OpenScape Business

How to Configure SIP Trunk for Hong Kong Broadband Network (HKBN)

Table of Contents

Table of History

Date	Version	Changes
02.05.2017	1.0	First version
26.06.2017	1.1	Optimize document by deleting useless parts
10.09.2024	1.2	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.

Information

Trunk Configuration Data provided by HKBN

The configuration data needed to setup the SIP trunk can be found on the HKBN sales order and installation order form.

Information from ITSP – HKBN provider:

| Name of customer related data	Example	Used in field of OSBiz – WBM	Needed to be configured
Call number	37046900 ~ 999		
Number of DIDs	100 (i.e. 900 ~ 999) [*1]	DID for subscriber	Yes
IP address / subnet mask, default router / gateway	192.168.0.101 / 24 192.168.0.1	Internet Configuration	Yes
SIP Domain	ippbx.hkbn.net	ITSP Domain Name	Yes
Proxy	10.15.224.199	ITSP Provider Proxy	Yes
Prime number	37046900	Internet telephone station / Default number	Yes
Number of SIP channels	8	Assigned Lines	2 [*2]

Remarks:

[*1] The digit length and range of DID number can be negotiated with ITSP (i.e. HKBN) on application

[*2] The number of "Assigned Lines" are limited by "Number of SIP channels" provided by ITSP and "Available licenses for SIP trunk" in License Management

# Configuration Setup Wizard

Internet Telephony

Go to Setup Wizards > "Central Telephony" > "Internet Telephony"
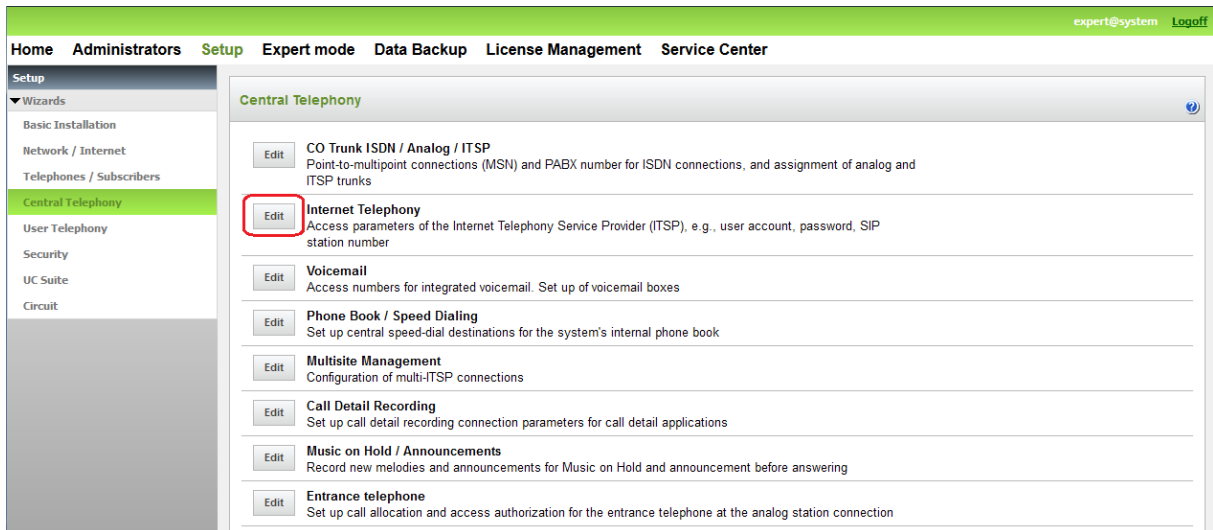
The overview page appears for entering the location data.

Please enter country code (i.e. "852" for Hong Kong region) with optional local area code, which is depending on number of digits on ITSP incoming calls.

The local area code will be combined with subscriber DID number as CLIP for outgoing call.
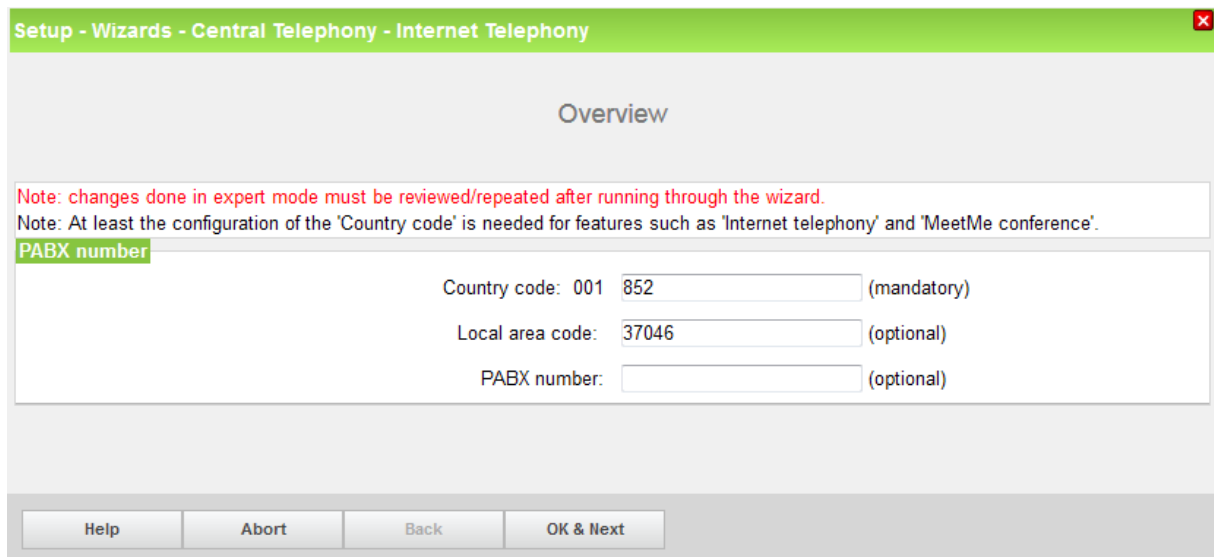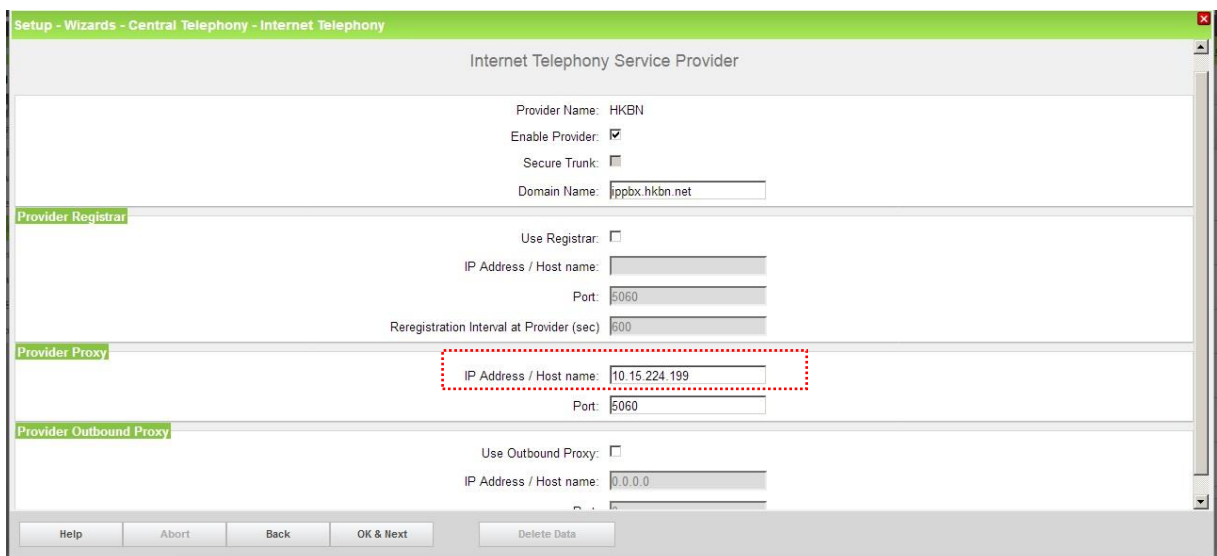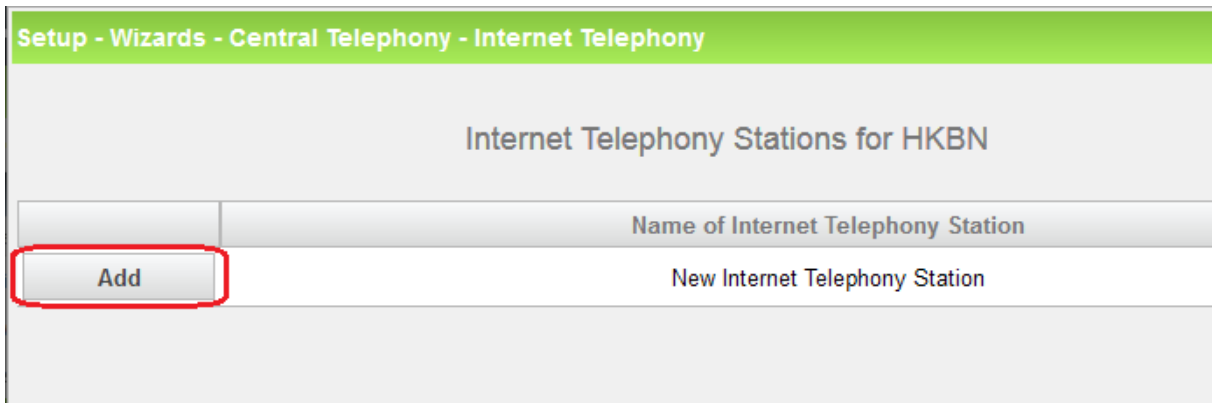

