



OpenScape Business

How To Configure SIP Trunk for your ITSP (**SIGNET NL**)

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Table of History

Date	Version	Changes
2016-06-21	1.0	First version
2016-07-15	1.1	Updated to final tests
2016-09-30	1.2	Update contents
2024-09-06	1.3	editorial changes

Note: The basis for this document is the current OpenScape Business at the time of certification. Since OpenScape Business is constantly developed, input masks and interfaces as well as requirements may change in the future. The settings and entries described here then apply accordingly.

Configuration Data

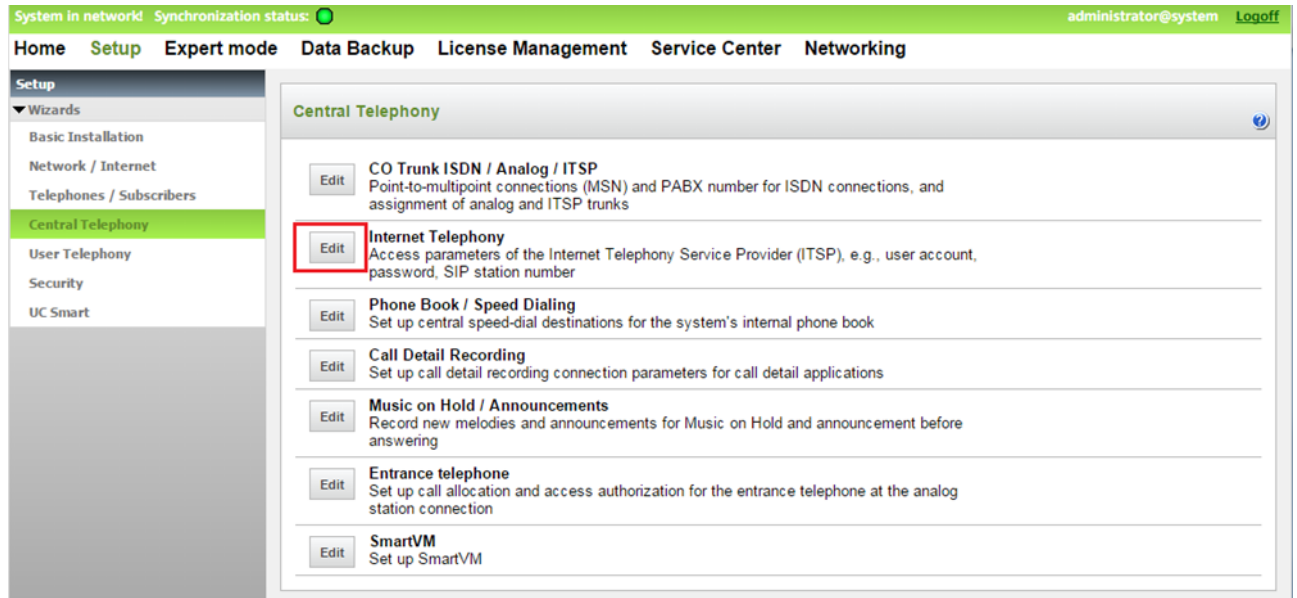
Information from ITSP **SIGNET** provided:

Name	Example
Call Number:	(085) 7470048 0049 ,0028 0407470093
Number of DID digits:	9
SIP Domain:	Sip.wlvoip.net
SBC_IP:	31.226.168.234 UDP 5060
digest Auth.:	Yes
SIP Username:	certifytest01
SIP Password:	*****
Clip no Screening:	no
Number of voice-channels:	8

