



OpenScape Business V3

SIP Trunk for Chunghwa Telecom IP Centrex
- Taiwan

OpenScape Business V3 Mainboard Family
OpenScape Business S

About this document

This configuration guide describes an example of how to set up the SIP trunk **Chunghwa Telecom IP Centrex** as an ITSP connection to the OpenScape Business.

Note: The basis for this document is the current OpenScape Business V3R4.3. 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.

System	OpenScape Business
Released with Version	V3R4.3
Chunghwa Telecom IP Centrex	Features & Capabilities
Account (DID/Client)	<i>DID</i>
Multisite	<i>no</i>
CLIP / CLIR	<i>no</i>
CLIP no Screening	<i>no</i>
COLP	<i>no</i>
Call Forwarding (302)	<i>no</i>
DTMF (RFC2833/4733)	<i>yes</i>
Codecs G.722/G.711/G.729	<i>no / yes / yes</i>
G.711 Fax / T.38 Fax	<i>no / no</i>
Secure trunk	<i>no</i>

Remarks:

The SIP trunk **Chunghwa Telecom IP Centrex** is not released for

- G.711 Fax / T.38 Fax
- UC Suite

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Date	Version	Changes
18.02.2026	1.0	release with OpenScape Business V3R4.3

Information

The **Chunghwa Telecom IP Centrex** SIP-Trunk will be released for the first time with OpenScape Business V3R4.3 variants

- OpenScape Business V3 Mainboard Family
- OpenScape Business S

Trunk Configuration Data provided by Chunghwa

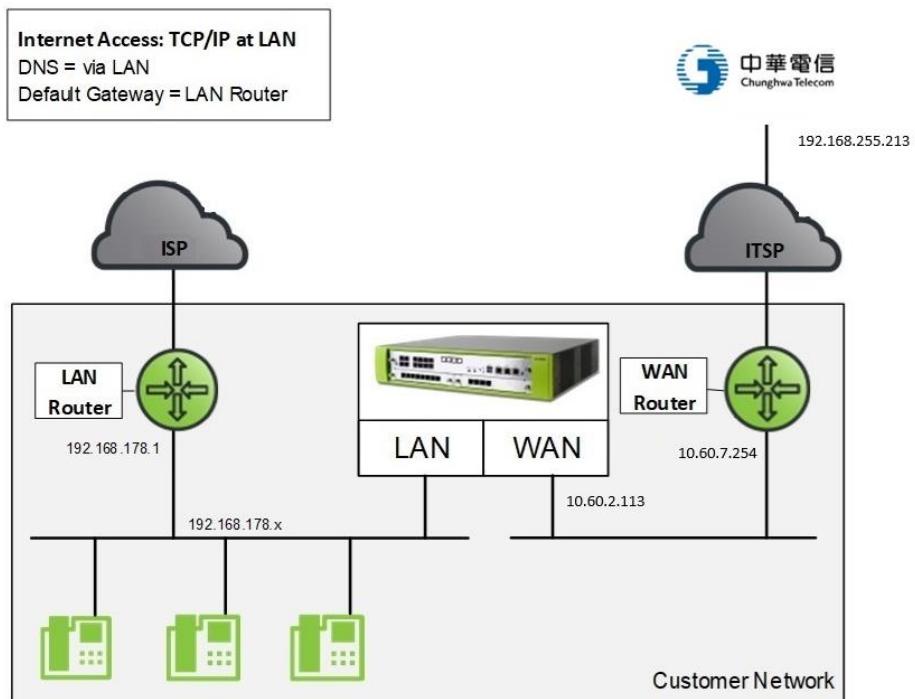
Applying for **Chunghwa Telecom IP Centrex** requires providing the OpenScape Business IP information (configured as WAN IP), Domain Name for SIP Trunk, SIP Proxy Domain, and Outbound Proxy IP Address. This information can also be provided by the **Chunghwa Telecom** installer who provides the ITSP.

Configuration Wizard

Internet Configuration (WAN Interface dedicated to ITSP)

Chunghwa Telecom supplies the SIP trunk connection in conjunction with the appropriate access device.

The IP address for the OpenScape Business is listed in the customer data and must be configured on the WAN interface, e.g.:



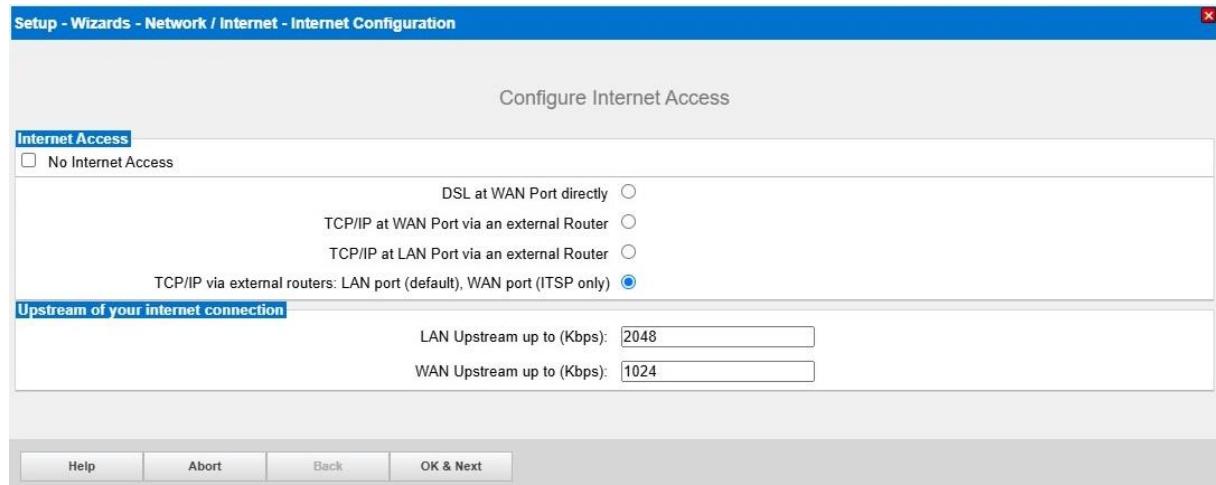
No static route is required for the default configuration.

Configure WAN Interface

For the configuration of the WAN Interfaces go to wizard for Network / Internet – “Internet Configuration” or Basic Installation,



activate the option „**TCP/IP via external routers: LAN port (default), WAN port (ITSP only)**” and assign upstream for LAN and WAN interface.



Click [OK & Next].