Click [OK & Next]

Provider configuration and activation for Internet Telephony -> uncheck "No call via Internet", use "County specific view" to select "All countries" and select "HKBN" as "Activate Provider".
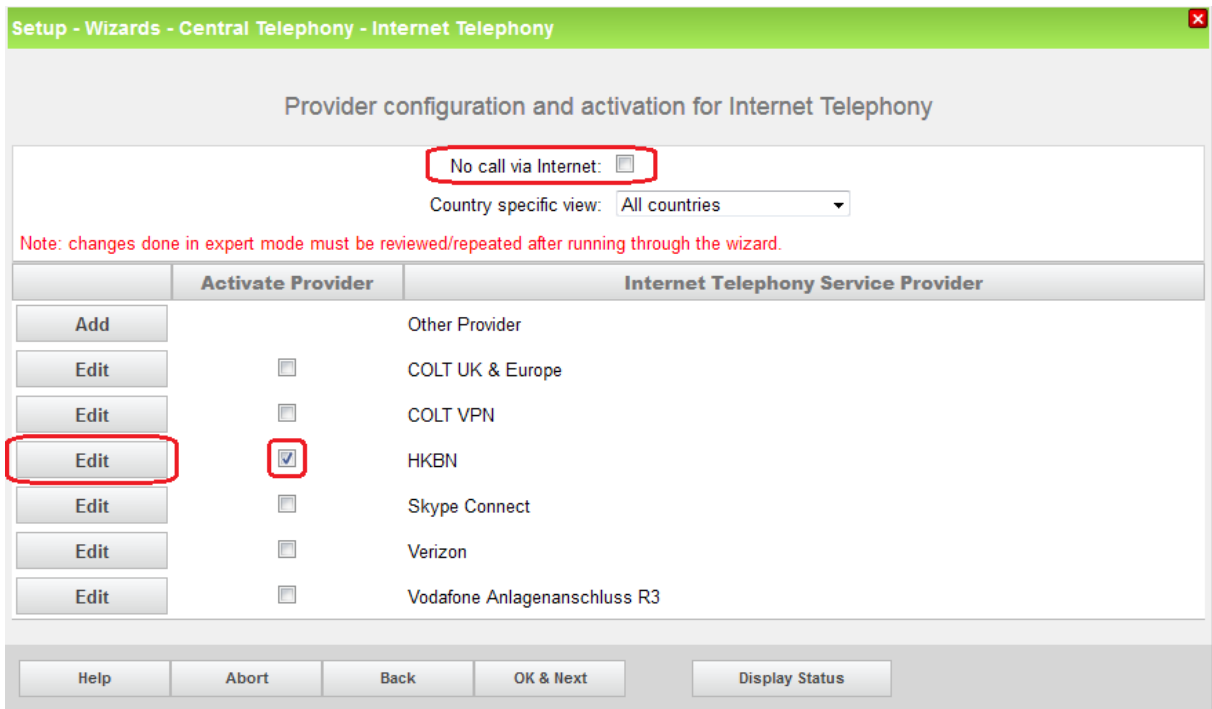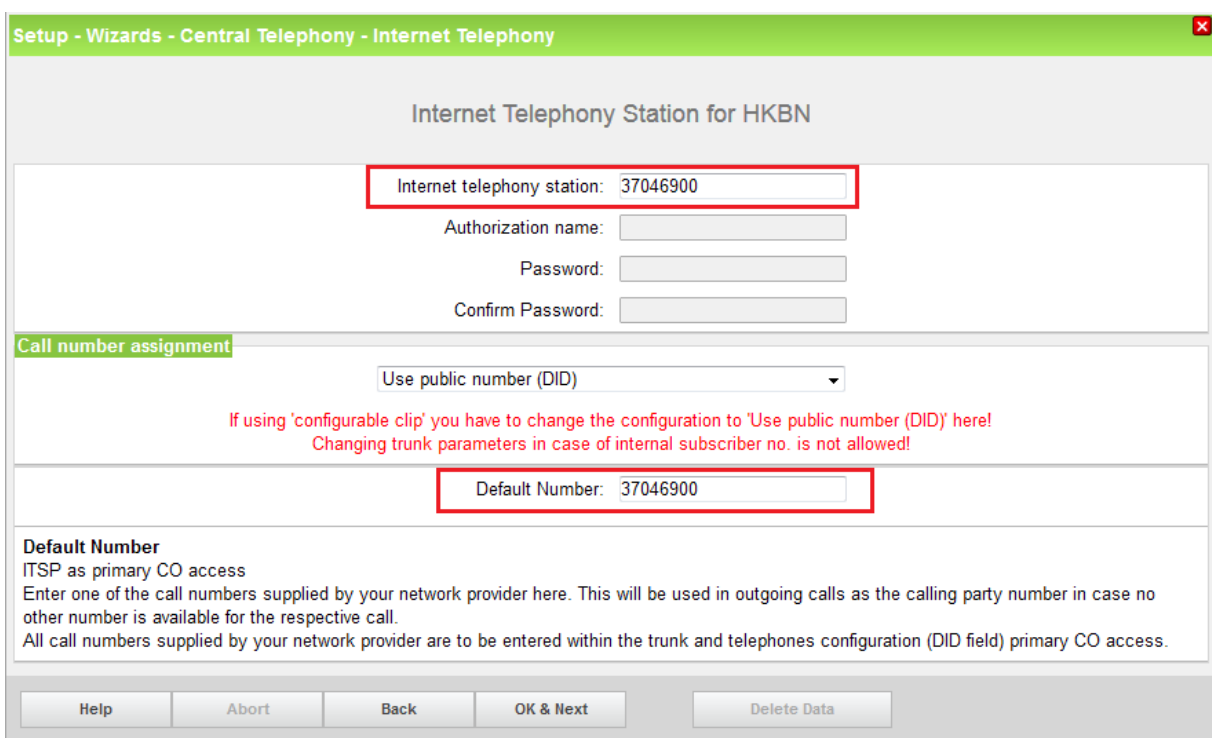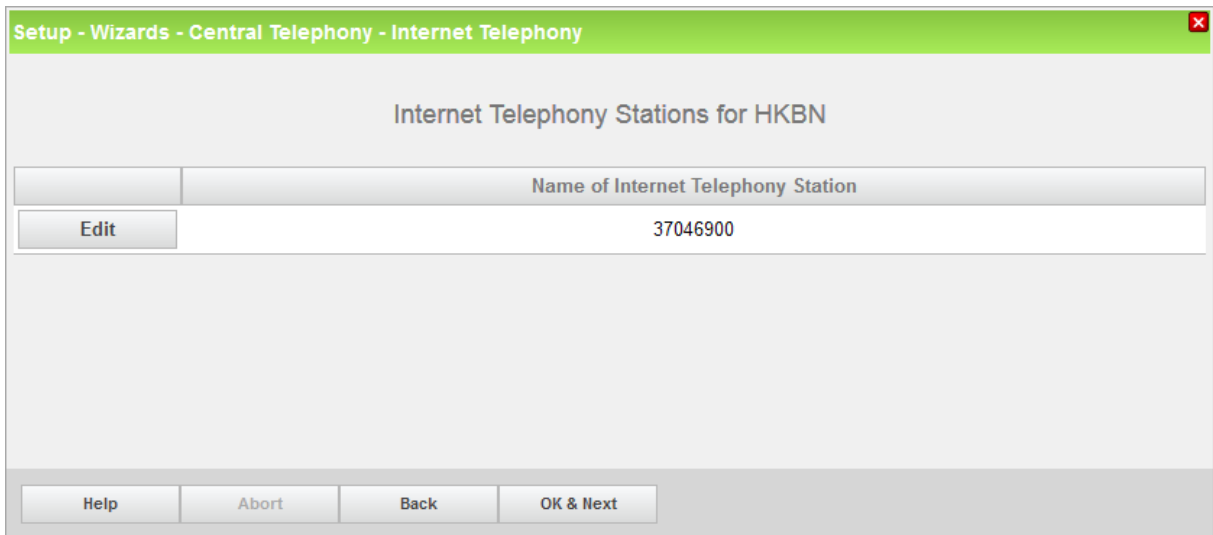