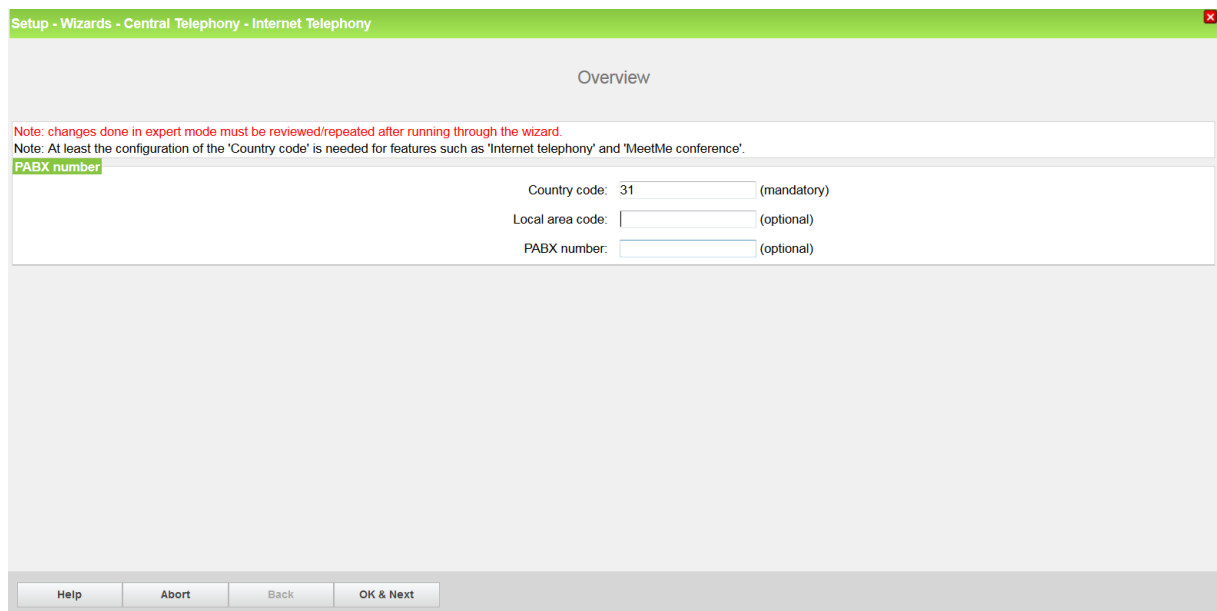
Configuration Wizard

Internet Telephony

Go to „Central Telephony – Internet Telephony“

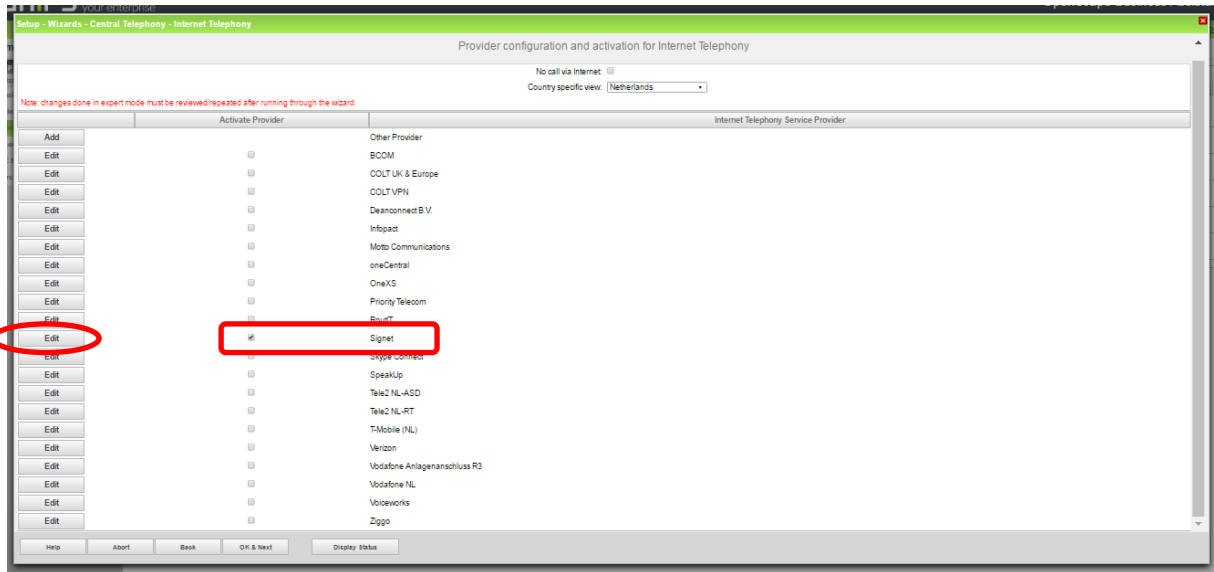


The overview page appears for entering the location data. The most flexible type of configuration is to enter the Country code only.



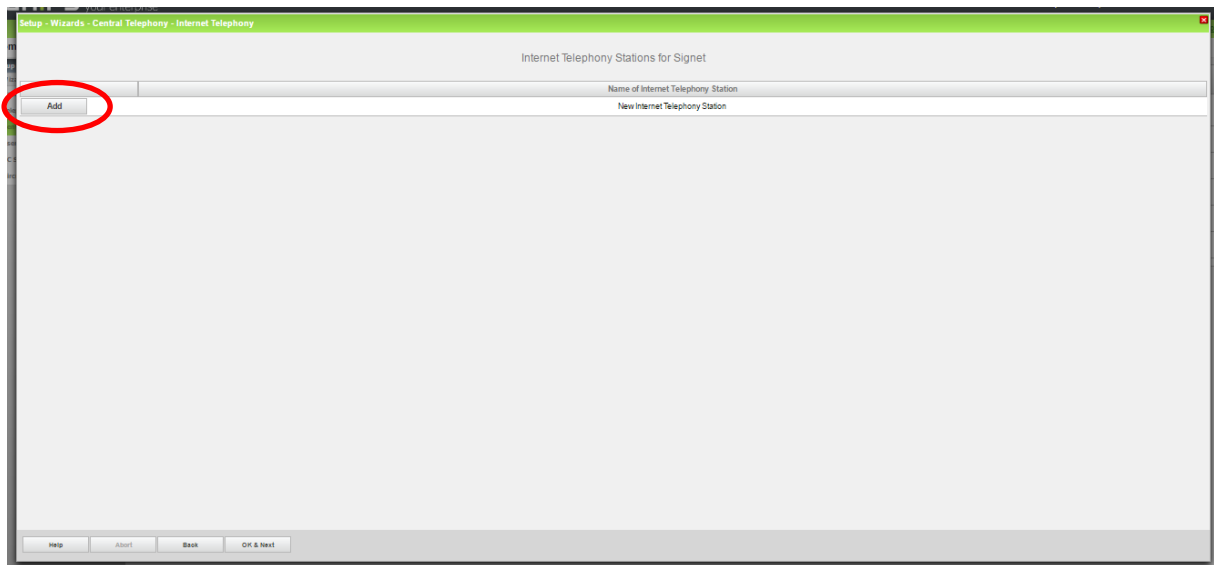
As outgoing number only the port assigned phone numbers are used.
In this case, remaining digits are filled in DID field.
Click [OK & Next]

Provider configuration and activation for Internet Telephony -> No call via Internet -> uncheck Use County specific view: Netherlands and select **SIGNET**.



