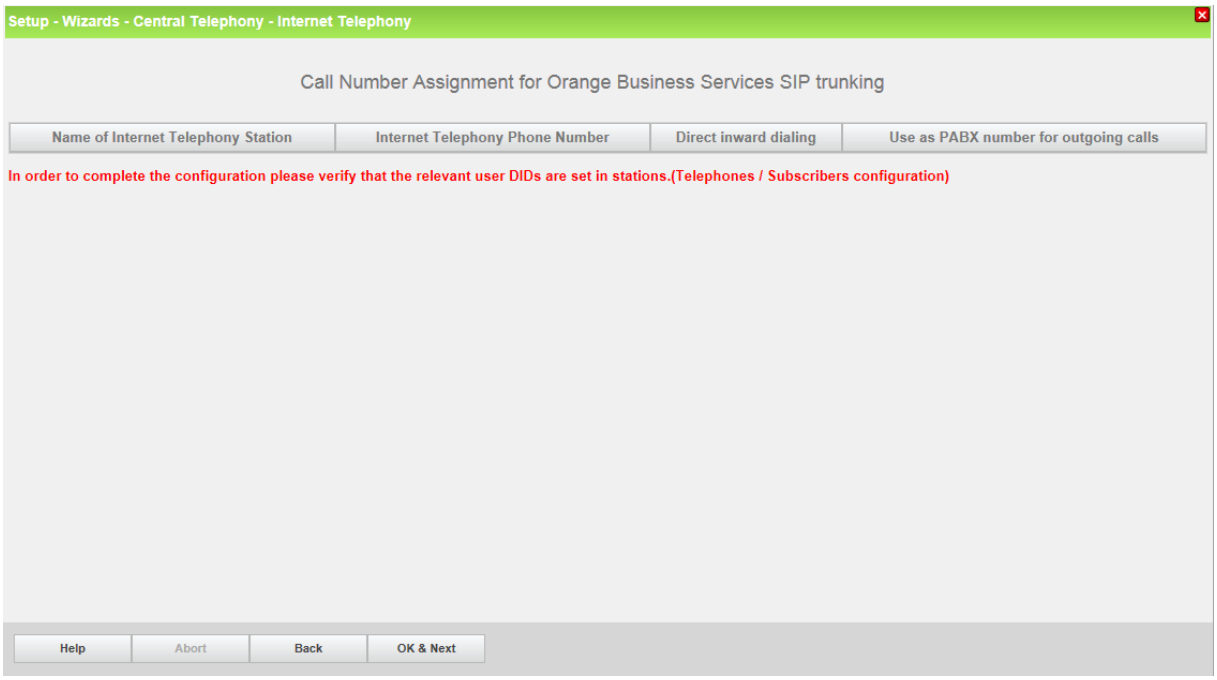
Default number: Main number of connection in international format. The default number is used as outgoing number when no DDI number is assigned to a station. (e.g: +33296082180). Usually the **Lead Number** is entered here.



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



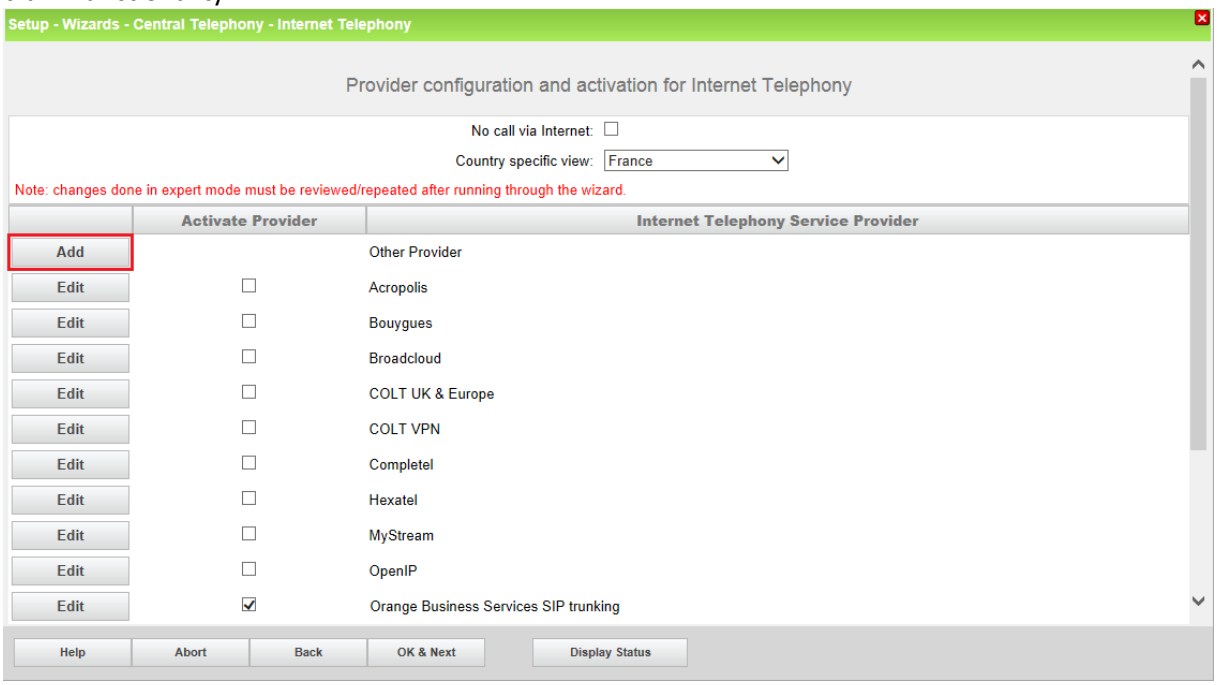
Click [OK & Next]



Click [OK & Next] (no input needed)

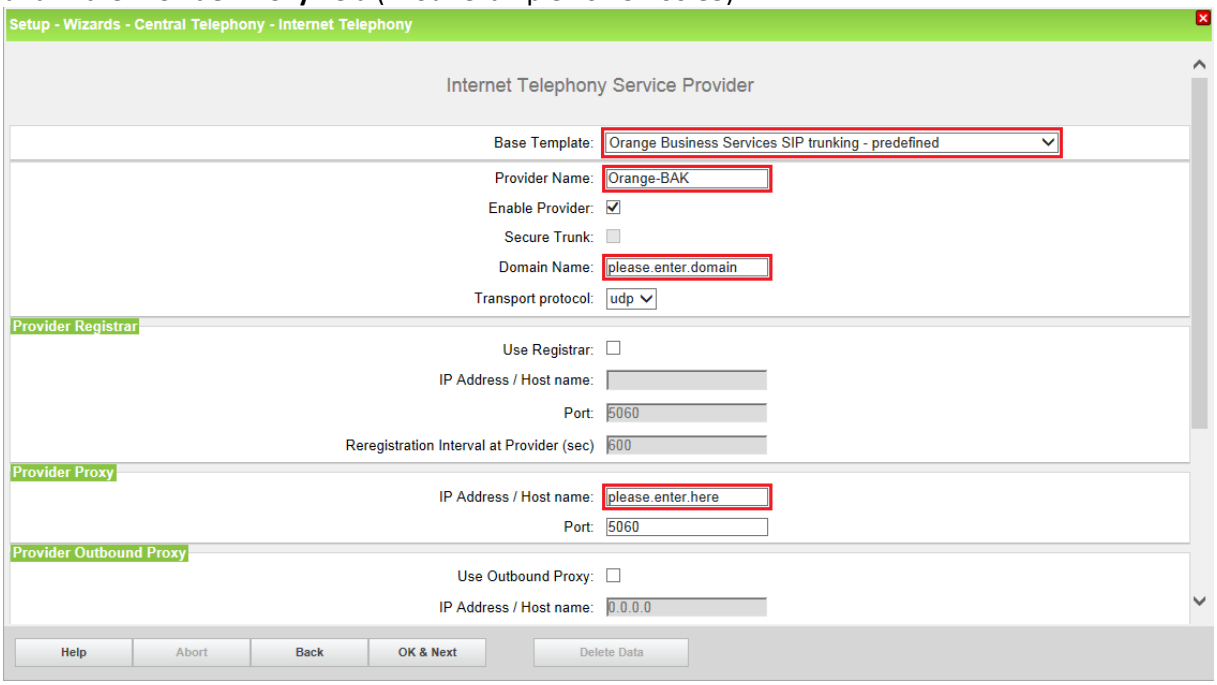
Now you enter again the page “Provider configuration and activation for Internet Telephony”

If an **Orange Backup SBC IP** is available, a second trunk needs to be configured for supporting failover trunk functionality.