On the next page please add OpenScape Business WAN IP address, Subnet Mask and IP address of Default Router for WAN interface:

Setup - Wizards - Network / Internet - Internet Configuration

Internet Access

IP Address:	10.60.2.113
Subnet Mask:	255.255.248.0
MAC Address:	00:1a:e8:00:00:00
Ethernet Link Mode:	Auto
Max. Data Packet Size (bytes):	1500
Bandwidth Control for Voice Connections:	Keine
Bandwidth for Downloads:	10000
Bandwidth for Uploads:	10000
Bandwidth Used for Voice/Fax (%):	80
IEEE802.1p/q Tagging:	<input type="checkbox"/>
IEEE802.1p/q VLAN ID:	0
IP Address of Default Router for WAN:	10.60.7.254

Help | Abort | Back | OK & Next

Click [OK & Next].

On next page please add the primary DNS Server and default router of the LAN interface:

Setup - Wizards - Network / Internet - Internet Configuration

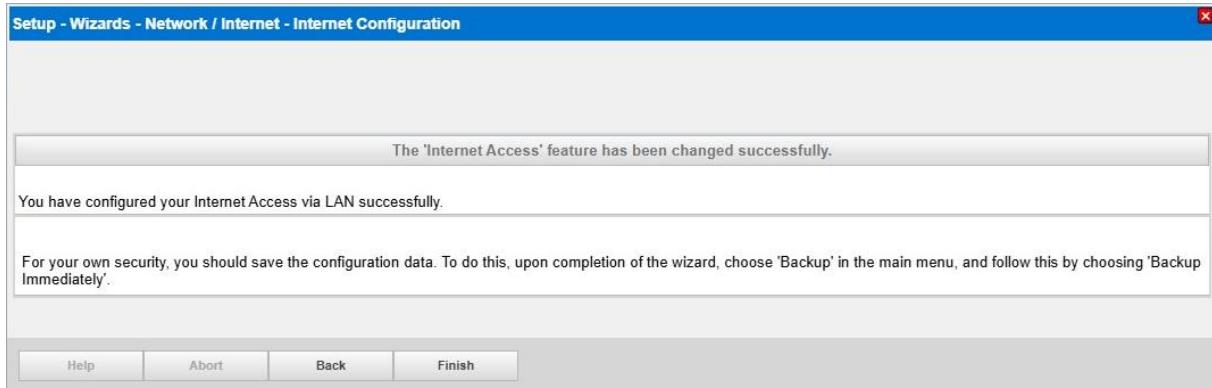
Routing Configuration

DNS Server	IP Address of primary DNS Server: 192.168.178.1
Default Router	IP Address of Default Router: 192.168.178.1

Help | Abort | Back | OK & Next

Click [OK & Next].

With the next step finish the wizard:



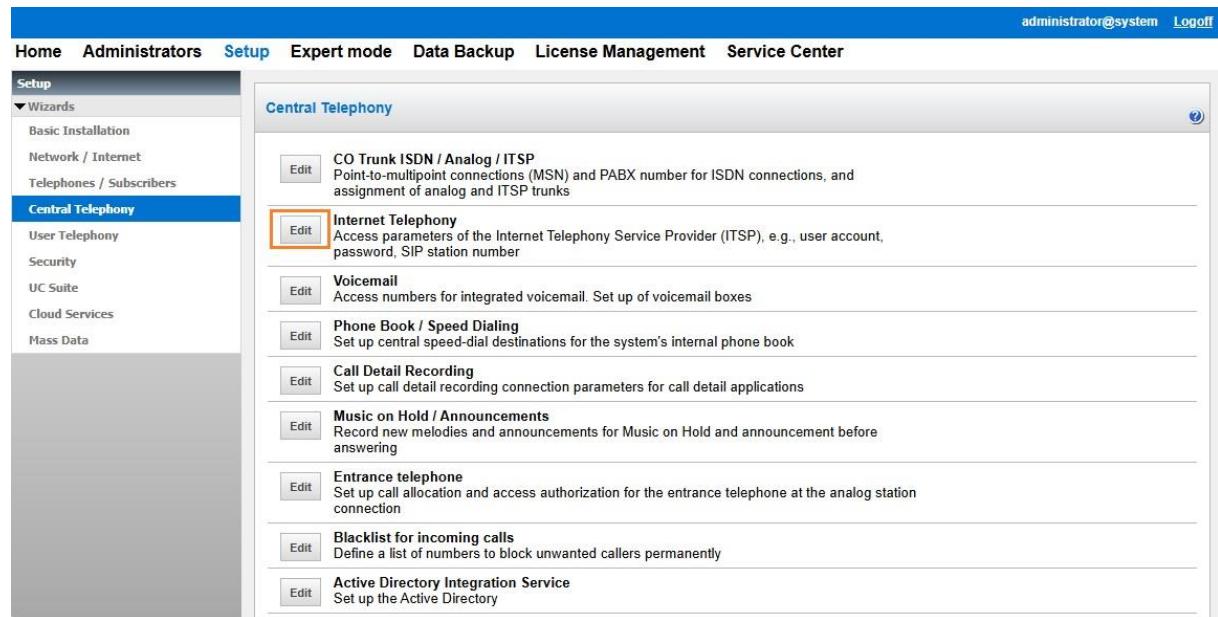
Click [Finish].



After activating the „**TCP/IP via external routers: LAN port (default), WAN port (ITSP only)**” settings the OpenScape Business must be restarted.

Internet Telephony

Go to Central Telephony – “Internet Telephony”

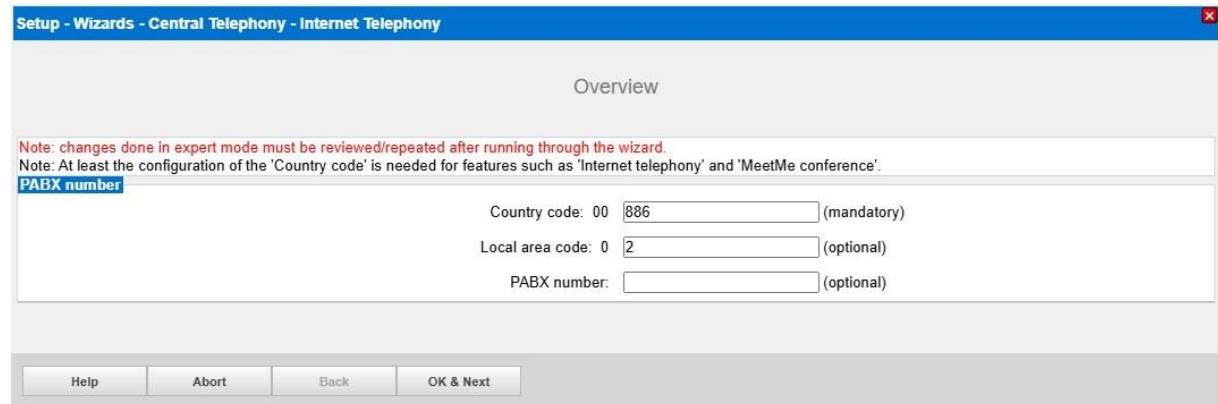


The screenshot shows the 'Central Telephony' setup page. On the left, a sidebar lists 'Wizards', 'Basic Installation', 'Network / Internet', 'Telephones / Subscribers', and 'Central Telephony' (which is selected and highlighted in blue). The main content area is titled 'Central Telephony' and contains several configuration options, each with an 'Edit' button:

- CO Trunk ISDN / Analog / ITSP**: Point-to-multipoint connections (MSN) and PABX number for ISDN connections, and assignment of analog and ITSP trunks.
- Internet Telephony**: (highlighted with an orange box) Access parameters of the Internet Telephony Service Provider (ITSP), e.g., user account, password, SIP station number.
- Voicemail**: Access numbers for integrated voicemail. Set up of voicemail boxes.
- Phone Book / Speed Dialing**: Set up central speed-dial destinations for the system's internal phone book.
- Call Detail Recording**: Set up call detail recording connection parameters for call detail applications.
- Music on Hold / Announcements**: Record new melodies and announcements for Music on Hold and announcement before answering.
- Entrance telephone**: Set up call allocation and access authorization for the entrance telephone at the analog station connection.
- Blacklist for incoming calls**: Define a list of numbers to block unwanted callers permanently.
- Active Directory Integration Service**: Set up the Active Directory.

Figure 1

The overview page appears for entering the location data – e.g.:



The screenshot shows a configuration wizard page titled 'Setup - Wizards - Central Telephony - Internet Telephony'. The title bar also includes 'Overview' and a close button. The main area is titled 'Overview' and contains the following text:

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:	00	886	(mandatory)
Local area code:	0	2	(optional)
PABX number:			

At the bottom are buttons for 'Help', 'Abort', 'Back', and 'OK & Next'.

Figure 2

Click [OK & Next].

Provider configuration and activation for Internet Telephony

- No call via Internet -> uncheck
- Use County specific view: **Taiwan** and select **Chunghwa Telecom IP Centrex**

<optional>

	As long as the profile Chunghwa Telecom IP Centrex is not available, please create a private profile Chunghwa _2 (see appendix).
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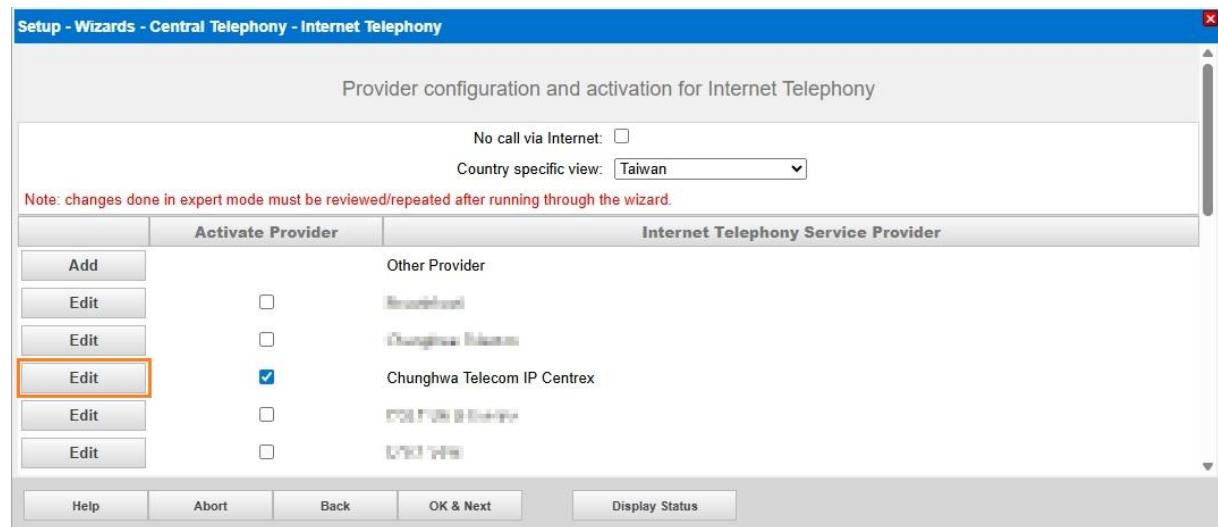


Figure 3

Activate Provider and click on [Edit].

On the next page please enter **Domain Name**, **Provider Proxy** and **Provider Outbound Proxy** provided by **Chunghwa Telecom**. The required **Ports** are pre-configured and need not to be changed.

In this example:

- **Domain Name:** im2.cht.com.tw
- **Provider Proxy:** im2.cht.com.tw
- **Provider Outbound Proxy:** 192.168.255.213