Activate Provider and click on [Edit].

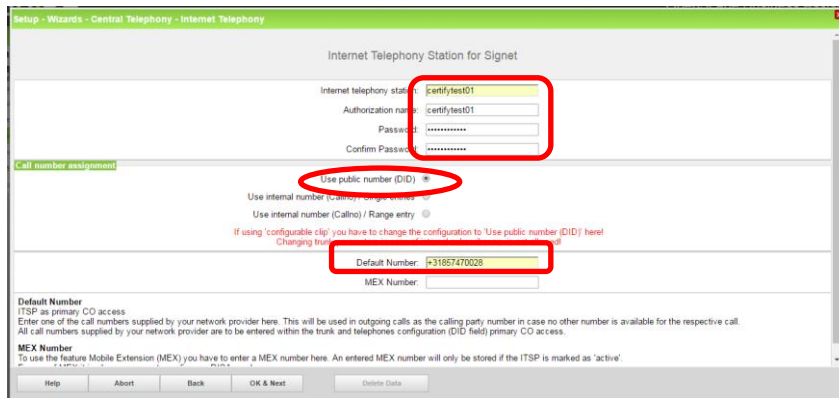
In this dialog the specific customer SIP Userdata will be configured.



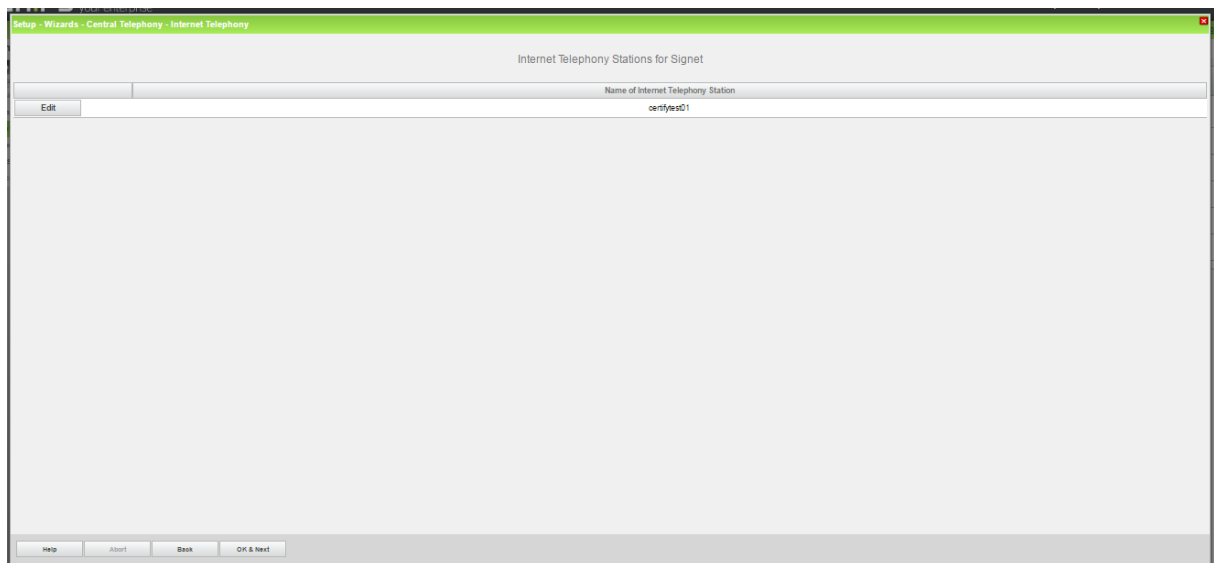
Click on [Add].

Data provided by ITSP SIGNET is inserted here.

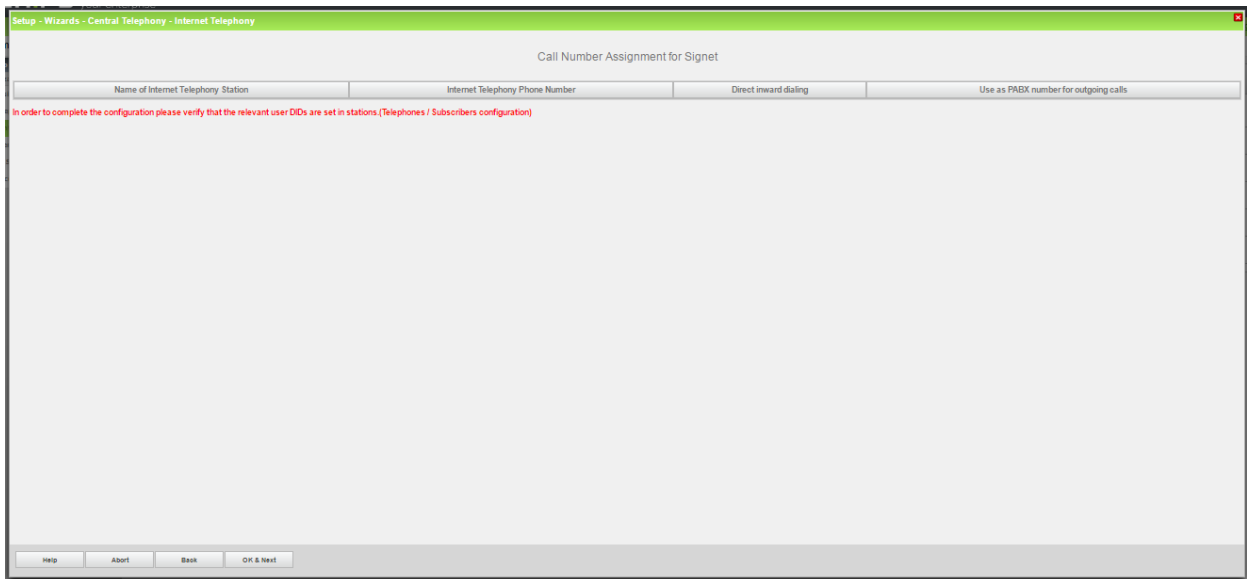
- Internet telephony station: SIP Username is inserted here (gebruikersnaam / account)
- Authorization name: SIP Username is inserted here (gebruikersnaam / account)
- Password: Password provided by ITSP SIGNET. (wachtwoord)
- Default number: Main number of connection. The default number is used as outgoing number when no DDI number is assigned to a station,.