Click on [Add].

On the next page, select “Orange Business Services SIP trunking” as Base Template, provide a name (up to 10 characters) and enter the IP address of the **Orange Backup SBC** in the **Domain Name** field and in the **Provider Proxy** field (in our example 10.25.200.83).



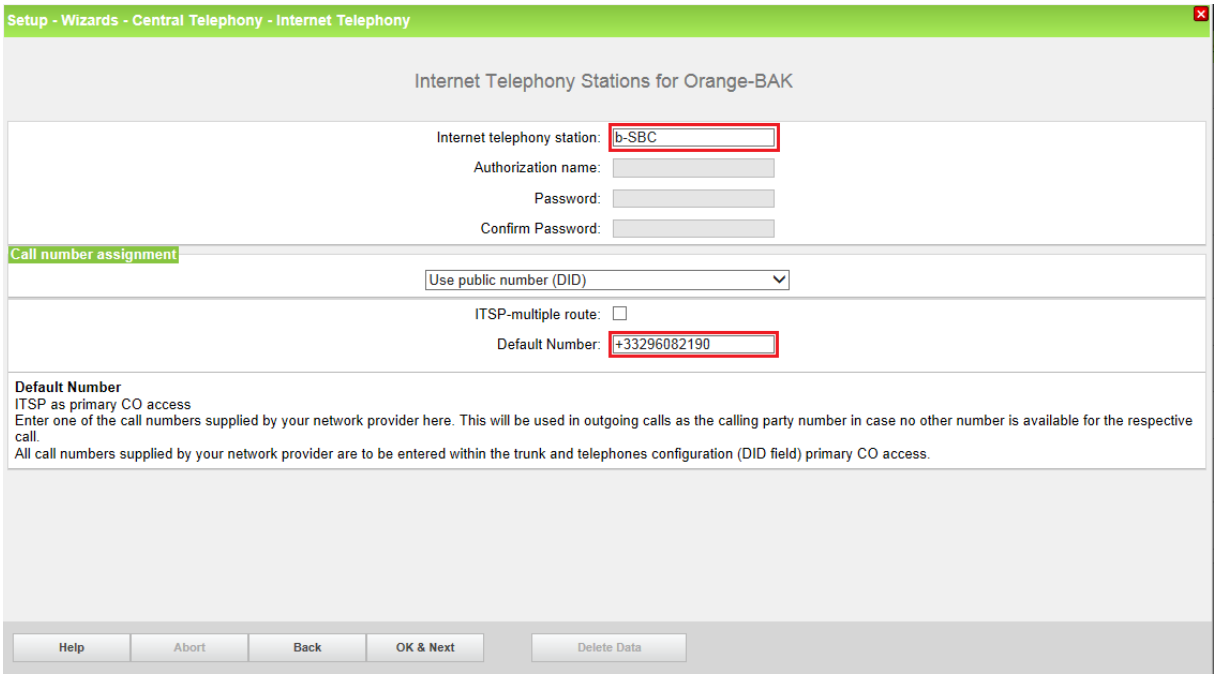
Click [OK & Next].

On the next page click on [Add] and enter the data for the Backup SBC SIP user.

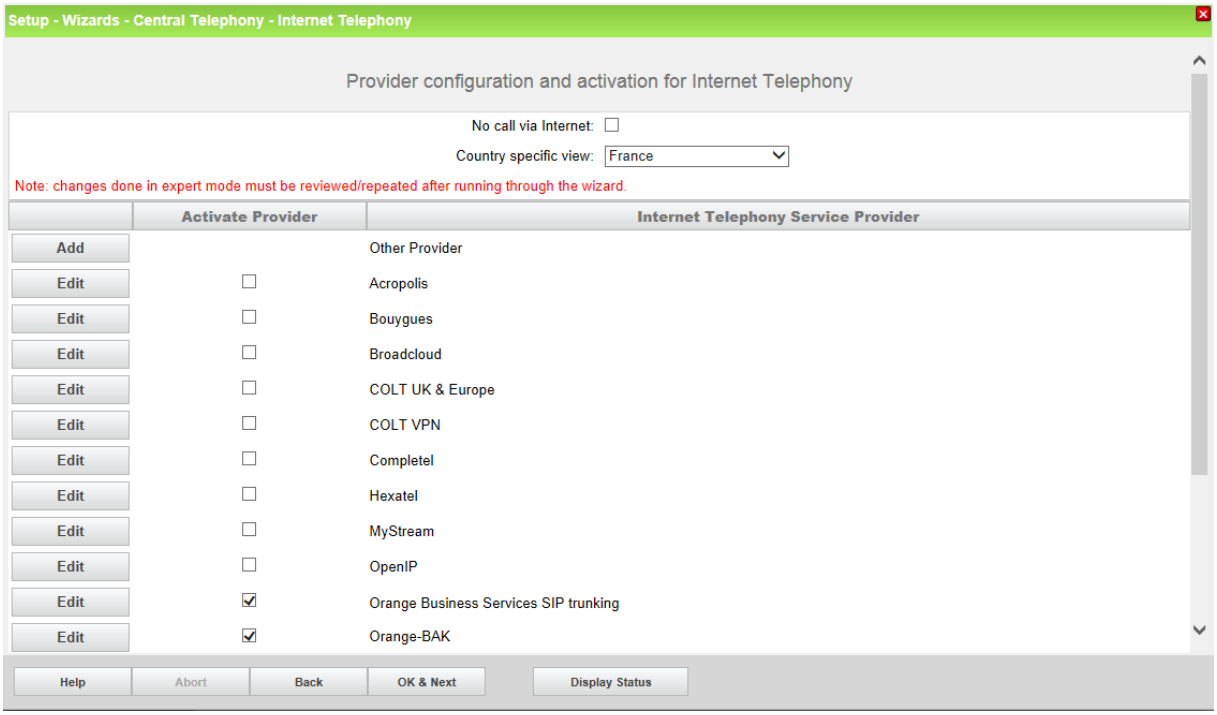
The following fields needs to be configured:

Internet telephony station: A **Unique name** is assigned here (e.g: b-SBC)

Default number: Please note that a number different form the one of the Nominal SBC User must be used (e.g: +33296082190).



Click [OK & Next] on this and the following pages and you will reach again the page “Provider configuration and activation for Internet Telephony”:



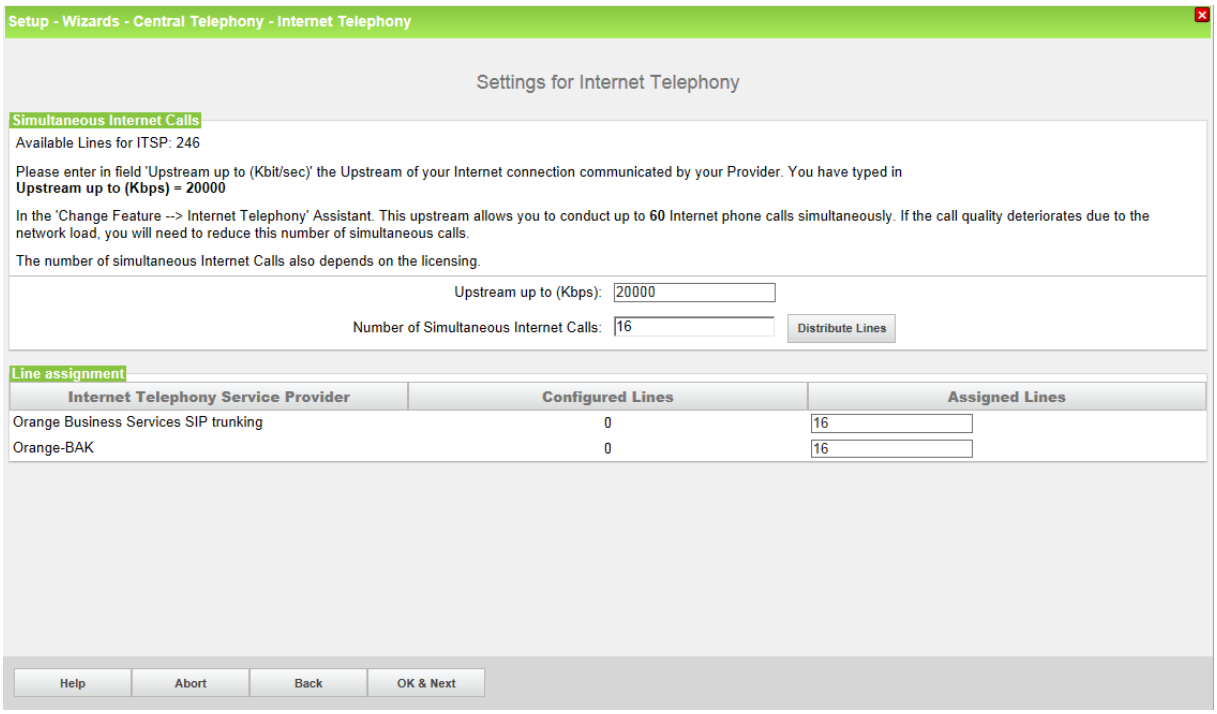
Click [OK & Next]

Define bandwidth (# Trunks)

The amount of simultaneous Internet (**Assigned Lines**) calls must be aligned with the **Maximum Active Calls** assigned to the Trunk Group on the Orange Business Services provider side.