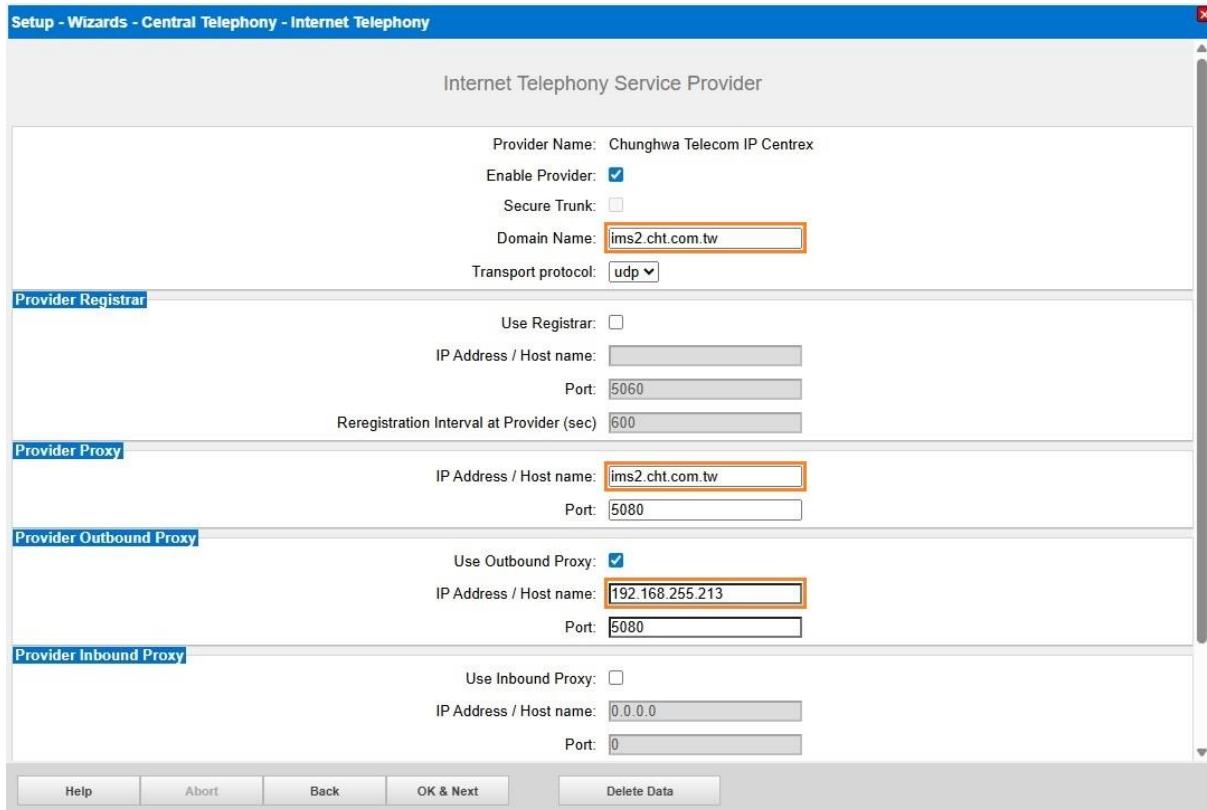


Figure 4

Click [OK & Next].

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



Figure 5

Click on [Add].

Data provided by the **Chunghwa Telecom**.

Internet telephony station: PSTN Number

Authorization name: n/a

Password: n/a

Default number: 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. Usually, the Lead Number is entered here.

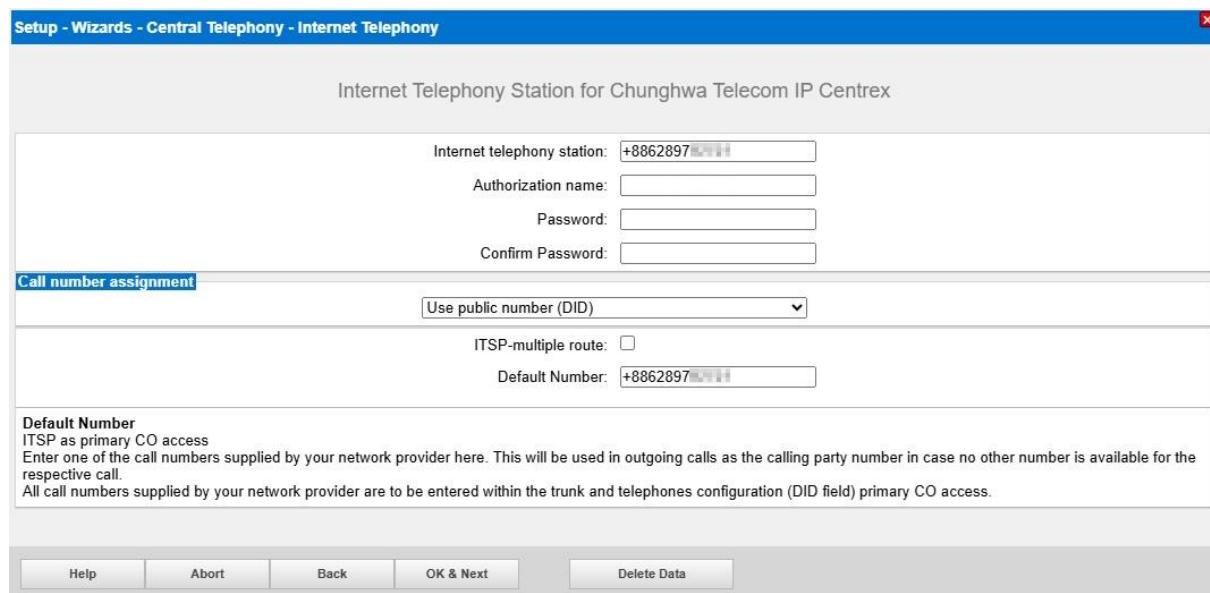


Figure 6

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

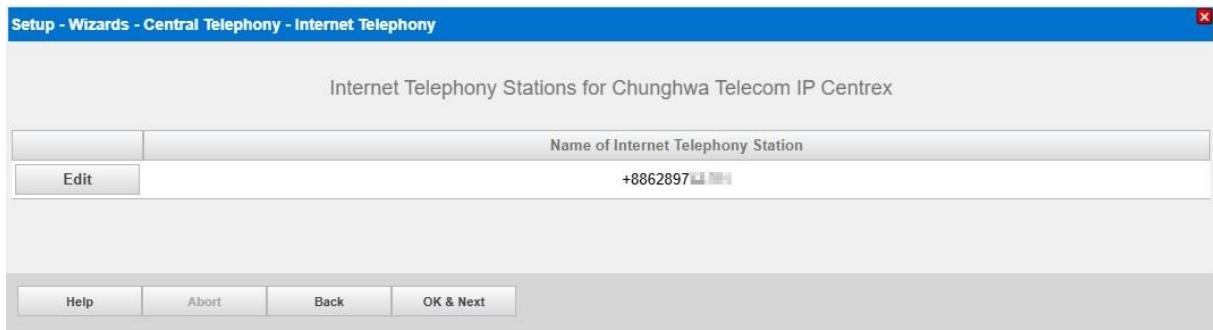


Figure 7

Click [OK & Next]



Figure 8

Click [OK & Next] (no input needed)