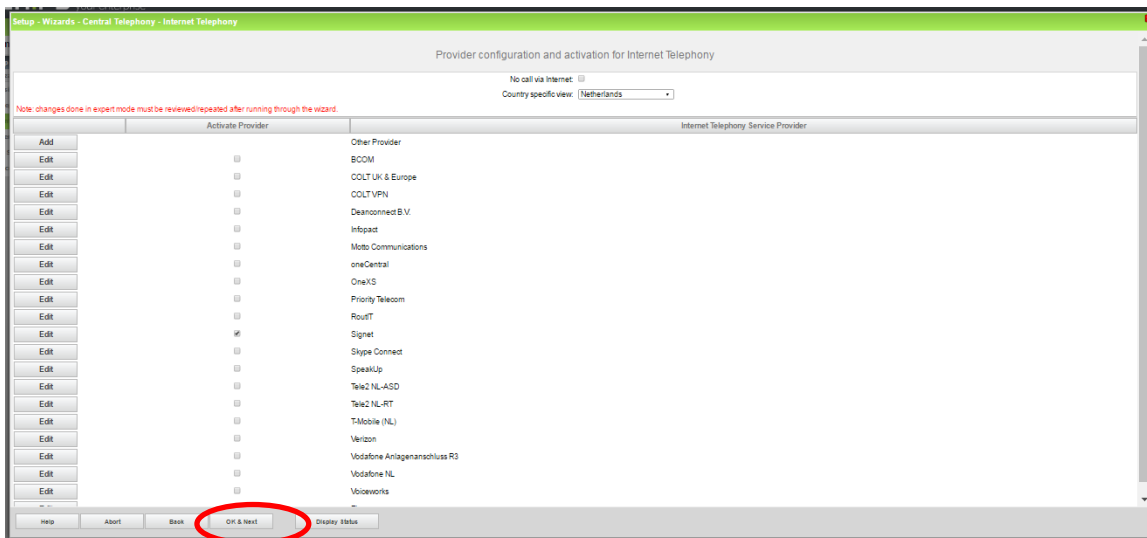
Click [OK & Next].



Click [OK & Next].

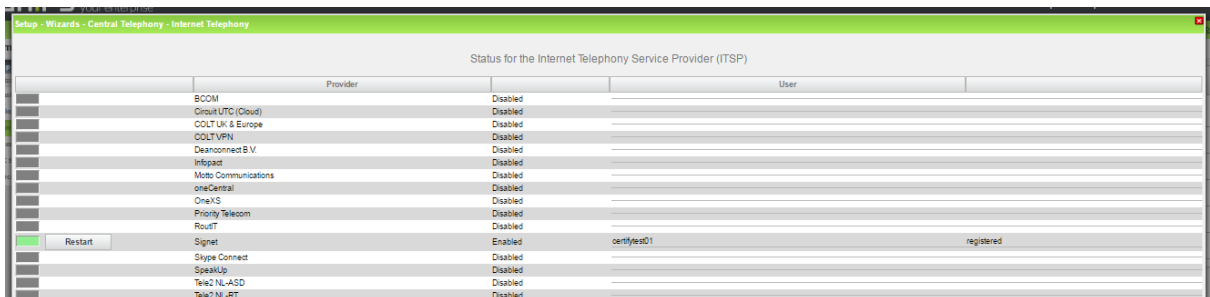


Click [OK & Next] (no input needed)



Click on "Display Status"

Next page status of ITSP is displayed. In case of a wrong SBC Address in Expert mode status of ITSP is „not registered“



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: 100
Please enter in field 'Upstream up to (Kbps)' 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
Signet	8	8

HELP Abort Back OK & Next

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.