Click on [Edit]

Enter the data with reference to ITSP SIP trunk information, and then click [OK & Next]
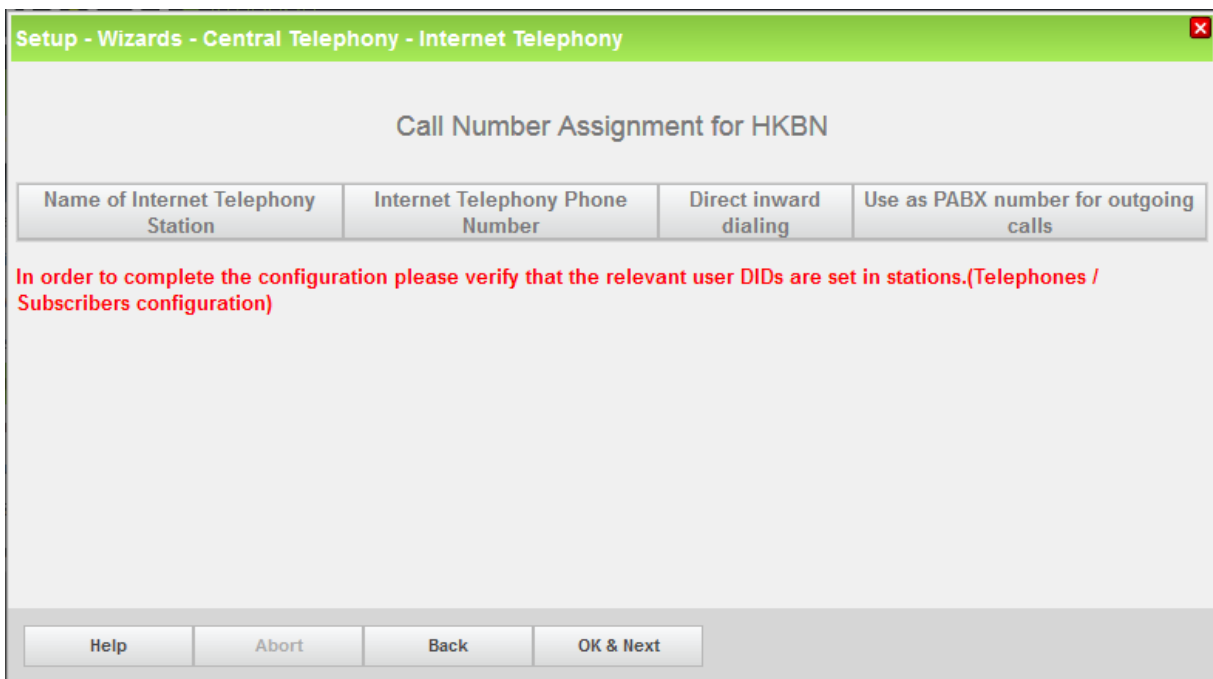
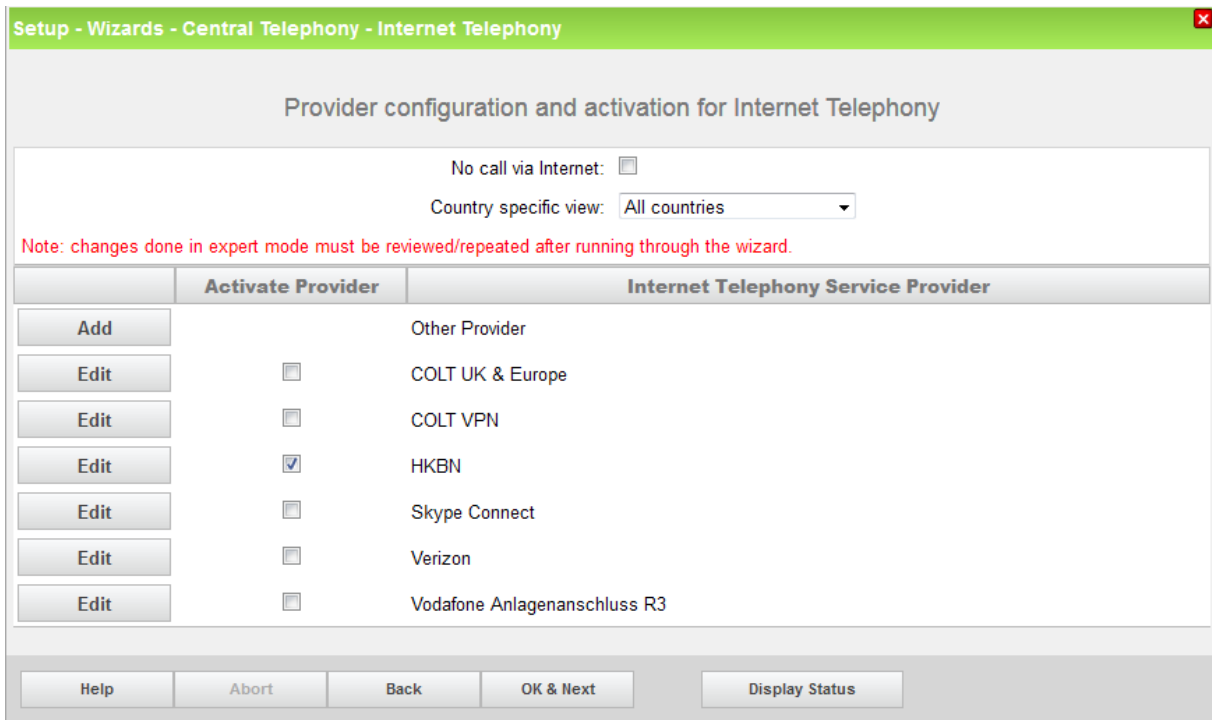Click on [Add] to create new Internet Telephony Station