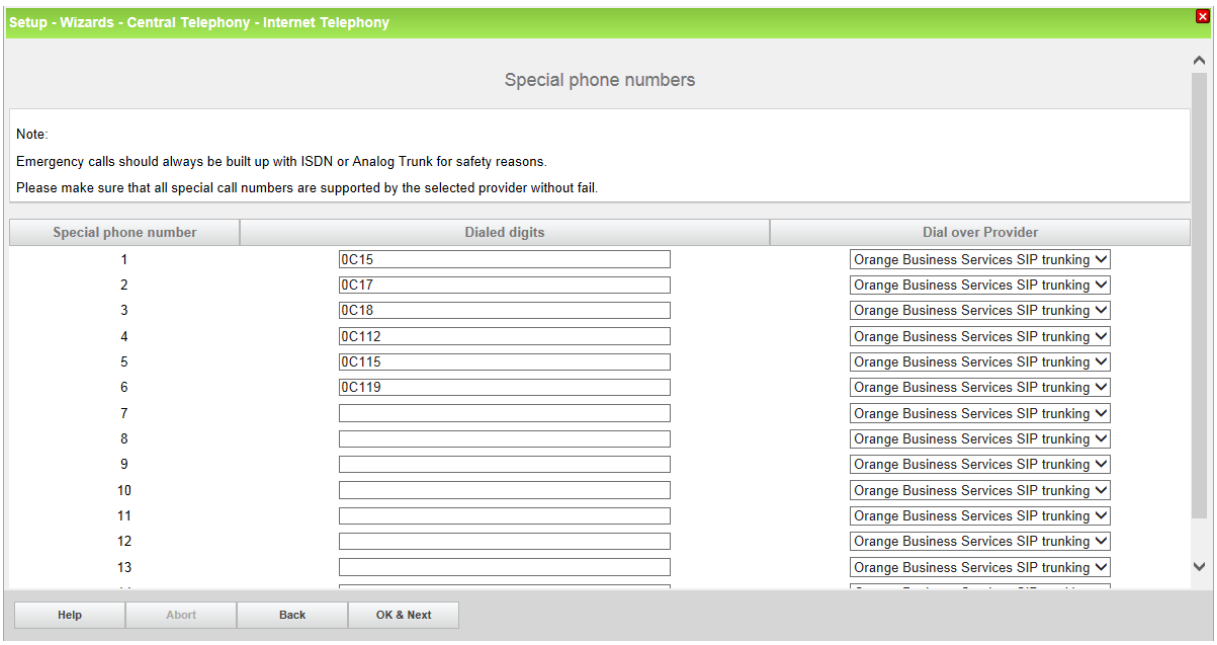
Fill in the available bandwidth, and distribute the amount of SIP channels. The bandwidth does not need to be exact, it can also have a higher value.

Both Trunks “nominal” and “backup” must get the same amount of lines.

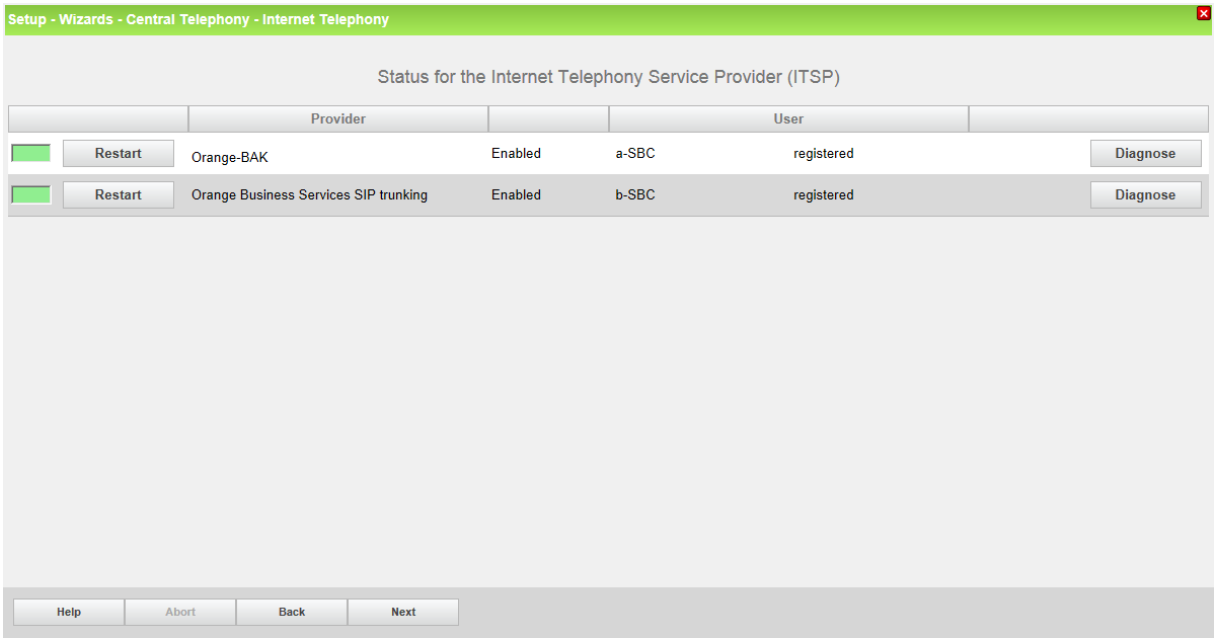


Click [OK & Next]

Fill in the special numbers.



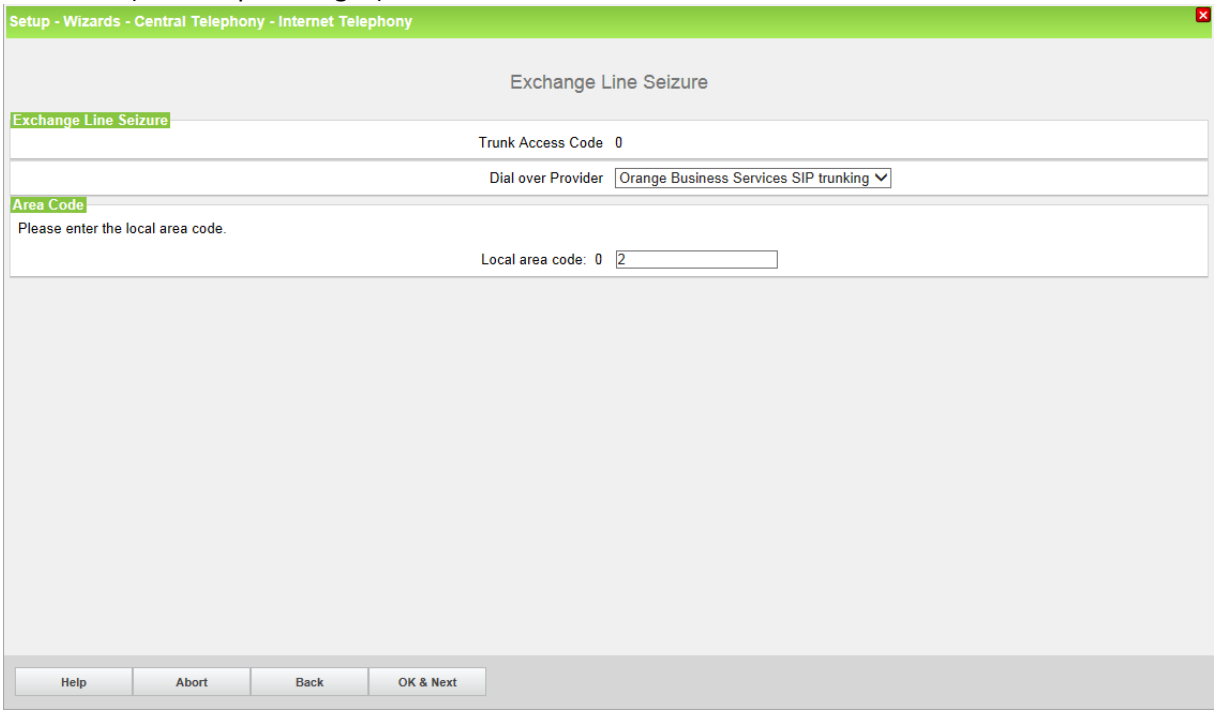
On next page status of ITSP is displayed.