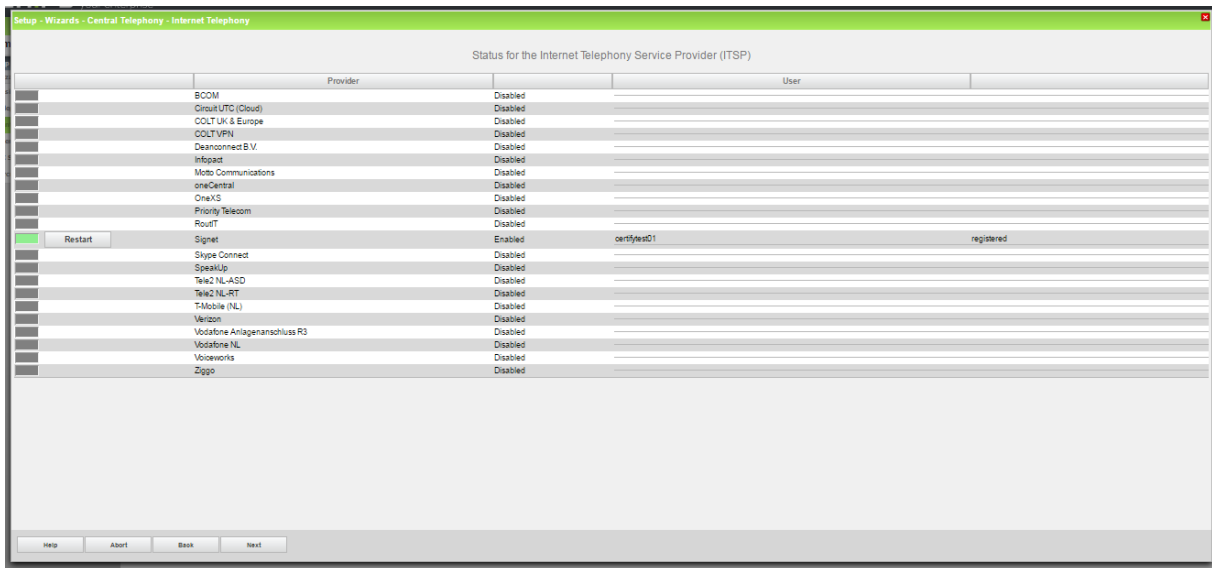
Setup - Wizards - Central Telephony - Internet Telephony

Special phone numbers

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

Special phone number	Dialled digits	Dial over Provider
1	00112	Signet
2		Signet
3		Signet
4		Signet
5		Signet
6		Signet
7		Signet
8		Signet
9		Signet
10		Signet
11		Signet
12		Signet
13		Signet
14		Signet
15		Signet

HELP Abort Back OK & Next



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

Multisite configuration

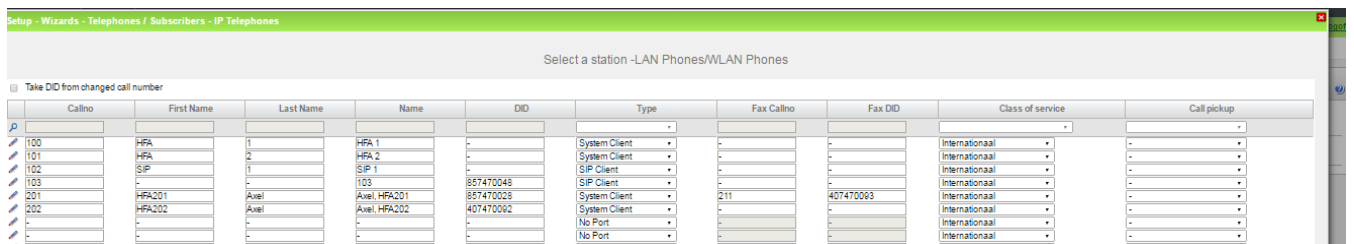
Multi-site refers to the integration of currently up to 8 different local area codes in a single system via the same or different ITSP connections. (For example, numbers from Rotterdam 010 xxx, Amsterdam 020, etc.). All up to 8 area codes must be within one country.

Additional configuration notes:

DID configuration

In general the DID has to be configured in long format. E.g. Axel HFA201 857470028 for a user regionfree, Axel HFA202 407470092 for user in Eindhoven.

The country code 31 has to be configured as described before.



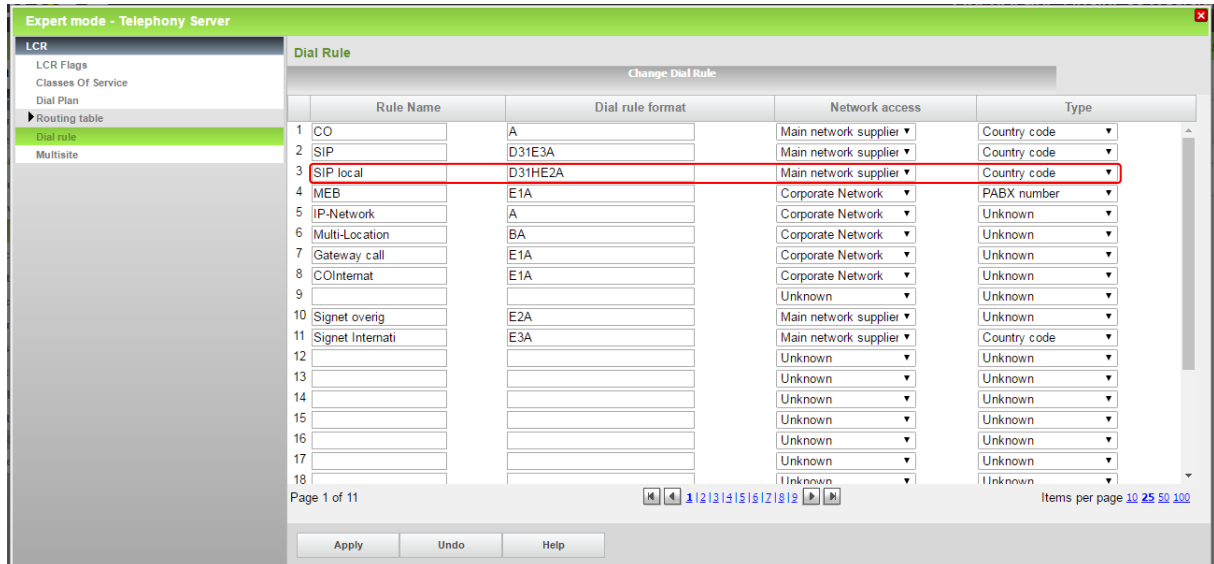
Callno	First Name	Last Name	Name	DID	Type	Fax Callno	Fax DID	Class of service	Call pickup
100	HFA	1	HFA 1	-	System Client	-	-	Internationaal	-
101	HFA	2	HFA 2	-	System Client	-	-	Internationaal	-
102	SIP	1	SIP 1	-	SIP Client	-	-	Internationaal	-
103	-	-	103	857470048	SIP Client	-	-	Internationaal	-
201	HFA201	Axel	Axel HFA201	857470028	System Client	211	407470093	Internationaal	-
202	HFA202	Axel	Axel HFA202	407470092	System Client	-	-	Internationaal	-
-	-	-	-	-	No Port	-	-	Internationaal	-
-	-	-	-	-	-	-	-	Internationaal	-