Enter the data of "Internet telephony station" and "Default Number" with reference to prime number of SIP trunk in general and then click [OK & Next].
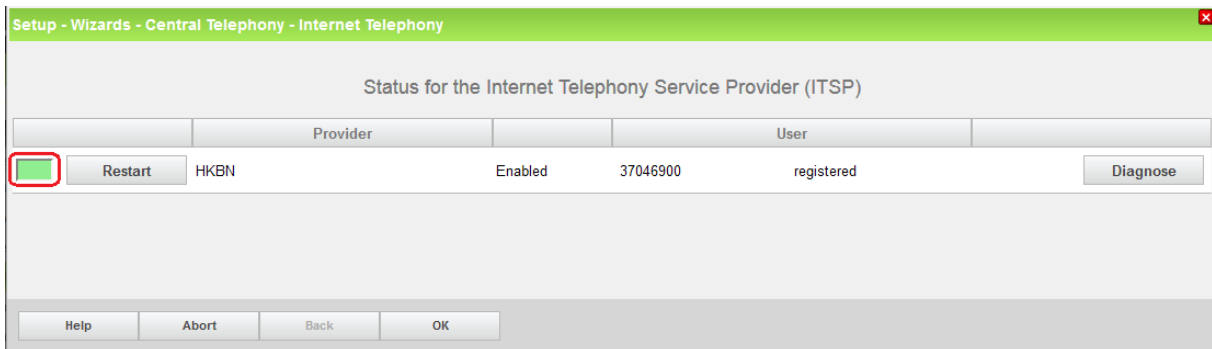
Click [OK & Next]
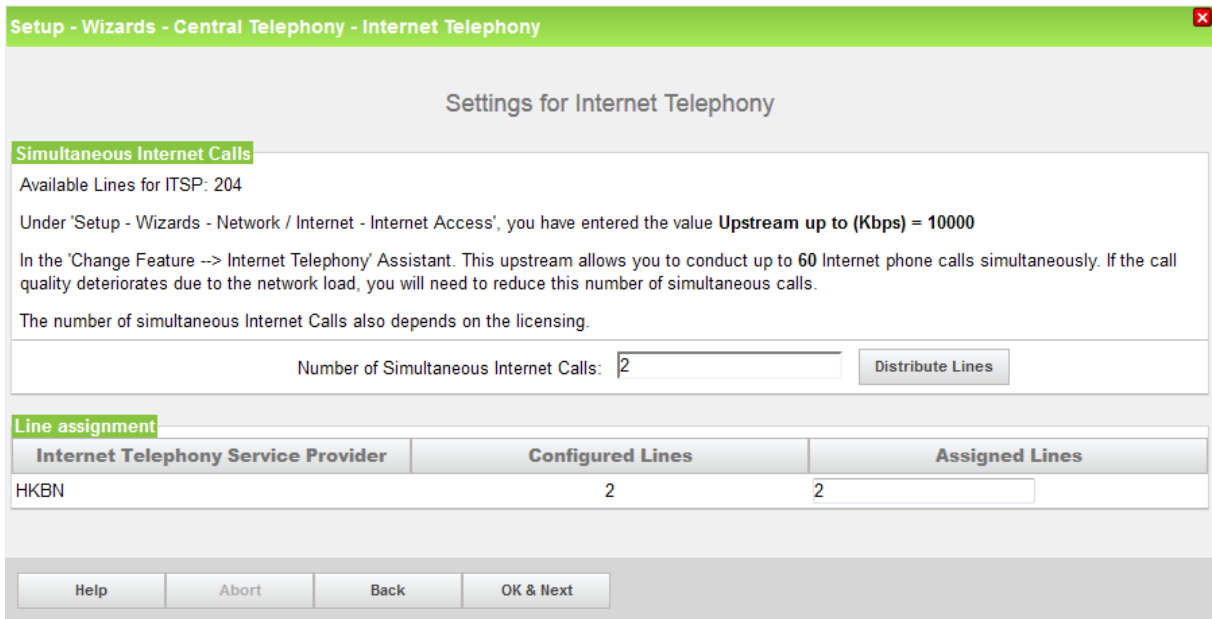

Click [OK & Next]

Click [Display Status] to verify SIP trunk for "HKBN" is activated

Green color box means the ITSP provider is activated, click [OK] to return, then click [OK & Next] with no further input

Enter number of simultaneous Internet calls with reference to number of channels by ITSP SIP trunk and available license for SIP trunk in License Management, then click "Distribute Lines".
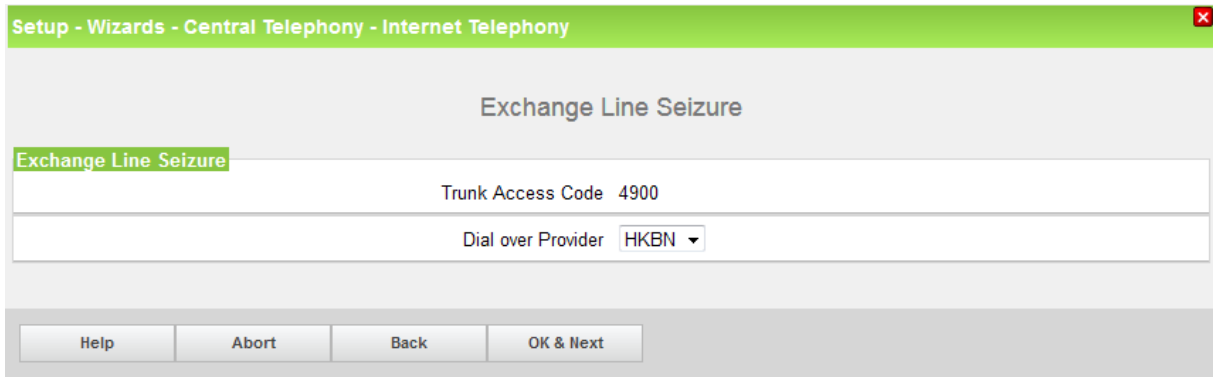