Click [Next]

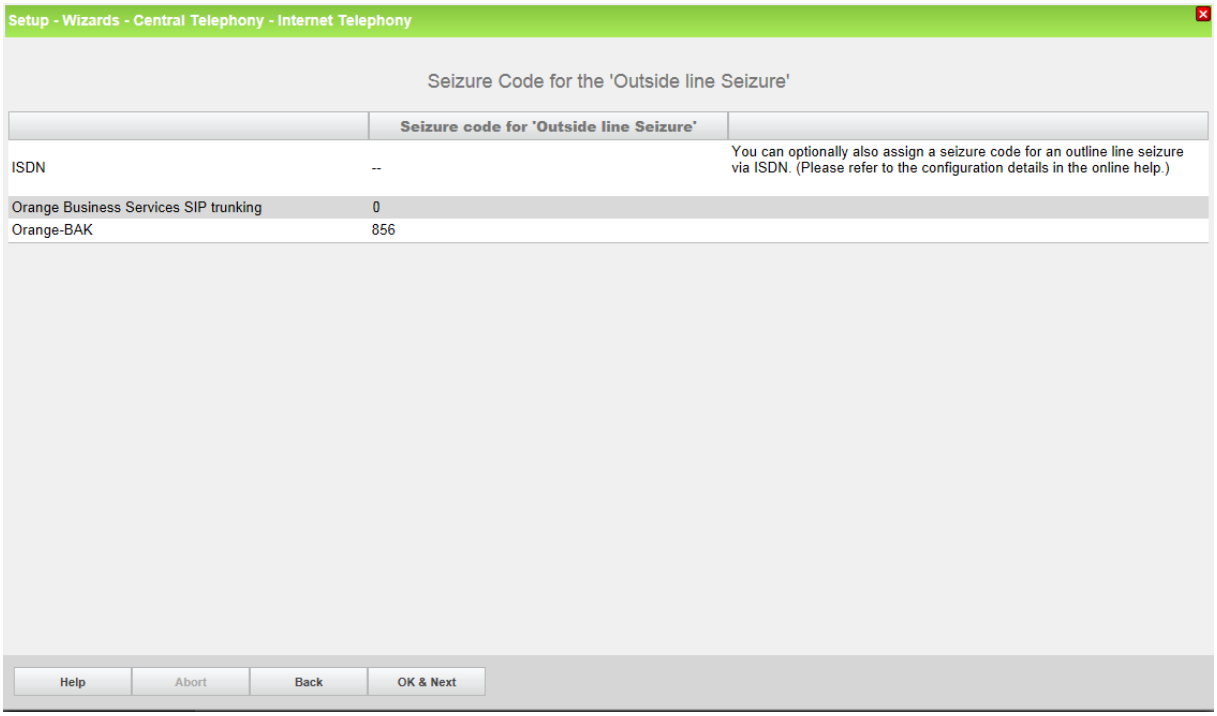
“Exchange Line Seizure“:

Nominal SBC should be used with access code 0. If the local area code was not entered in first step PBX number (see “Internet Telephony” configuration), then there will be a field to enter the local area code (without prefix digits)



Click [OK & Next]

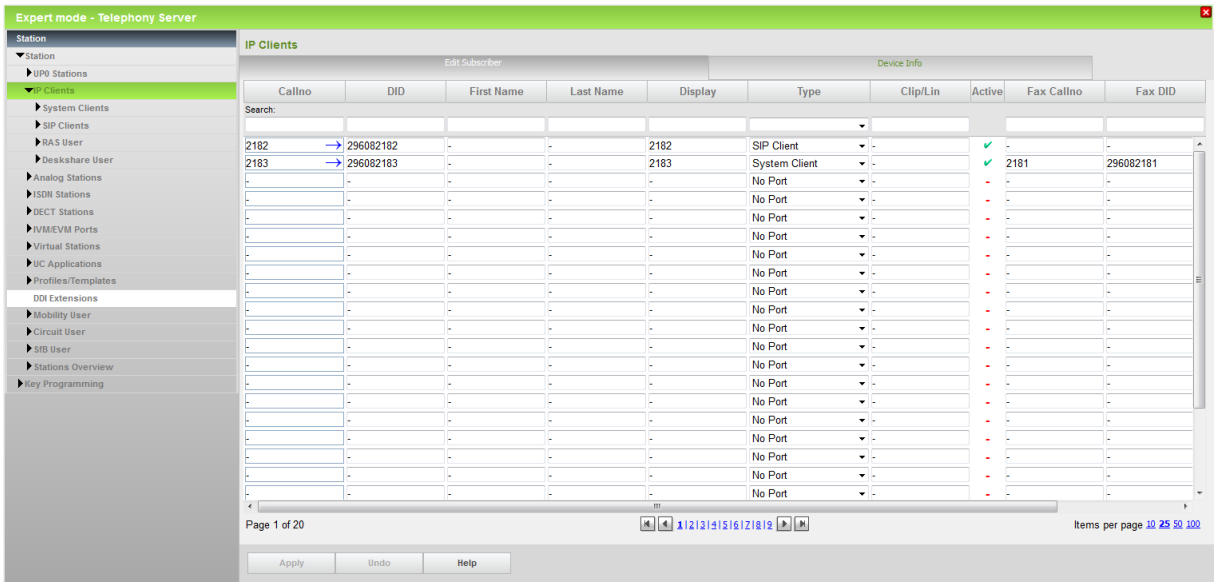
Overview with all configured “Outside line Seizure“ is displayed.



Click [OK & Next] and on the next page [Finish].

DID configuration

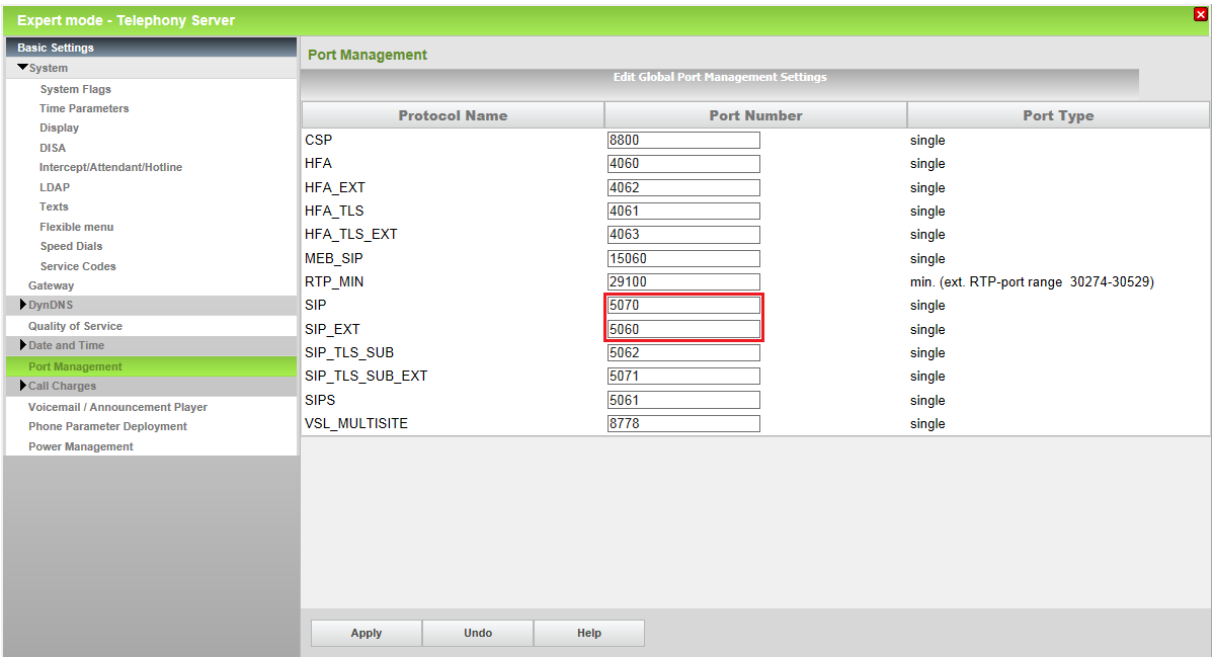
In the DID Section, the full DID will need to be entered without the country code.