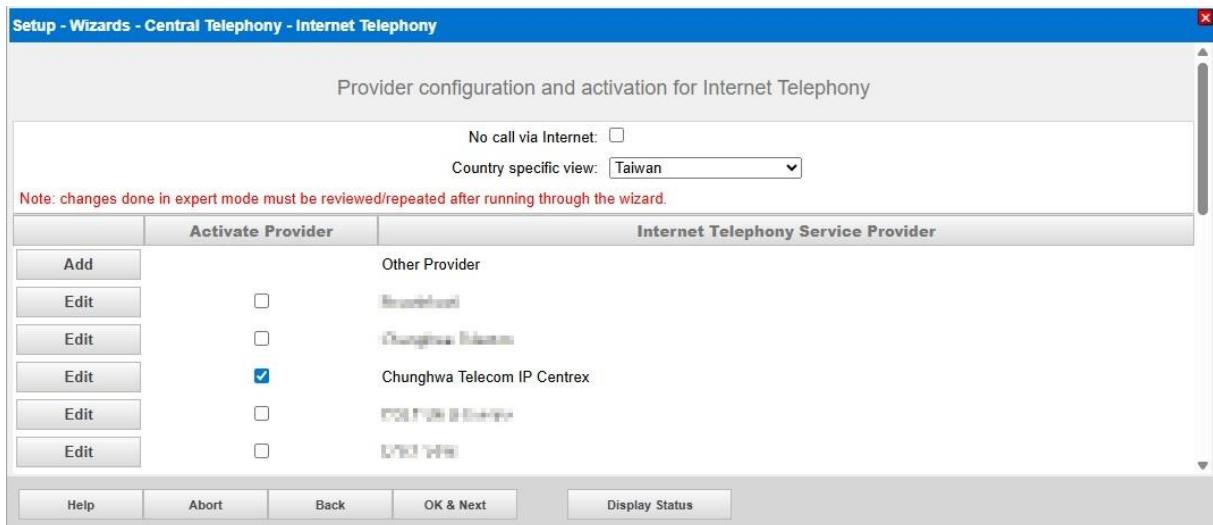


Figure 9

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 by **Chunghwa Telecom**.

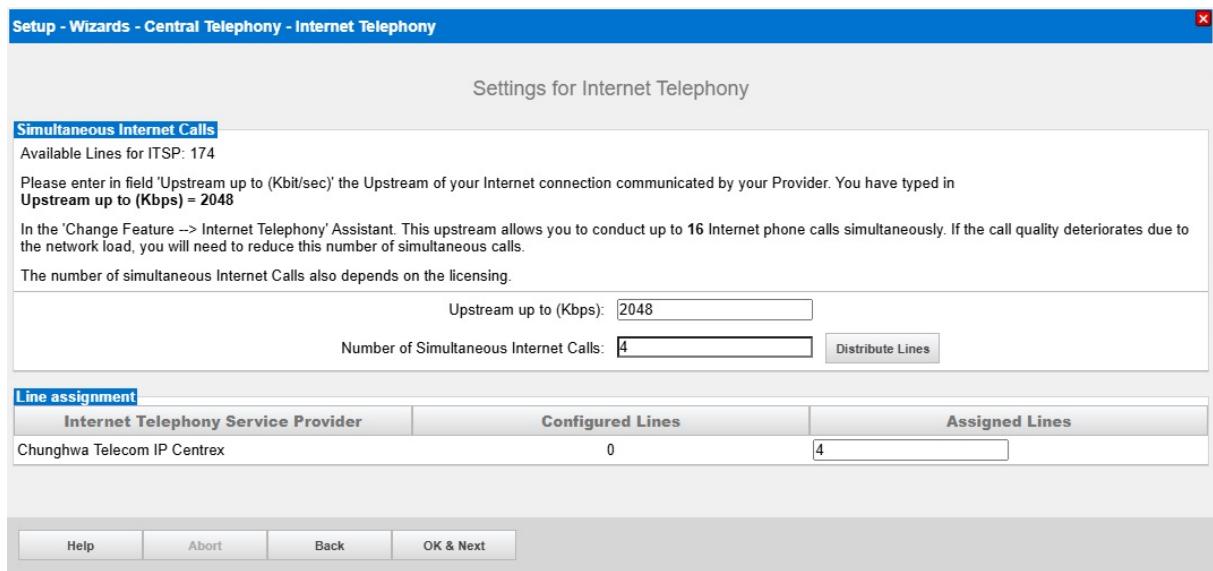


Figure 10

Click [OK & Next]

Now the corresponding configuration data will be created and entered into the system, please wait until the progress bar reaches 100%.

Special phone numbers

In this dialog it is possible to adjust the routing of special phone numbers. The following example is for the TAIPEI area. For other areas, please adjust the settings according to customer's needs.

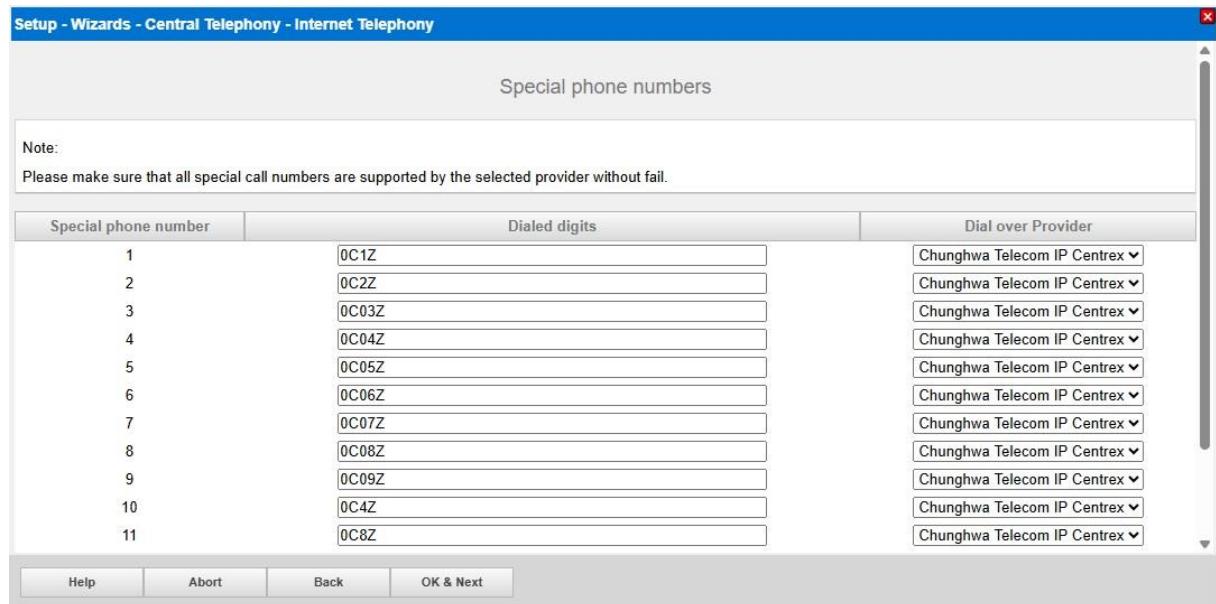


Figure 11

Click [OK & Next]

On next page status of ITSP is displayed.