Click [OK & Next]
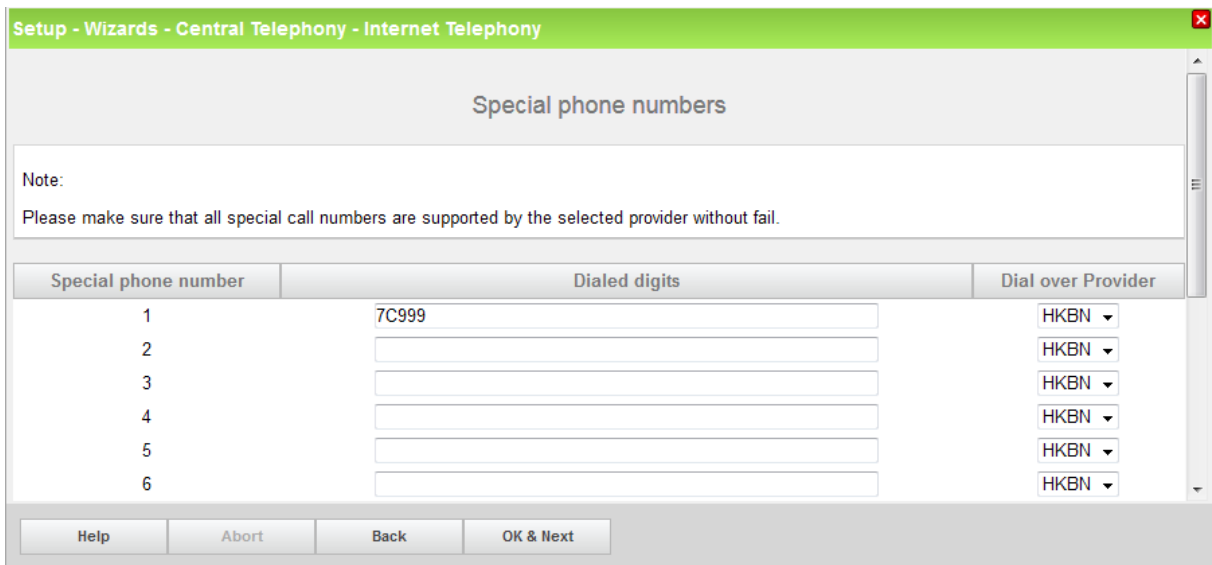
Enter special phone number; such as emergency telephone number (e.g. "999"), leading with access code for SIP trunk (e.g. "7"), then click [OK & Next] and [Next] with no further input.

Remarks:

- It is strongly recommended to select TDM trunk for emergency call out if available.
- Dial plan can be modified on LCR in Expert mode afterwards

In this example, default Trunk Access Code was set to "4900".

Click [OK & Next] with no further input ("Trunk Access Code" was assigned on Setup Wizards)
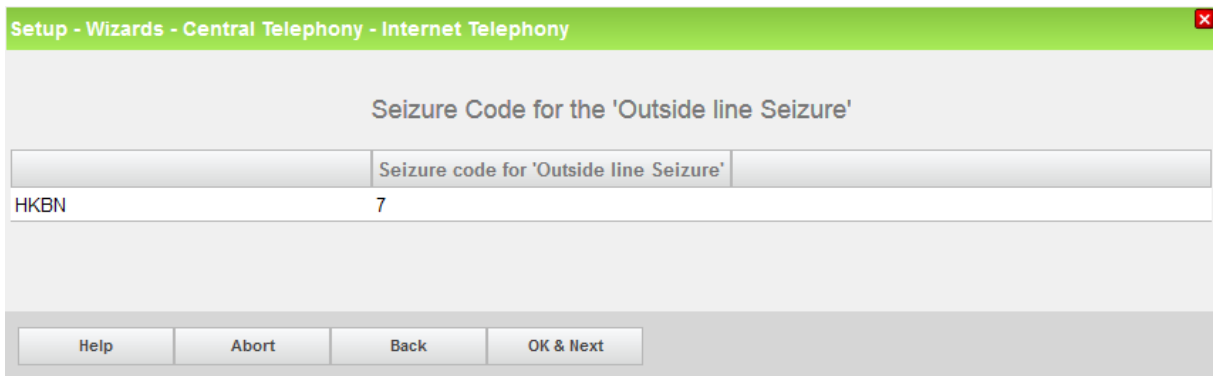
Click [OK & Next] with no further input (Seizure code for "Outside line Seizure" was assigned on Setup Wizards)

Click [Finish] to complete setup wizard

DID configuration

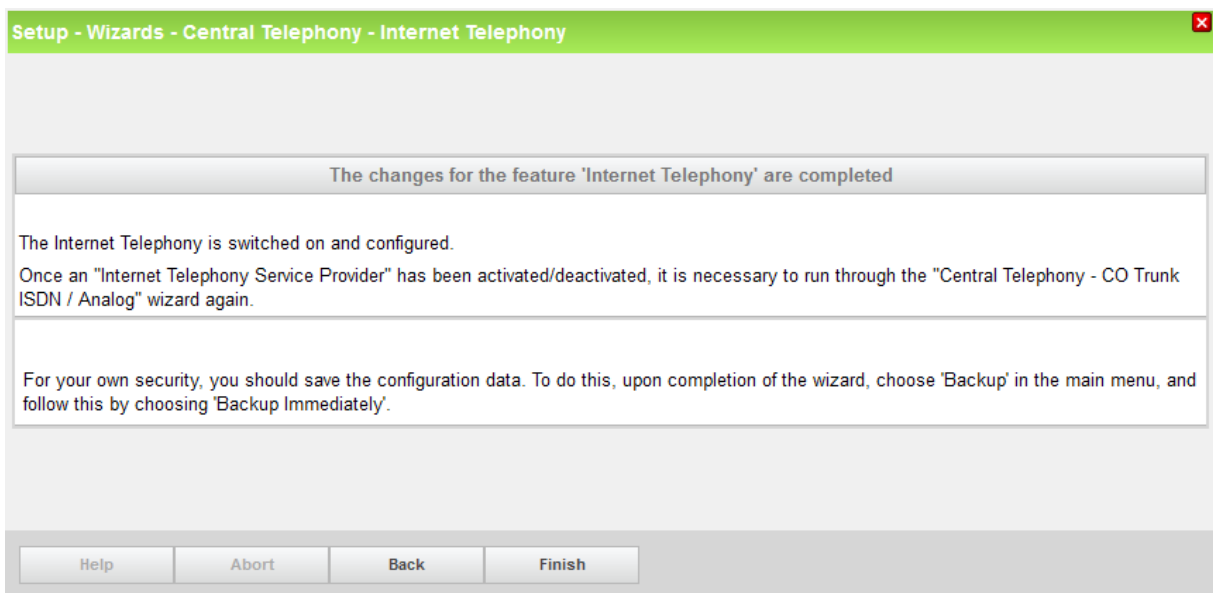The DID number range should be reference to ITSP SIP trunk information. It may assign "Callno" and "DID" with same number for easy management.
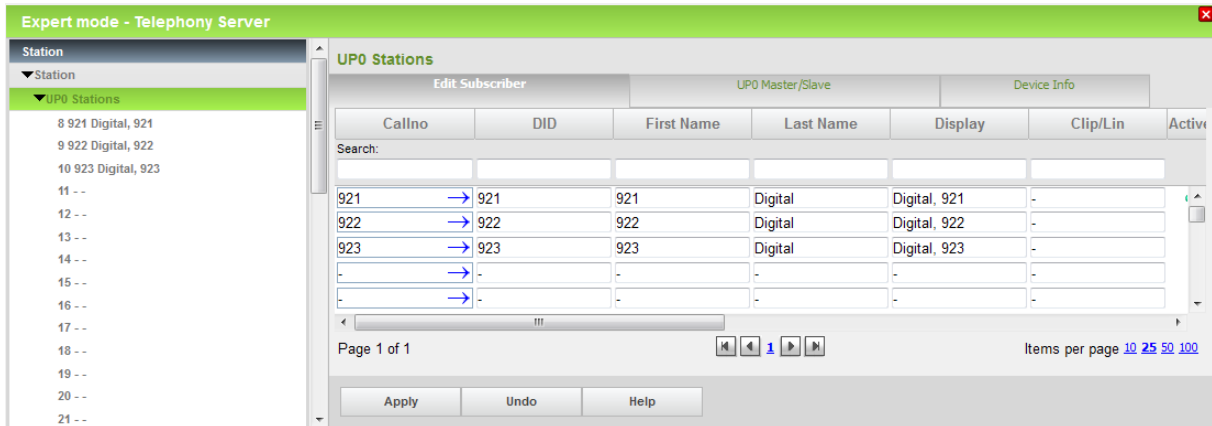
Hint 1:The Local area code (which is set on "Internet Telephony" setup wizard) will be used to combine with "DID" number as caller display on outbound call.