Additional Configuration

Port management

To comply with the requirements of the Orange Business Services SIP trunk the EXT_SIP port **MUST** be configured with 5060 (default is 5070).



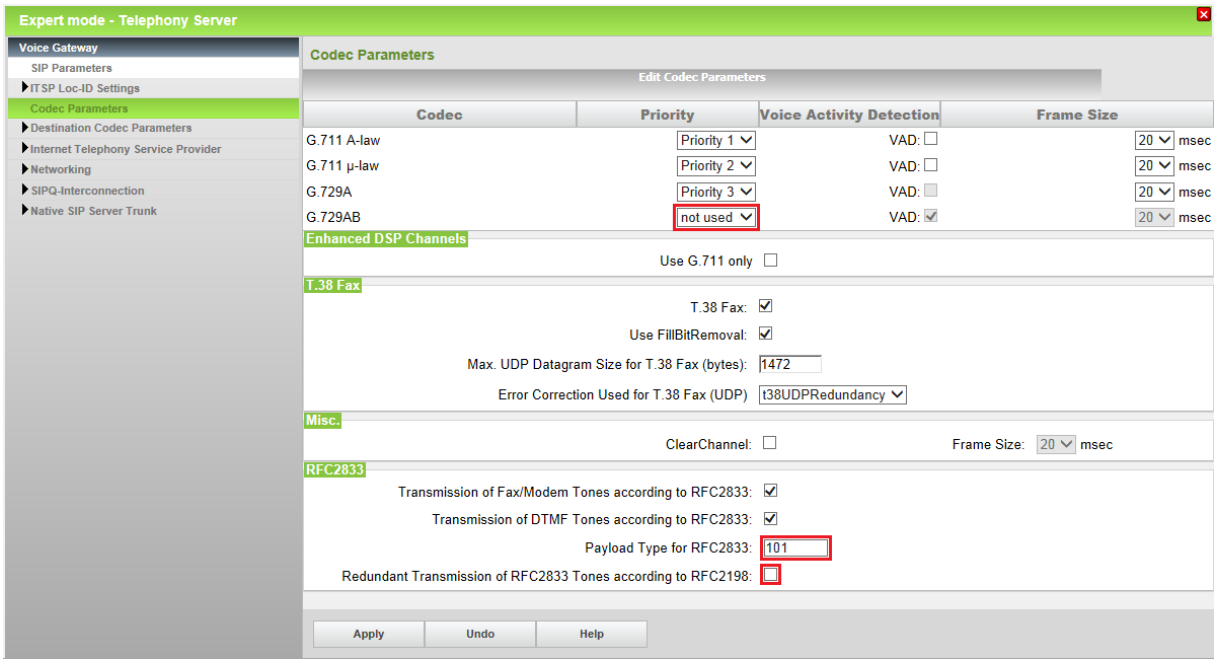
The internal SIP port should be set to a different port (e.g. 5070). Having internal and external port with the same value is possible but may lead to significant security risks.

After the port(s) is changed OSBiz **MUST** be restarted.

Codec Parameters

To comply with the requirements of the Orange Business Services SIP trunk the following codec parameters **MUST** be changed:

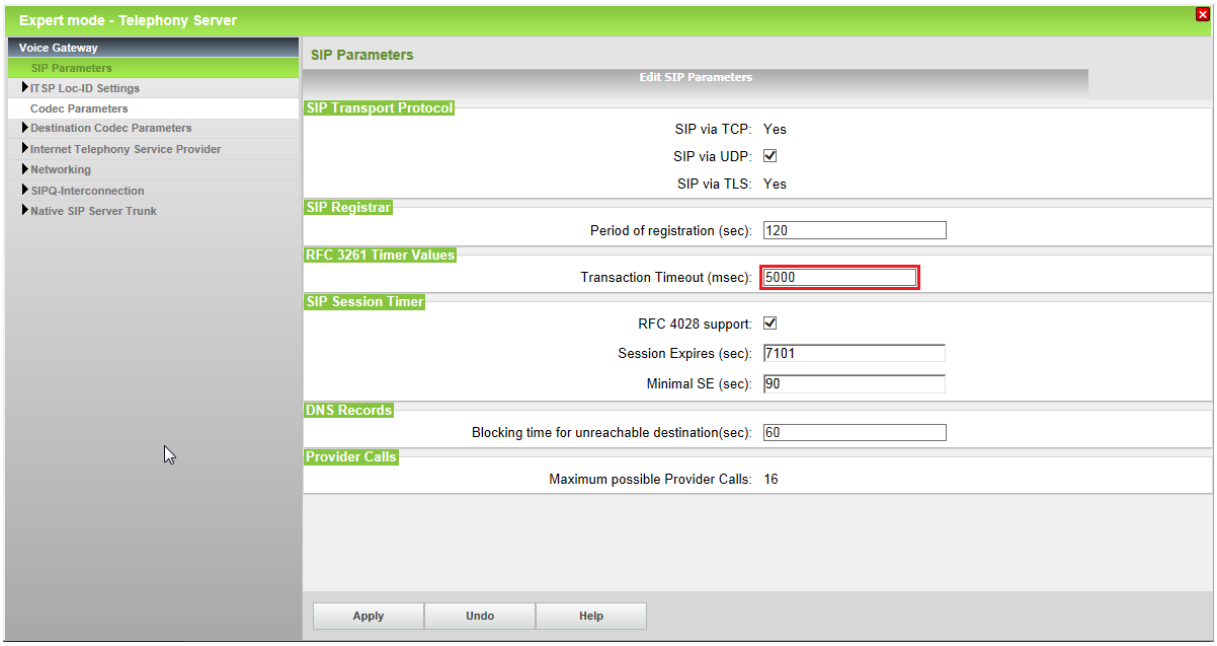
- RFC 2833 payload type **MUST** be 101.
- RFC 2198 support **MUST** be disabled.
- G.729AB is **NOT** supported by ORANGE and **SHOULD** be disabled.



SIP Parameters

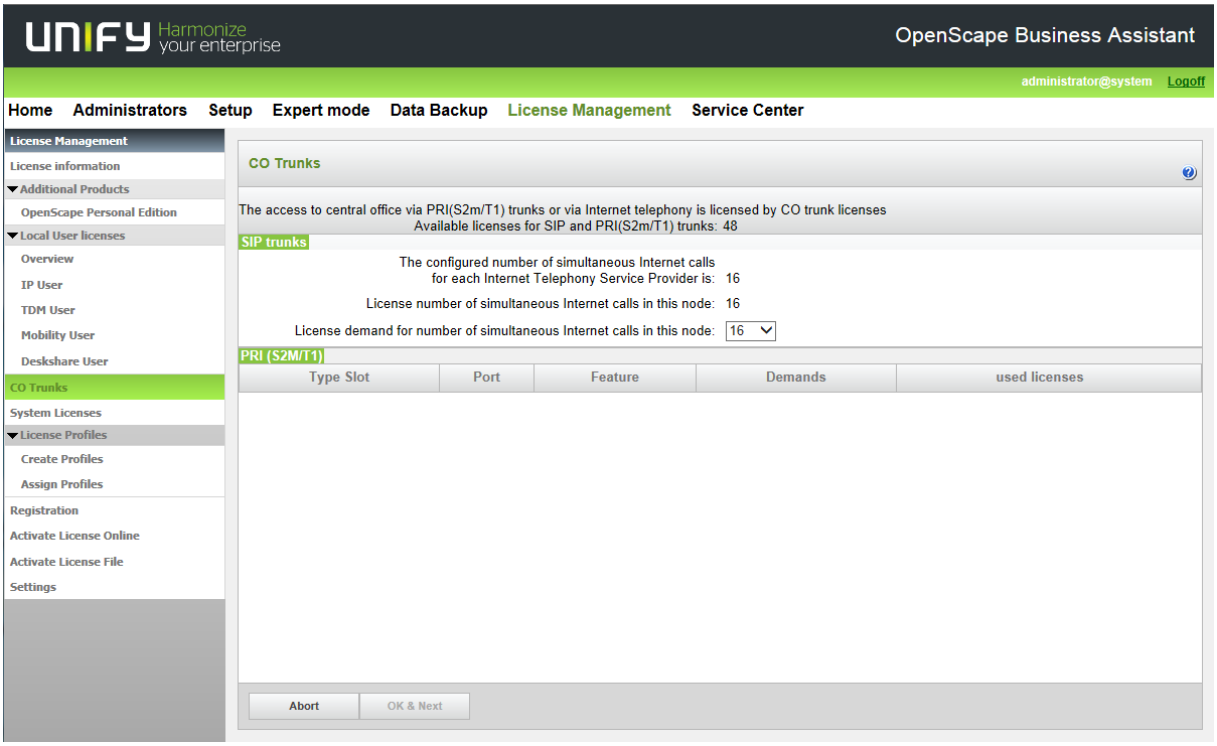
To comply with the requirements of the Orange Business Services SIP trunk the following SIP parameter **SHOULD** be changed:

- Transaction Timeout **SHOULD** be modified from 32s (default value) to 5s.