Additional manual Configuration

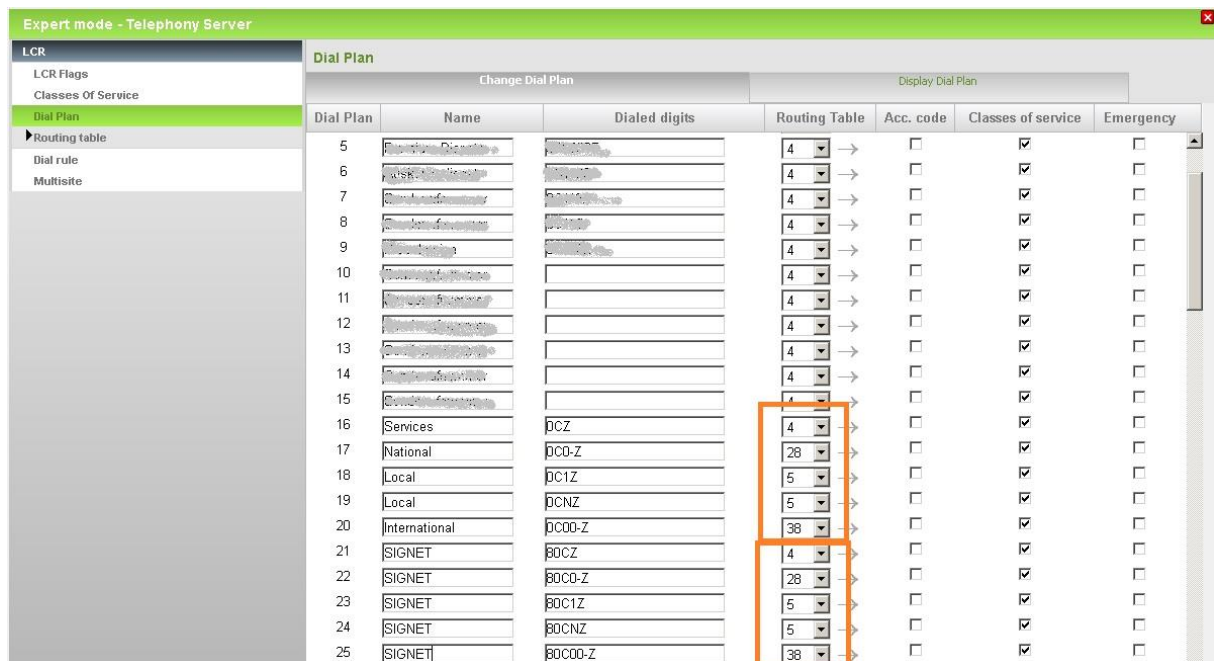
LCR settings

Important “Dial rule format settings” for local calls for OSBiz software <V2R2.

You need to modify the LCR Rules (more specifically the Dial rule format) in the way so as the dialed number will be finally sent with E.164 format (e.g:+3185xxxxxx)



In case of sw>=V2R2, the default LCR rules (Dialed digits, Routing tables and Dial Rule formats) have been modified in order to avoid doing further manual configuration. Consequently, it's not necessary to change anything since the default values are well applied with SIGNET. The LCR will look like the screen below.



Route configuration

After activation of SIGNET profile, the Route settings (e.g No. And type outgoing, call number with or without national/international prefix) are automatically applied properly. So you have nothing to configure in addition.

If don't keep the default seizure code, this can be changed at will (like in the example screenshot below). But then you have to double check again the LCR entries for Dialed Digits settings, since the setup of new seizure code will modify the front part of Dialed digits (before the separator 'C') for the entries which are used by the route of SIGNET .