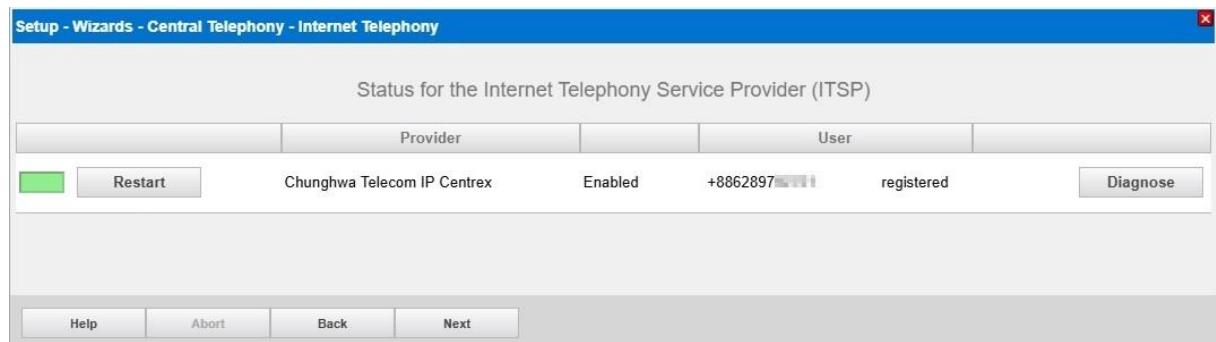


Figure 12

- If the SIP trunk has been successfully registered, the light will be green, and you can proceed to the next step. The "Diagnose" button opens a new window with a list of configured data.
- If the light is orange, clicking the "Diagnose" button will open a new window. This window provides information about potential problems and a list of configured data for review.

Click [Next]

„Exchange Line Seizure“

Select which trunk will access code 0. Enter the local area code without prefix digits (needed only when local area code was not entered in first step PBX number).

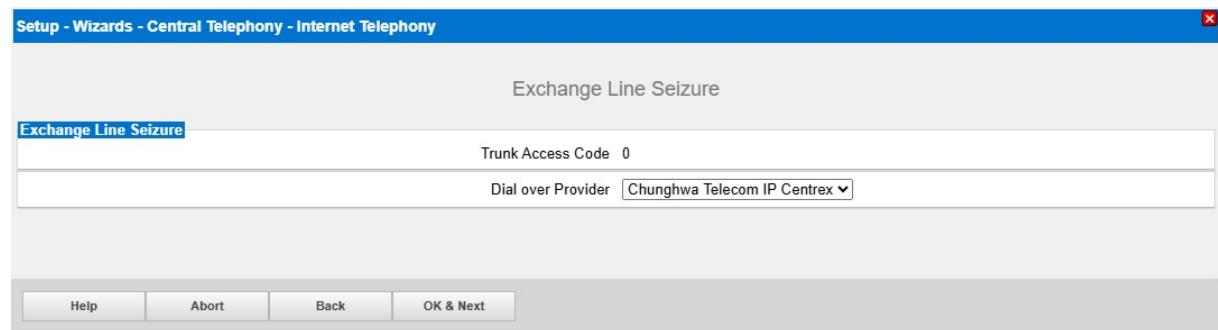


Figure 13

Click [OK & Next]

Overview with all configured „Outside line Seizure“ are displayed.

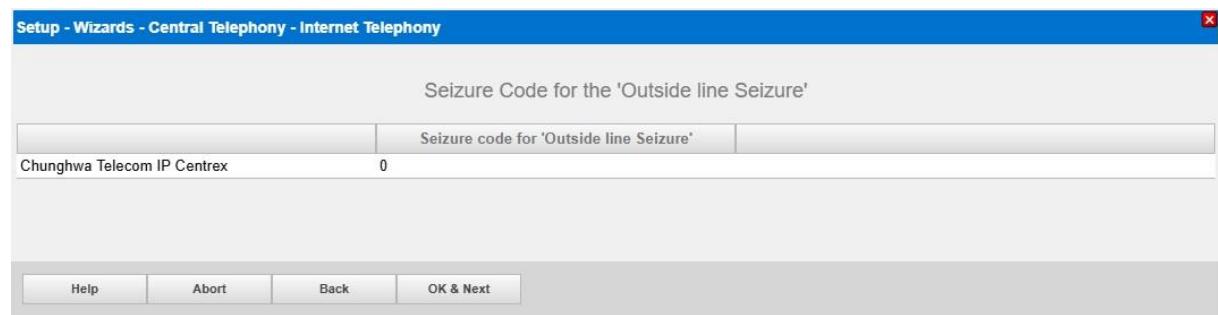


Figure 14

Click [OK & Next] and

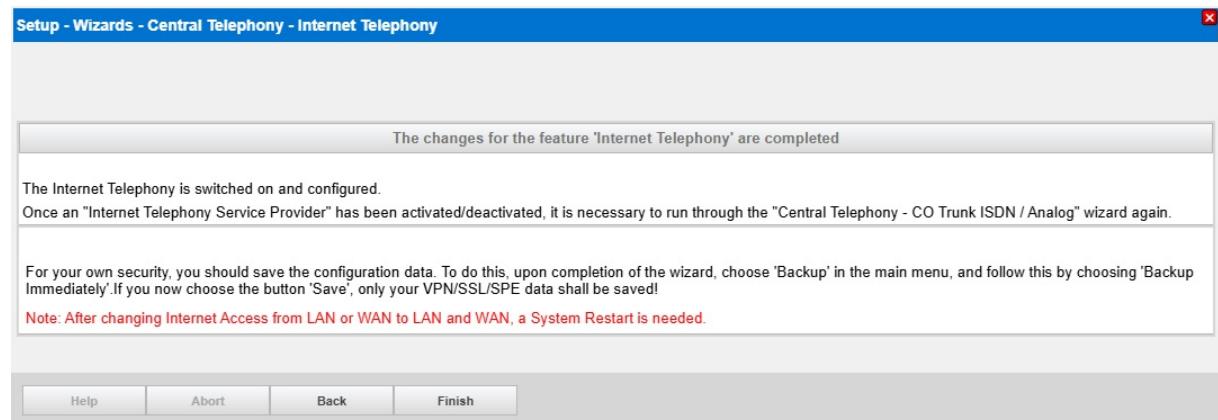


Figure 15

on the next page [Finish].

DID configuration

In the DID Section, the DID will need to be entered (removing part without country code, and if configured without local area code, PABX number). Mostly the DID is same with Extension Number (Callno).

Figure 16

In the trunk route outgoing, always use the same outbound number to dial (activate “Suppress station number”).