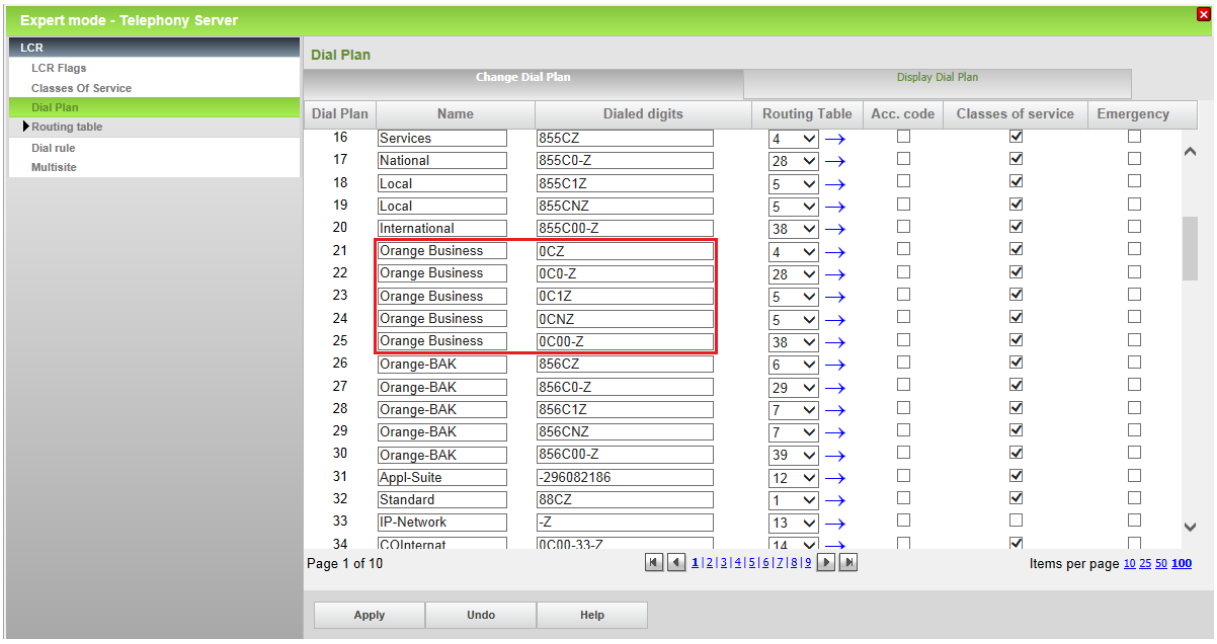
License

Add the "S2M/SIP Trunk" license to the SIP-Trunk

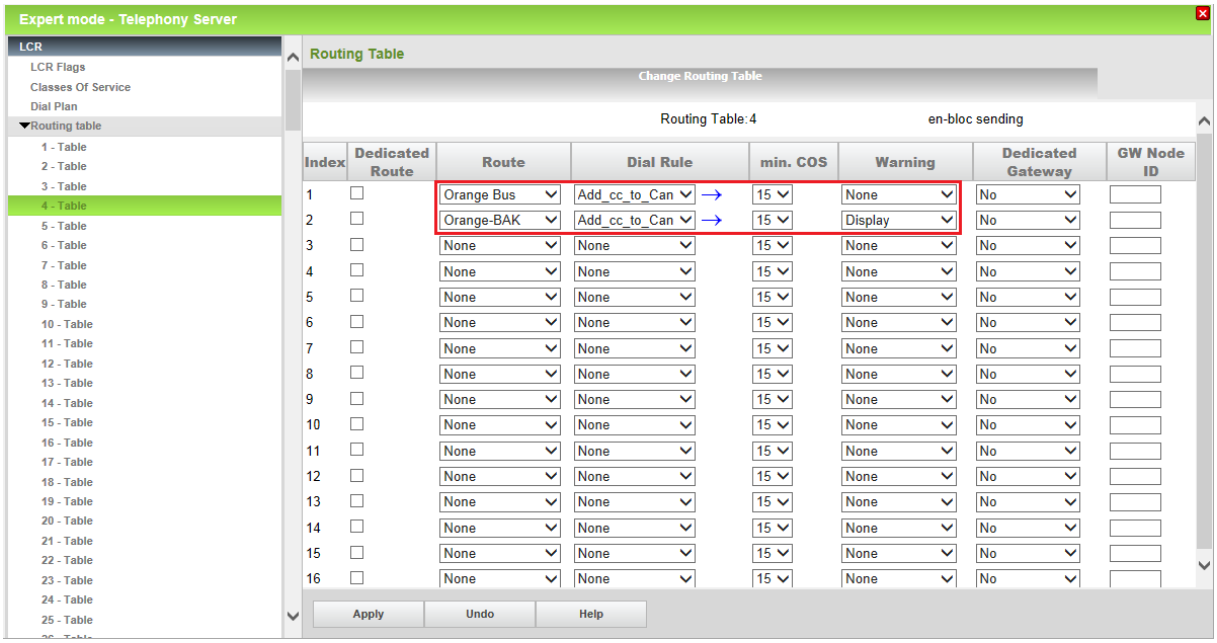


LCR changes

For the SIP trunk failover functionality to work, additional configuration is required in LCR (LCR Overflow).

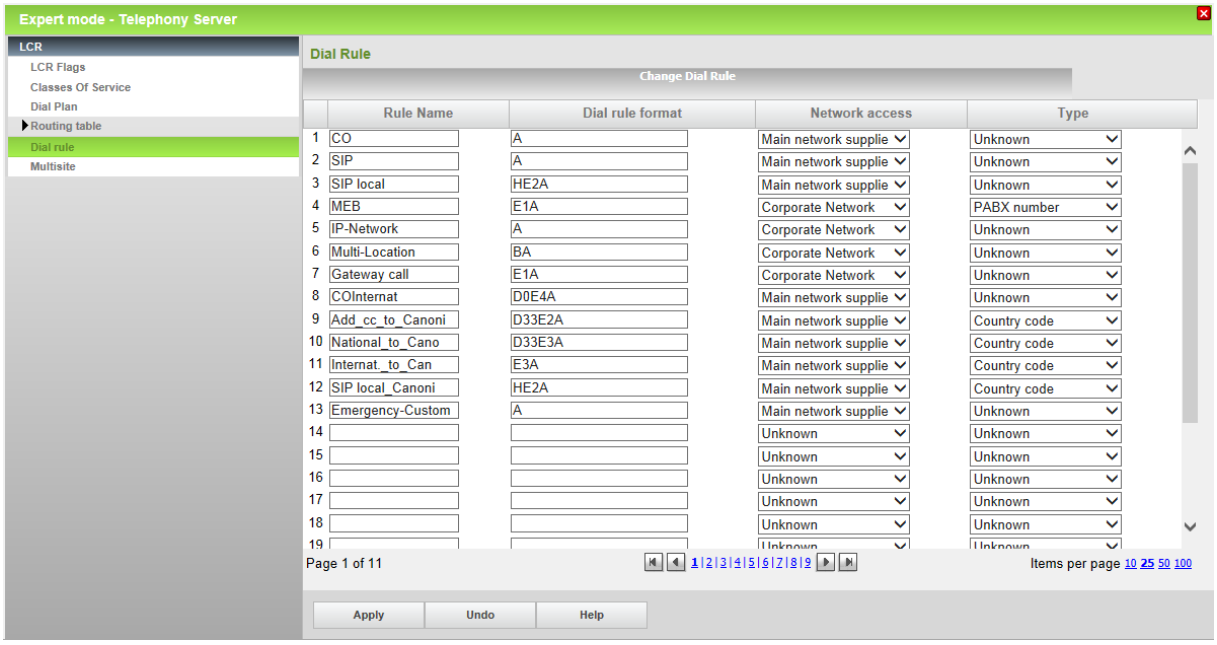


Open each routing table (e.g. 4,5,28 and 38) of the primary SIP trunk (i.e. Orange Business Services SIP trunking) and configure the backup trunk as the second entry with the same dialing rules (i.e. Orange-BAK).



Repeat for all routing tables (e.g. 4,5,28 and 38). The “Display” value above is optional and serves to notify the user on the phone that the call goes through the backup interface.