Hint 2: It is possible to change CLIP for station subscriber individually as request.

Additional Configuration

License

Add the "S2M/SIP Trunk" license to the SIP-Trunk
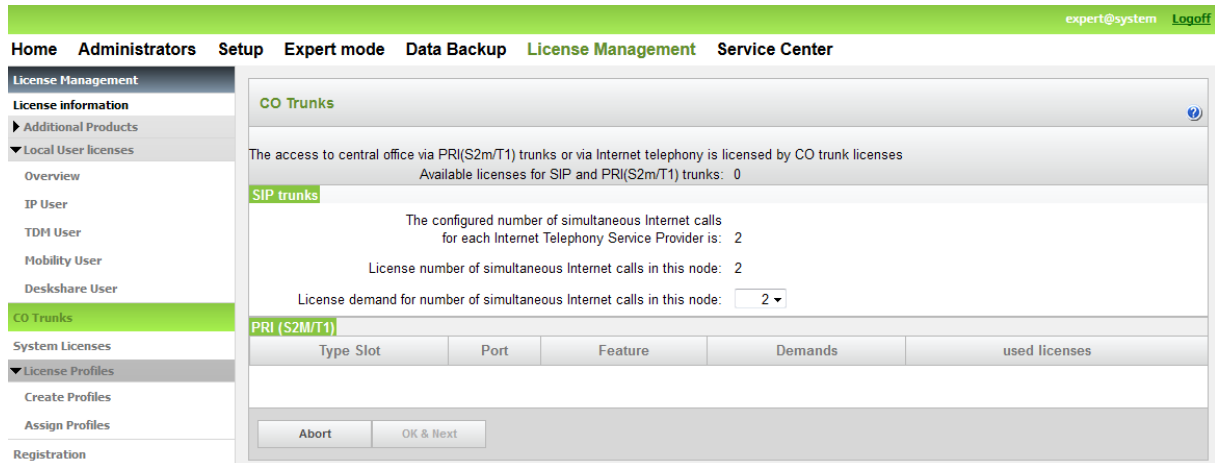
Route configuration (optional)

The route configuration will be generated automatically after setup wizard. It may change the seizure code as need.
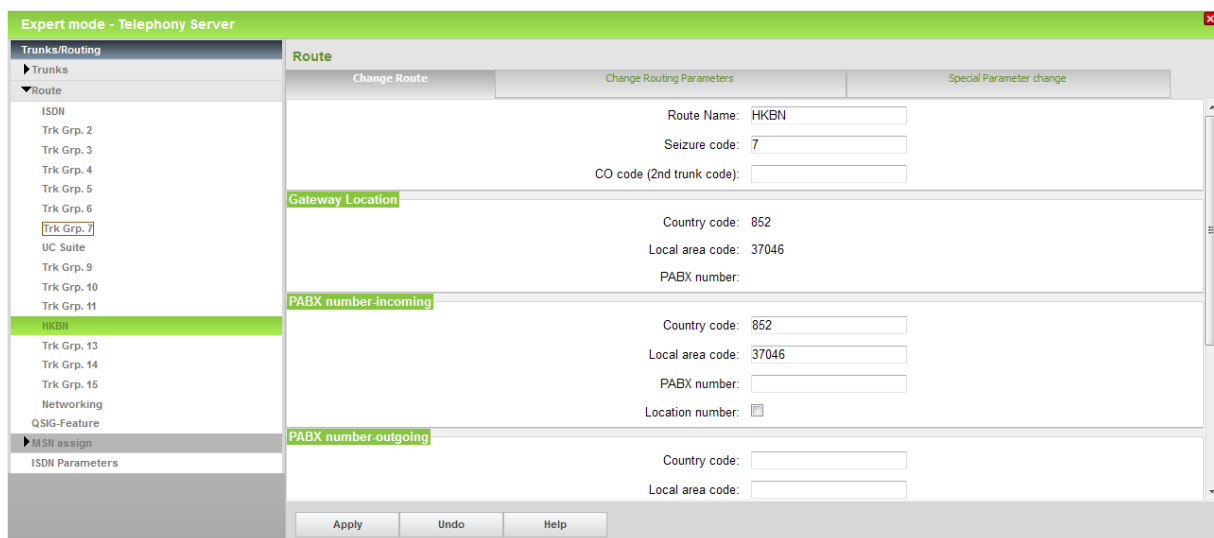
In general, there is nothing change for routing parameter or special parameter
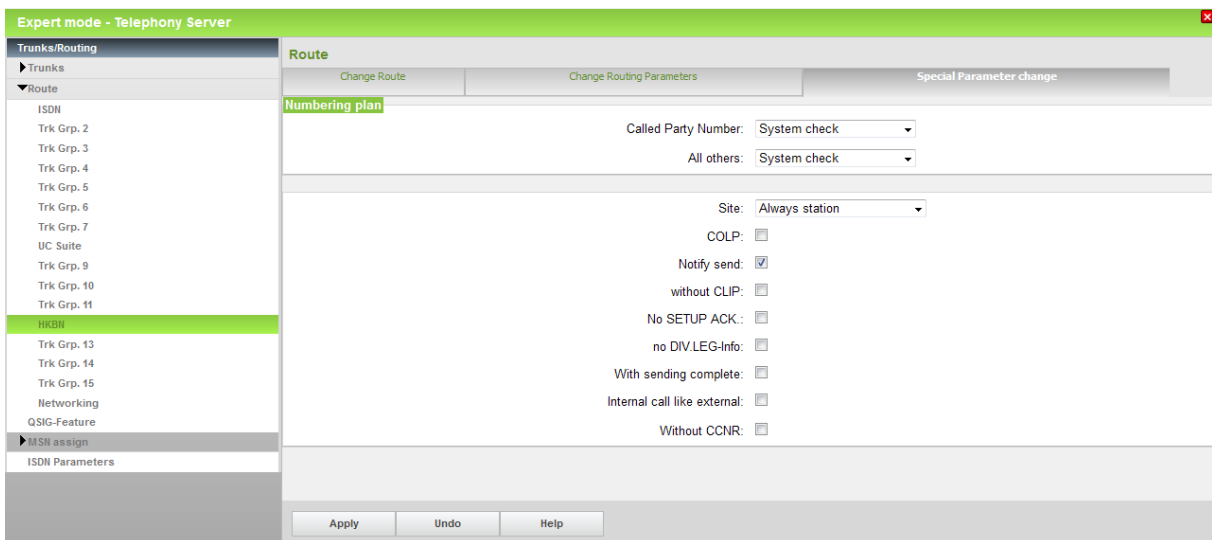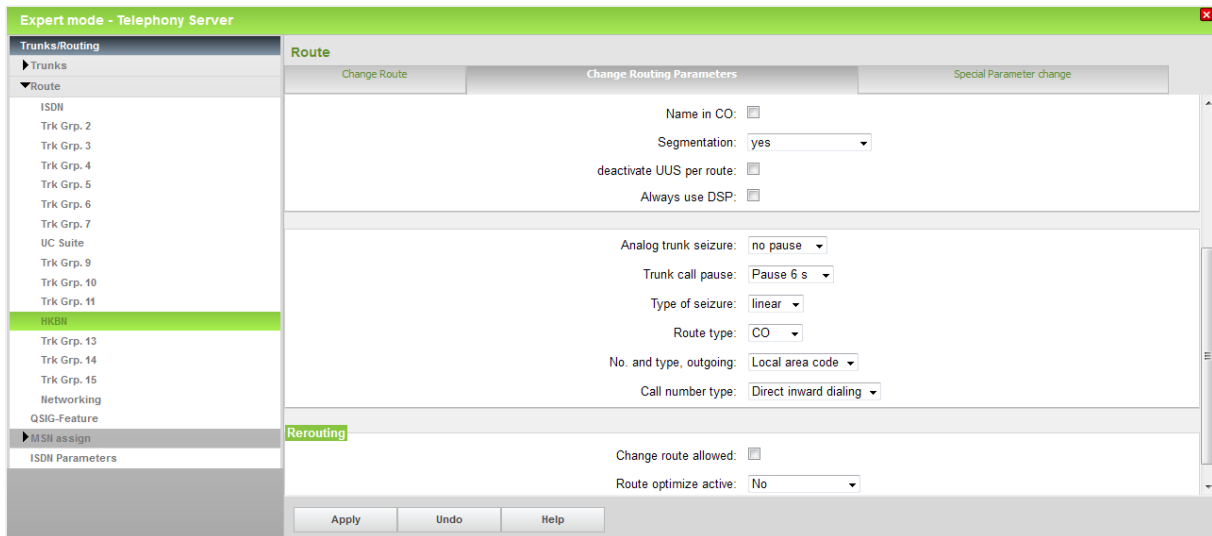
LCR changes (optional)