Figure 17

For inbound calls the PABX number outgoing of **Figure 17** is configured as AutoAttendant group.

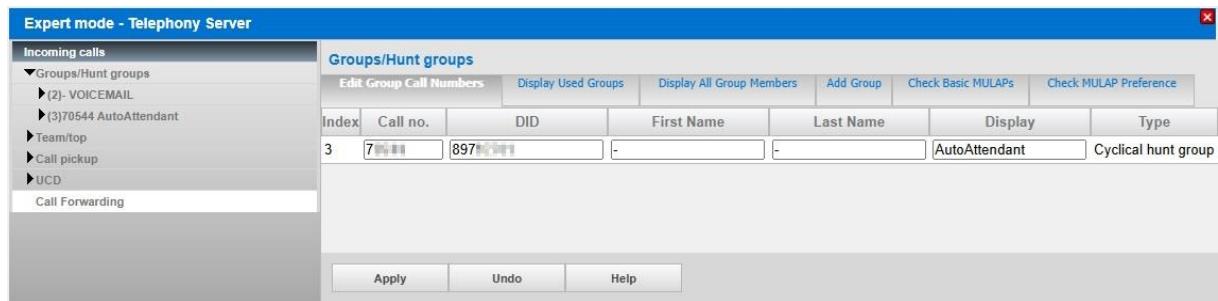
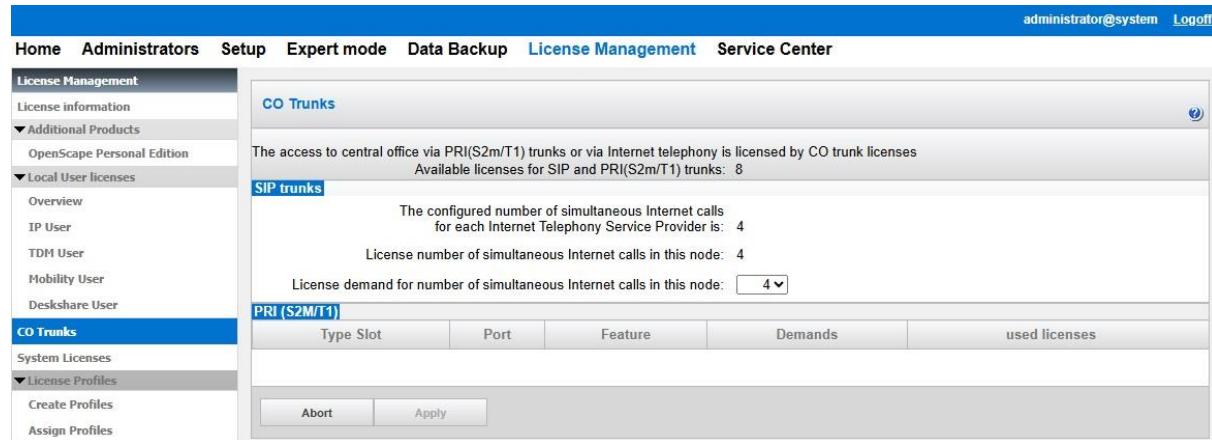


Figure 18

Additional Configuration

License

Add the “S2M/SIP Trunk” license to the SIP-Trunk



The screenshot shows the 'License Management' section of the OpenScape Business V3 interface. The left sidebar has 'CO Trunks' selected. The main area shows 'CO Trunks' and 'SIP trunks' sections. The 'SIP trunks' section displays configuration for simultaneous Internet calls, with a dropdown menu set to '4'. A table for 'PRI (S2M/T1)' is partially visible. At the bottom are 'Abort' and 'Apply' buttons.

Figure 19

Known limitations and restrictions

The SIP trunk **Chunghwa Telecom IP Centrex** is not released for

- G.711 Fax / T.38 Fax
- UC Suite

Hold call or Tranfer Call from far end was not tested.

Mandatory configuration in Expert Mode

Port management

Go to Expert Mode → Telephony Server → Basic Settings → Port Management

To comply with the requirements of the **Chunghwa Telecom IP Centrex** the SIP_EXT port **MUST** be configured with 5060 (default is 5070).

It's recommended that SIP devices can be identified as internally or externally connected.

Protocol Name	Port Number	Port Type
CSP	8800	single
HFA	4060	single
HFA_EXT	4062	single
HFA_TLS	4061	single
HFA_TLS_EXT	4063	single
MEB_SIP	15060	single
RTP_MIN	29100	min. (ext. RTP-port range 30274-30529)
SIP	5070	recommendation
SIP_EXT	5060	
SIP_TLS_SUB	5062	single
SIP_TLS_SUB_EXT	5071	single
SIPS	5061	single
VSL_MULTISITE	8778	single

After the ports are changed, OpenScape Business **MUST** be restarted.

Codec Parameters

Go to Expert Mode → Telephony Server → Voice Gateway → Codec Parameters

To comply with the requirements of the **Chunghwa Telecom IP Centrex** the following codec parameters **MUST** be changed:

1. The usage of the T.38-Fax protocol is not released for **Chunghwa Telecom IP Centrex**. For this reason, disable T.38-Fax protocol.
2. RFC 2833 payload type must be set to customer's requirements and is provided by **Chunghwa Telecom**, for example 100.

Codec	Priority	Voice Activity Detection	Frame Size
G.711 A-law	Priority 1	VAD: <input type="checkbox"/>	20 <input type="button" value="msec"/>
G.711 μ-law	Priority 2	VAD: <input type="checkbox"/>	20 <input type="button" value="msec"/>
G.729A	Priority 3	VAD: <input type="checkbox"/>	20 <input type="button" value="msec"/>
G.729AB	Priority 4	VAD: <input checked="" type="checkbox"/>	20 <input type="button" value="msec"/>

After the T.38-Fax settings are changed OpenScape Business **MUST** be restarted.