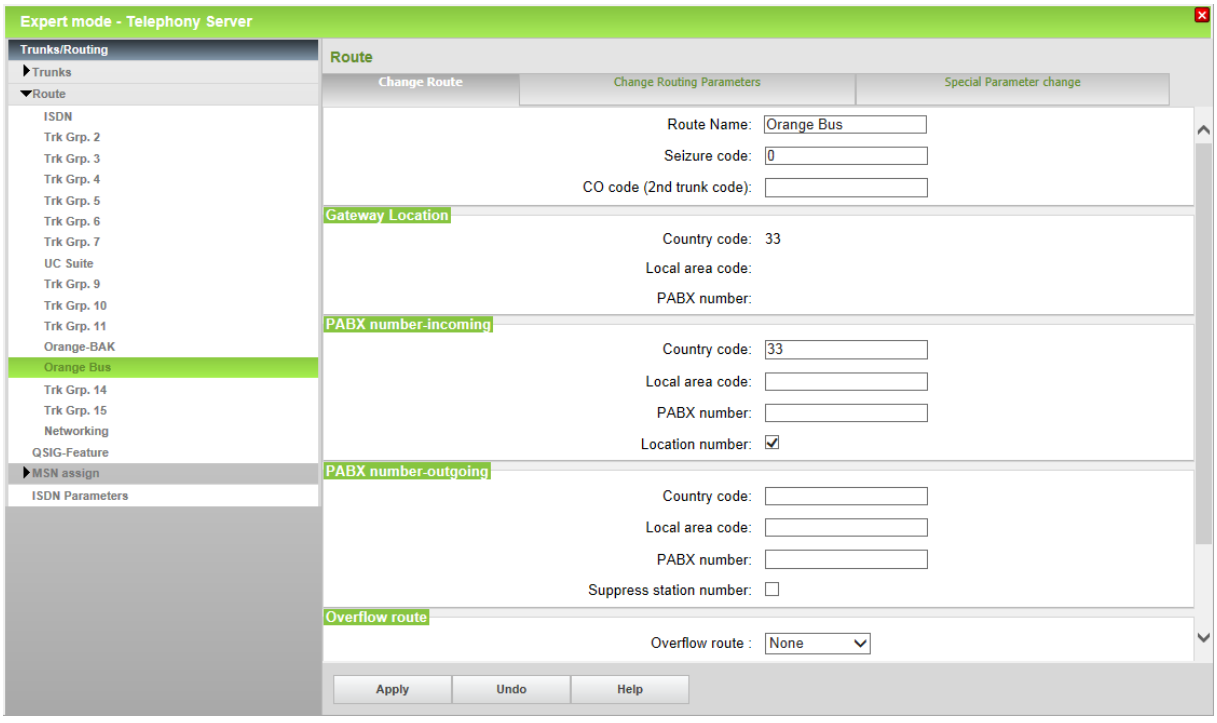
Dial rules:



Route configuration (optional)

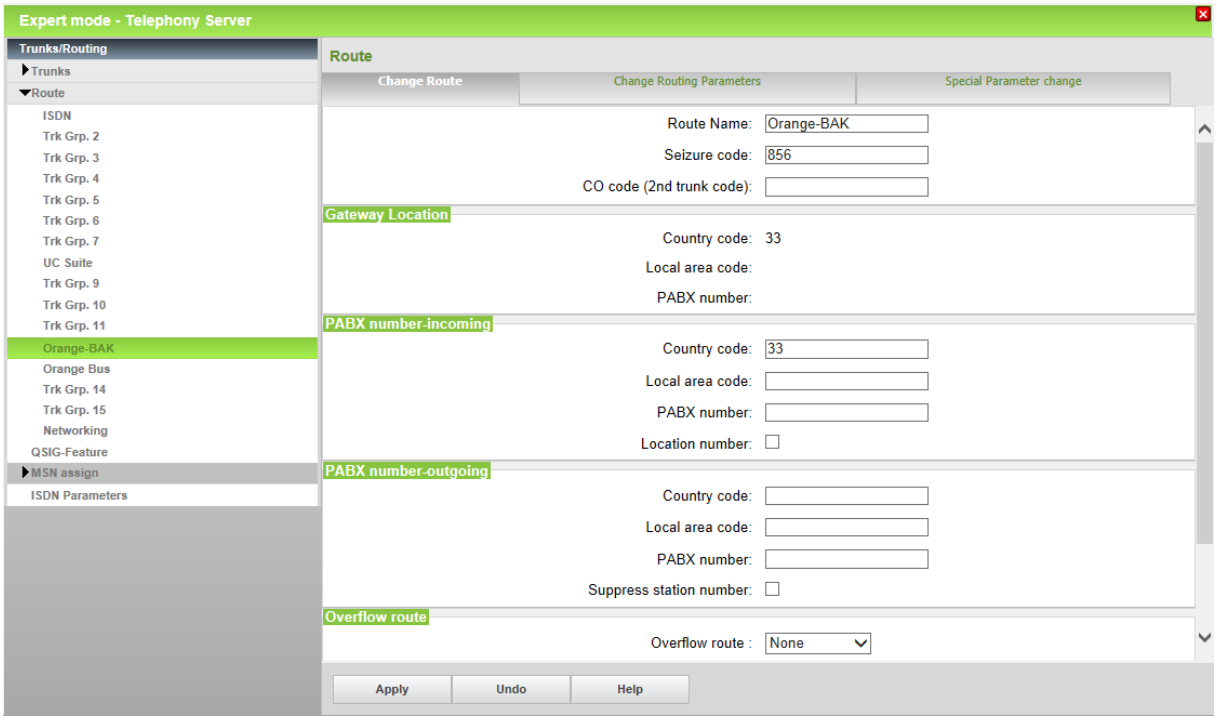
The route configuration will be created automatically. It should look like below.

Best practice is to enter the default Access Code in the field “Seizure code”, enter the Country code for the PABX number-incoming and select Location number.

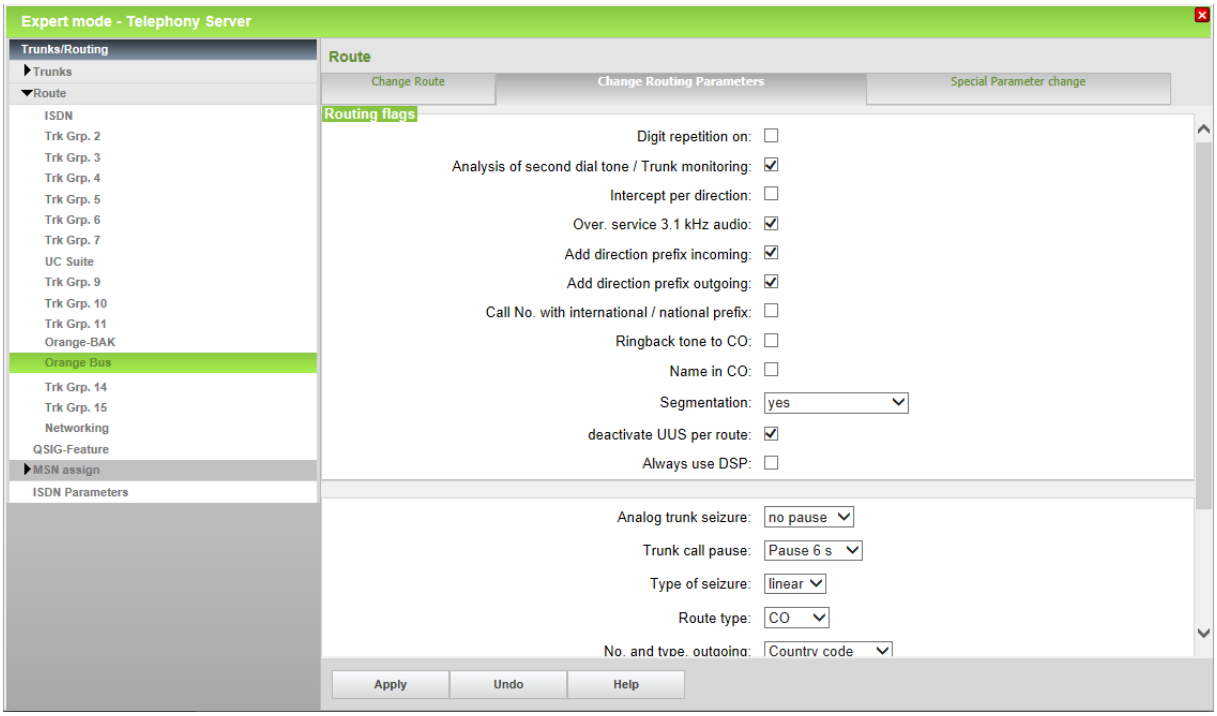


Note: Trk Grp. is automatically chosen by the OSBiz ITSP wizard.