There are some dial strings are generated automatically in Dial Plan after setup wizard. With reference to numbering plan for telecommunications services in Hong Kong, please update dial plan setting as need.
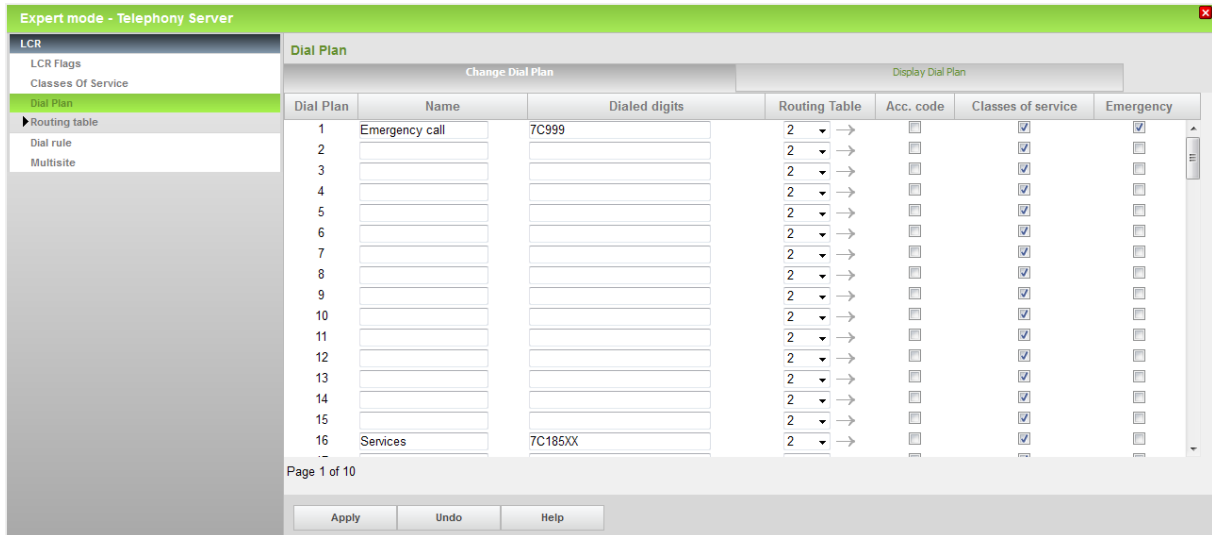
It may assign different routing table on designated dialed digits that assign different Class of Service (COS) as toll control.

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
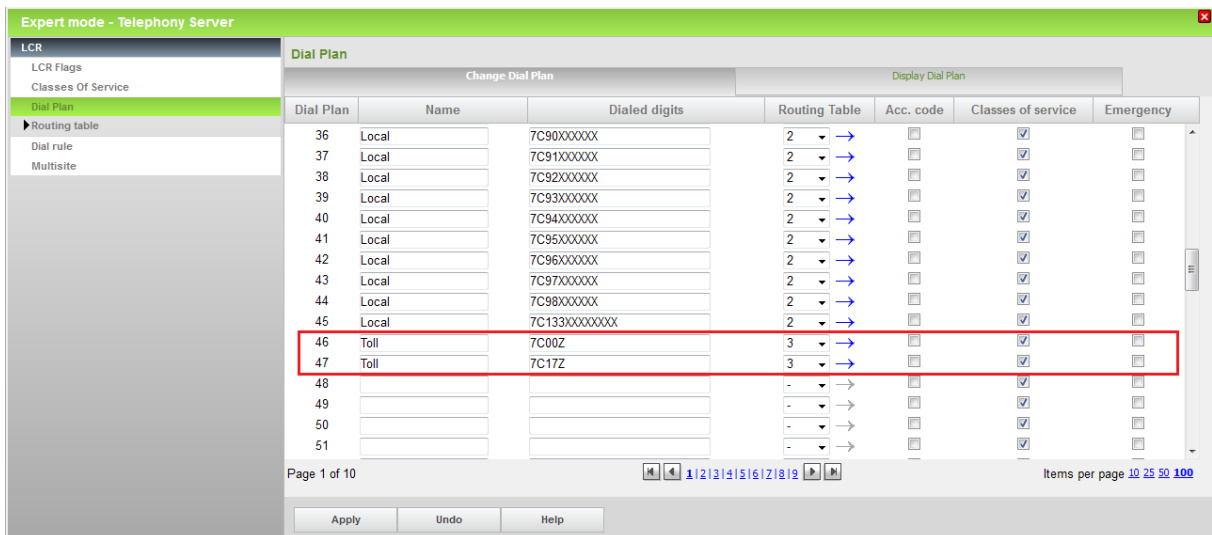 - 14 - Table
  - 15 - Table
  - 16 - Table
  - 17 - Table
  - 18 - Table
  - 19 - Table
  - 20 - Table
  - 21 - Table