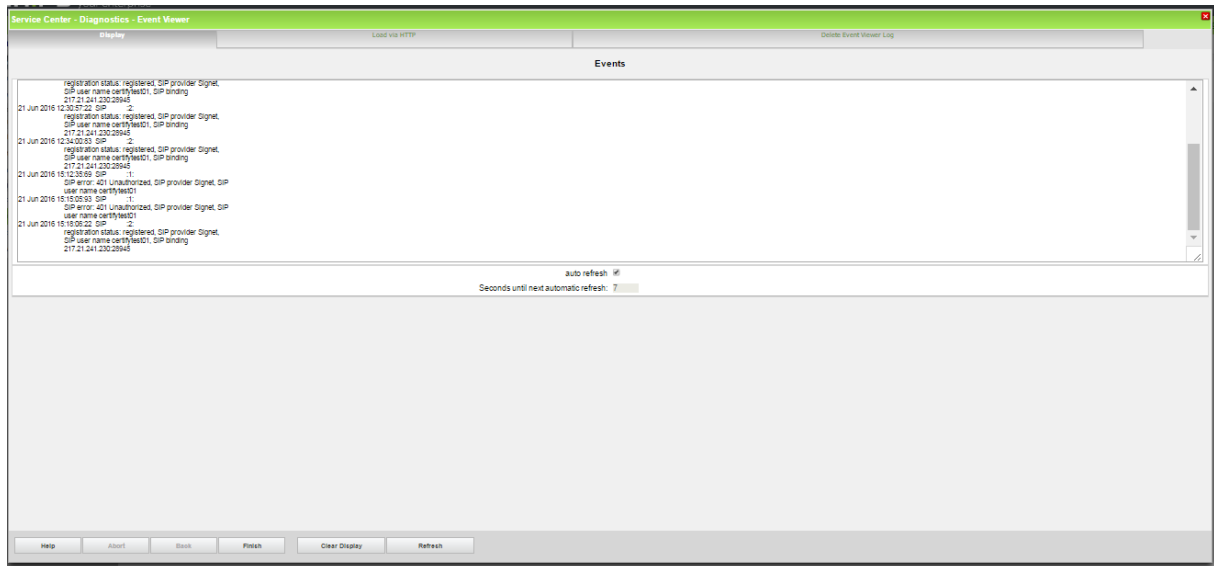
The screenshot displays the 'Expert mode - Telephony Server' interface. On the left, a sidebar lists various configuration categories: 'Trunk/Building', 'Trunks', 'Route', 'ISDN', 'Trk Grp. 2', 'Trk Grp. 3', 'Trk Grp. 4', 'Trk Grp. 5', 'Trk Grp. 6', 'Trk Grp. 7', 'App. 1-6', 'Trk Grp. 8', 'Trk Grp. 9', 'Trk Grp. 10', 'Trk Grp. 11', 'Signet', 'Trk Grp. 12', 'Trk Grp. 13', 'Trk Grp. 14', 'Trk Grp. 15', 'Trk Grp. 16', and 'Networking'. The 'Route' section is selected and highlighted in green. The main area shows the configuration for the 'Signet' route. The 'Route Name' is 'Signet'. The 'Seizure code' is '0'. The 'CO code (2nd trunk code)' is empty. The 'Gateway Location' section shows 'Country code: 31', 'Local area code: ', and 'FABX number: '. The 'PARX number-incoming' section shows 'Country code: 31', 'Local area code: ', 'FABX number: ', and 'Location number: '. The 'PARX number-outgoing' section shows 'Country code: ', 'Local area code: ', 'FABX number: ', and 'Suppress station number: '. The 'Overflow route' is set to 'None'. The 'Digit transmission' is set to 'en-bloc sending'. The 'Mobile Extension Number (MEX)' is empty. At the bottom, there are 'Apply', 'Undo', and 'Help' buttons.

Troubleshooting/Maintenance

Status OpenScape Business

In the service center there is some information to check the status of the provider.

The Event Viewer shows important information about the ITSP.



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

Service Center - Diagnostics - Status							
Station Status		Dialup Network Status	ITSP Status	VPN Status	Overview of IP Addresses		BLF Status
Callno	Name	Device Type	IP Address	MAC Address	Current SW Version	HW Version	Status
100	TDM 100	optiPoint 500 Basic	-	-	VM.PR2.02	-	Disabled
101	-	OpenStage 40	-	-	-	-	Disabled
102	-	optiPoint 500 Standard	-	-	P20	-	Disabled
103	-	-	-	-	-	-	Disabled
104	-	-	-	-	-	-	Disabled
105	-	optiPoint 500 Standard	-	-	P20	-	Disabled
106	-	Basestation	-	-	-	-	Disabled
107	-	Basestation	-	-	P20	-	Disabled
150	-	analog	-	-	-	-	Enabled
151	FAX 151	analog	-	-	-	-	Enabled
152	-	analog	-	-	-	-	Enabled
153	-	analog	-	-	-	-	Enabled
**131	OS60 131	OpenStage 60/80	192.168.5.70	00:1a:e8:58:3f:f9	V3R0.28.0 HFA C01	-	Enabled
132	-	OpenStage 80	192.168.5.50	00:1a:e8:03:02:99	V3R0.28.0 HFA C01	-	Enabled
133	OS15 133	OpenStage 15	-	-	-	387S41D0-0	Enabled
134	DP35 132	OpenScape Desk Phone IP 35G Eco	192.168.5.68	00:1a:e8:74:f1:1a	V3R0.25.0 HFA C01	S30817-S7710-A307-06	Enabled
135	OS60 135	OpenStage 60/80	192.168.5.57	00:1a:e8:4f:8a:ea	V3 R0.28.0	387S43B0-1	Enabled
136	-	OpenStage 40	-	-	-	387S42B0-1	Disabled

Service Center - Diagnostics - Status

Session Status ITSP Status SIP Status

Status for the Internet Telephony Service Provider (ITSP)