Likewise, for the failover route.

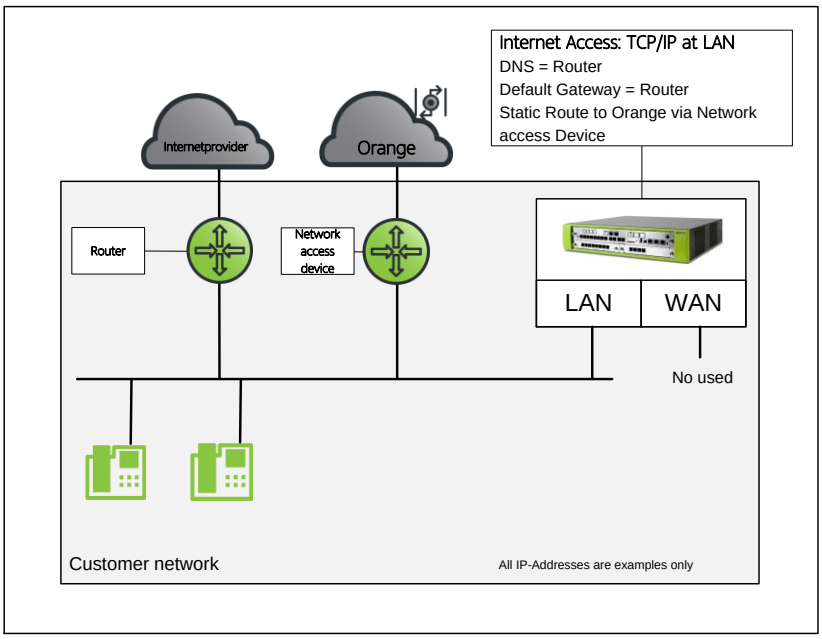


The route parameters:



These settings are shown as reference. The OSBiz ITSP wizard will set all these parameters to the correct values, no manual intervention is needed here.

Usage of Orange Network Access device



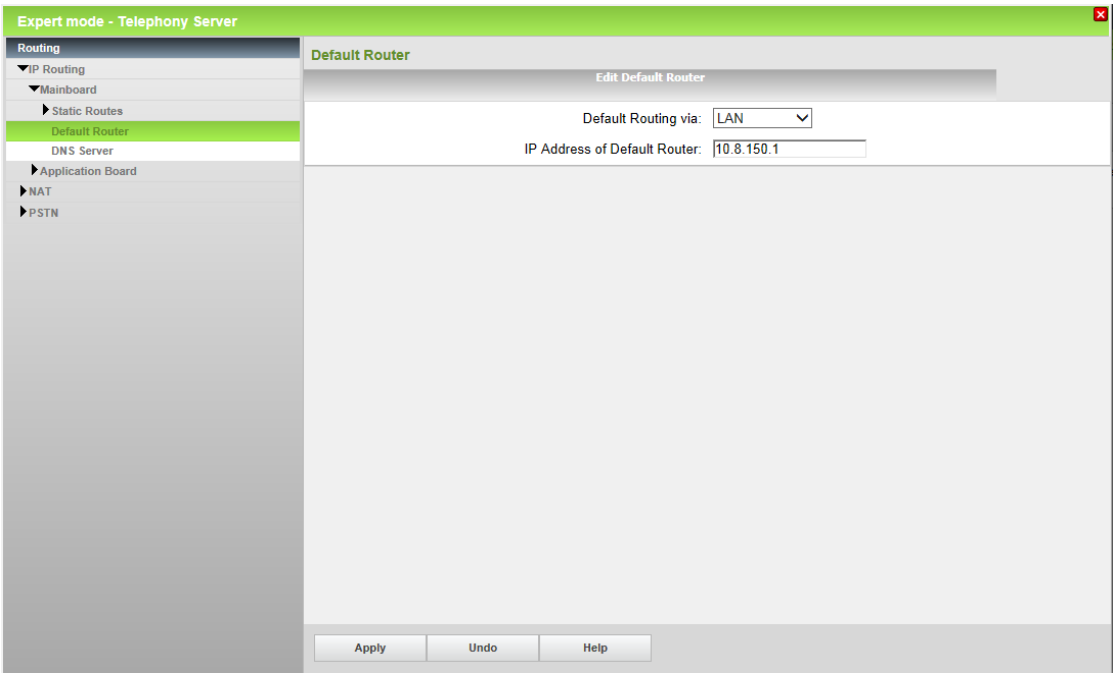
The OSBiz is connected via the LAN, to a Network Access device delivered to the customer as standard by Orange Business Services. This device will be added in the same subnet as the OSBiz subnet. The IP address of the device can be adapted by Orange, so that the Network Access device can be added in an existing voice VLAN of the OSBiz.

Inside this subnet, there is a default gateway. The SIP and RTP traffic to the Orange Business Services provider however needs to be routed via the Network Access device, all other traffic from OSBiz needs to be routed to the standard default gateway inside the subnet.

To be able to route the SIP/RTP traffic for Orange via the Network Access device, you do need to add a static route in the OSBiz. The static route is added for the Orange Business Services target IP address, with as gateway the IP address of the Network Access device.

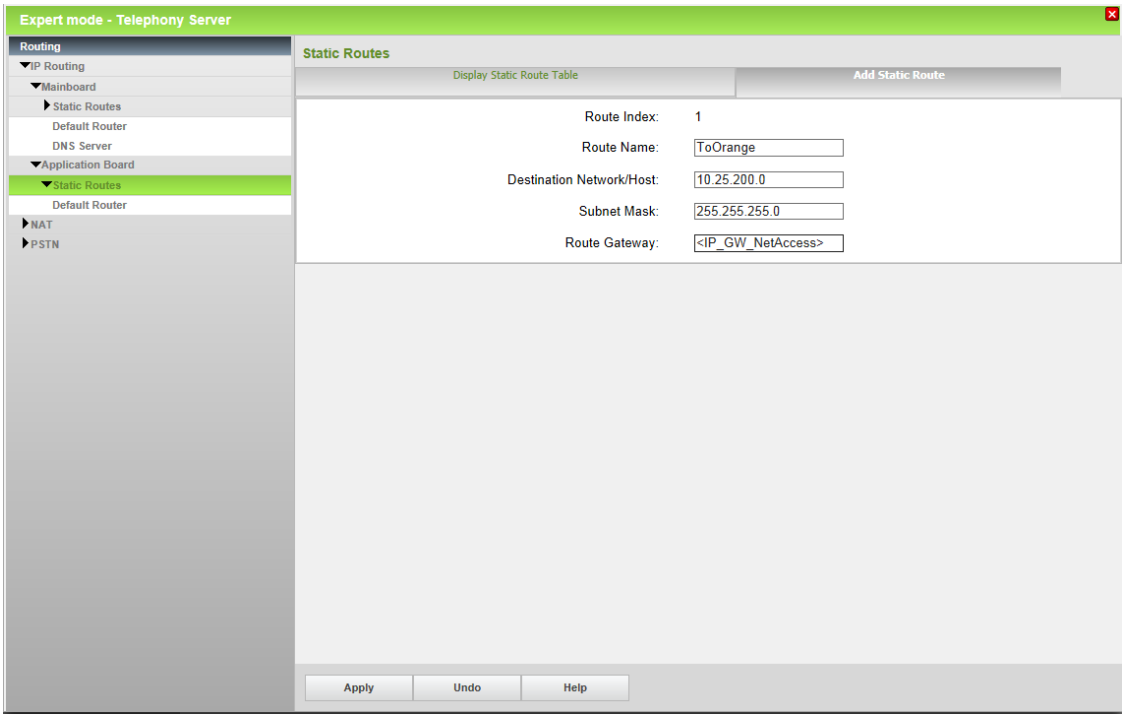
To do so, go to the Expert Mode -> Routing

The default gateway needs to be configured with the address of the internet router.



Traffic to the Orange SBCs e.g. 10.25.200.73 (nominal), 10.25.200.83 (backup) needs to be routed via the Network Access device.

To be on the safe side a route to a Class C subnet should be added -> 10.25.200.0 with mask 255.255.255.0.



For an OSBiz S system the static routing configuration takes place in Linux O/S with using YAST or CLI.

Please, note that the network topology provided in the current paragraph is a generic one for the most common Orange customer environments. There are more networking options available to fit the specific Orange customer needs. More information is provided at Orange FR website.