Routing Table

Change Routing Table

Routing Table:2   en-bloc sending

Index	Dedicated Route	Route	Dial Rule	min. COS	Warning	Dedicated Gateway	GW Node ID
1	☐	HKBN	HKBN_Local →	10	None	No	
2	☐	None	None	15	None	No	
3	☐	None	None	15	None	No	
4	☐	None	None	15	None	No	
5	☐	None	None	15	None	No	
6	☐	None	None	15	None	No	
7	☐	None	None	15	None	No	
8	☐	None	None	15	None	No	
9	☐	None	None	15	None	No	
10	☐	None	None	15	None	No	
11	☐	None	None	15	None	No	
12	☐	None	None	15	None	No	
13	☐	None	None	15	None	No	
14	☐	None	None	15	None	No	

[Apply] [Undo] [Help]

Expert mode - Telephony Server

LCR
- LCR Flags
- Classes Of Service
- Dial Plan
- ▶ Routing table
- Dial rule
- Multisite

Dial Rule

Change Dial Rule

|	Rule Name	Dial rule format	Network access	Type
1	CO	A	Main network supplier	Unknown
2	SIP	A	Main network supplier	Unknown
3	SIP local	HE2A	Main network supplier	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 supplier	Unknown
9	Add_cc_to_Canoni	D852E2A	Main network supplier	Country code
10	National_to_Cano	D852E3A	Main network supplier	Country code
11	Internat._to_Can	E3A	Main network supplier	Country code
12	SIP local_Canoni	HE2A	Main network supplier	Country code
13	HKBN_Local	A	Main network supplier	Unknown
14	HKBN_Toll	A	Main network supplier	Unknown
15			Unknown	Unknown
16			Unknown	Unknown

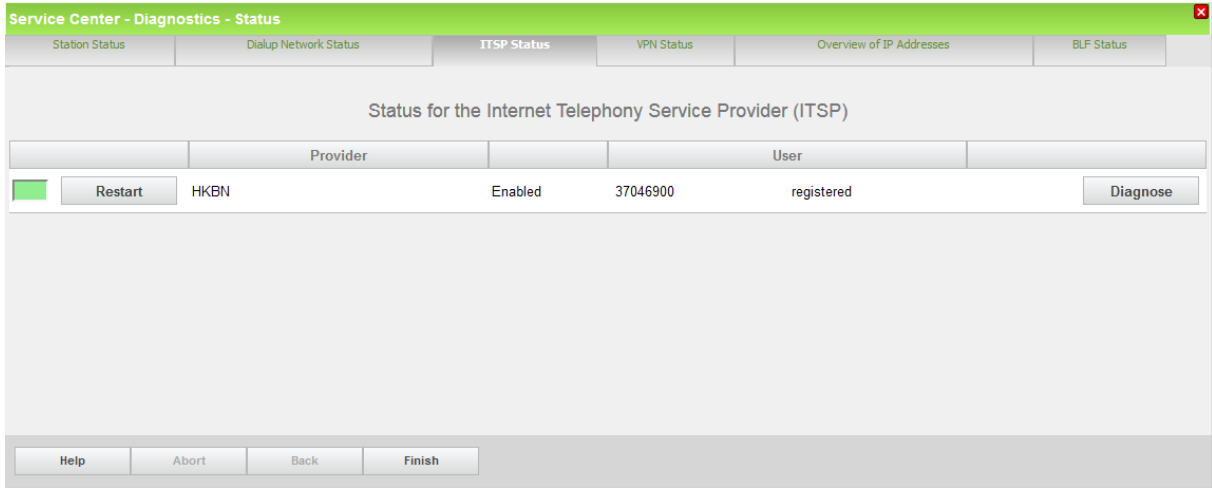Page 1 of 11 |◀ ◀ 1|2|3|4|5|6|7|8|9 ▶ ▶| Items per page 10 25 50 100

[Apply] [Undo] [Help]

How to check the status of SIP connection with HKBN

It is supported to check with Service Center > "Diagnostics" > "Status" for ITSP registration status or restart as need.
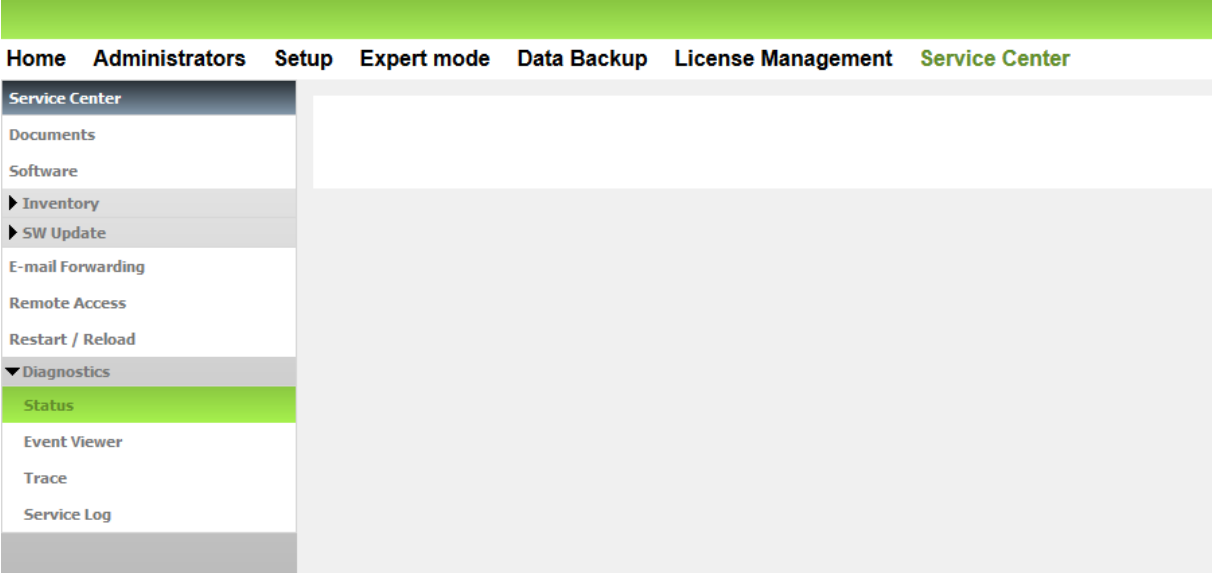
Select "ITSP Status" tag to check status of SIP trunk, green color means in ready state.

Known restrictions:

- "CLIR" is not supported by ITSP; user may dial with prefix "133" to mask caller display instead
- "CLIP no screening" is not supported by ITSP
- "COLP" is not supported by ITSP

Appendix

In general, the numbering plan for telecommunications services in Hong Kong is managed by Hong Kong Government, Office of the Communications Authority (OFCA). The details number assignment may be assigned by individual service provider.

- http://www.ofca.gov.hk/en/industry_focus/telecommunications/index.html
- https://www.hkbnes.net/en/solutions/voice/enterprise-sip-trunk.shtml