	Provider	Status	Account ID	User
	BOOM	Disabled		
	Circuit UTC (Cloud)	Disabled		
	COOLT UK & Europe	Disabled		
	COOLT (FR)	Disabled		
	Deconnect B.V.	Disabled		
	Infopact	Disabled		
	Moto Communications	Disabled		
	oneCentral	Disabled		
	OneXS	Disabled		
	Priority Telecom	Disabled		
	RoutT	Disabled		
<input type="button" value="Restart"/>	Signet	Enabled	certifres01	registered
	Slype Connect	Disabled		
	SpeakUp	Disabled		
	Tele2 NL-ACD	Disabled		
	Tele2 NL-RT	Disabled		
	T-Mobile (NL)	Disabled		
	Verizon	Disabled		
	Vodafone Anlagenanschluss R3	Disabled		
	Vodafone NL	Disabled		
	Vooneris	Disabled		
	Ziggo	Disabled		

Help Abort Back Finish

How to get Traces in case of problem

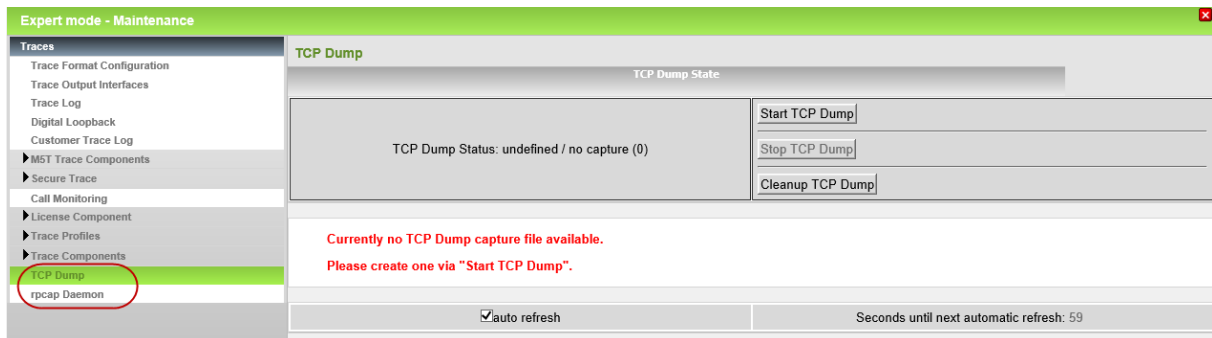
Wireshark traces

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 analyses 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 occurs, 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.

Start/Stop	Trace Profile	Description	Status
Start	CS_A_application	Connections to external applications or wrong functionality. Application traces have to be collected additionally.	Red
Start	Display_problems	The displayed texts are incorrect, missing or appear after a delay. This applies to all device types with a display.	Red
Start	Feature_Service_activation	Issues with feature/service (de-)activation via service code or menu option.	Red
Start	Gateway_Stream_detailed	Detailed analysis of issues with missing payload in calls between IP and TDM, e.g. SIP trunk to UPDE phone or TDM trunk to IP phone. High influence on the system performance.	Red
Start	Gateway_Stream_overview	Issues with missing payload in calls between IP and TDM, e.g. SIP trunk to UPDE phone or TDM trunk to IP phone. Overview only, but low influence on the system performance.	Red
Start	IP_interfaces	Issues with system IP interfaces: , i.e. WAN, LAN or Admin.	Red
Start	License_problem	Issues with licensing, e.g. with license configuration or evaluation.	Red
Start	Network_Call_Routing_LCR	Issues with alive monitoring in between nodes, LCR dialrules or unreachable destinations.	Red
Start	Peripheral_cards	Issues with the initialization or startup of peripheral cards.	Red
Start	RAS_or_Internal_access	Shall be combined with the IP_interfaces profile for detailed analysis of issues with remote administration (RAS) or internet access.	Red
Start	Ressources_MOH_Conferencing	Issues with music on hold or conferencing.	Red
Stop	SIP_Interconnection_Subscriber_ITSP	Shall be combined with the voice_fax_connection profile for detailed analysis of issues with SIP phones, access points, ITSP interfaces or SIP interconnections, e.g. calls to or from ITSP/SIP are not signaled at phones, DTMF or fax cannot be sent or received via ITSP/SIP interconnections.	Green
Start	SIP_Registration	ITSP / SIP-nodes / SIP-phones / SIP-access points cannot register or lose registration.	Red
Start	Smart_VM	Shall be combined with the voice_fax_connection profile for detailed analysis of issues with Smart Voicemail.	Red
Start	UC_Smart	Shall be combined with the voice_fax_connection profile for detailed analysis of issues with UC Smart.	Red
Stop	Voice_Fax_connection	Issues with voice or fax connections, e.g. missing or distorted connections, wrong LED signals, interrupted calls or faxes, user cannot take or answer call, call not ringing at phone, no ringback tone. This trace profile is enabled by default (factory settings). It may be combined with interface specific profiles depending on the involved device types.	Green
Start	VPN	Issues with VPN connections, e.g. connection disrupted, unable to import or generate SSL certificate (. crt), certificate revocation list (. crl), peer certificate (. pkcs12) for VPN, unable to import or generate SPE certificate. Issues with the speed mode of the Web based Assistant, see data set	Red

Buttons: Help, Abort, Back, Next, Delete Trace, Diagnosis Logs