Appendix

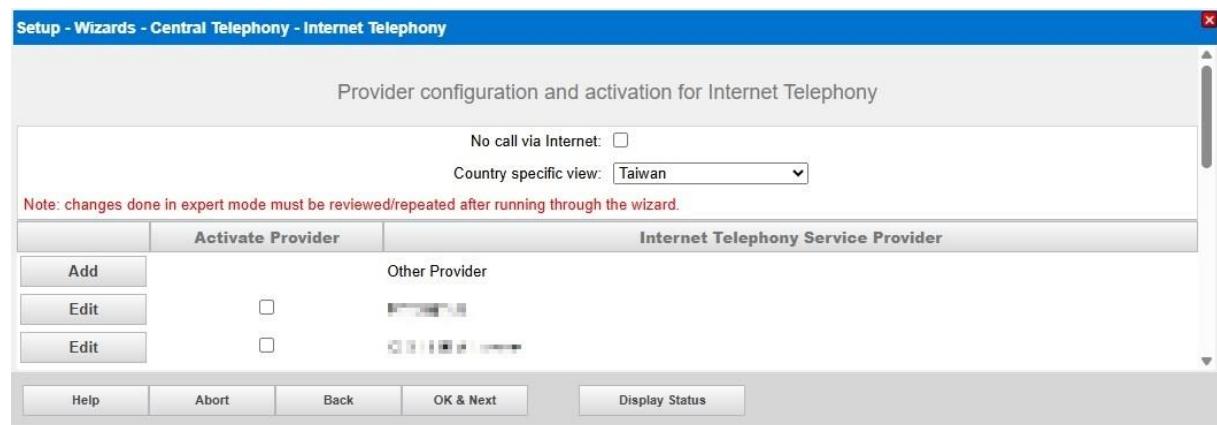
Create profile

As long as the **Chunghwa Telecom IP Centrex** profile is not yet available, please first create a private profile with the name **Chunghwa _2** as follows.

Please open the wizard for “Central Telephony – Internet Telephony” as described in [Figure 1](#) and [Figure 2](#) and go to:

Provider Configuration and -activation for Internet-Telephony:

- “No call via Internet” -> uncheck
- “County specific view”: **Taiwan** and select **Other Provider**



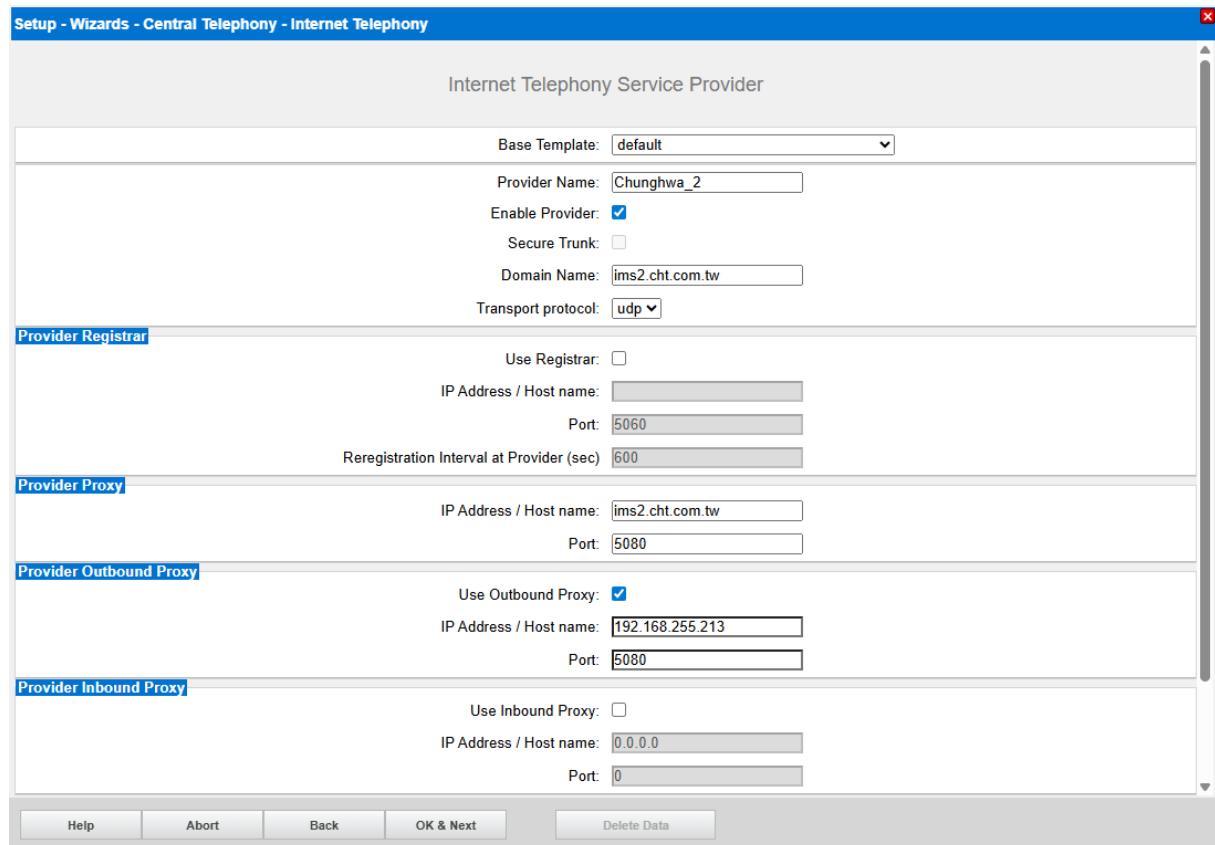
Click on [Add].

Use the **default** template with name **Chunghwa_2**, enable the provider and configure the server data provided by **Chunghwa Telecom**.

In this example:

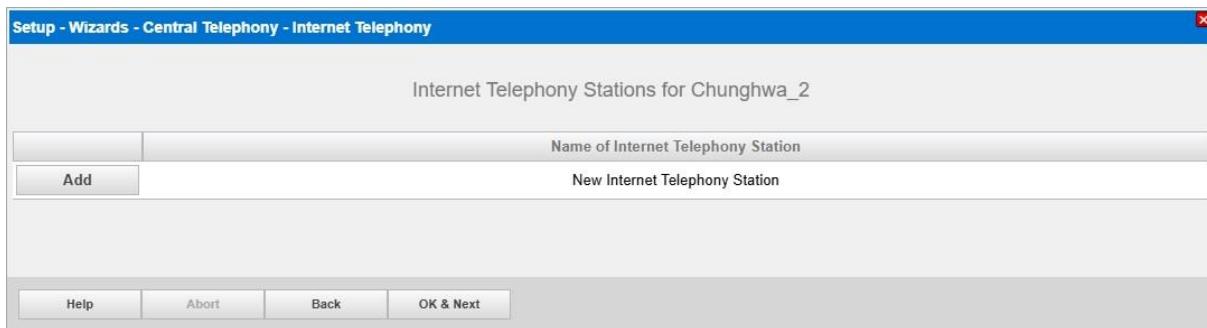
- **Domain Name:** im2.cht.com.tw
- **Provider Proxy:** im2.cht.com.tw **Port:** 5080
- **Provider Outbound Proxy:** 192.168.255.213 **Port:** 5080

as follows (see [Figure 4](#)):



Click [OK & Next]

In the following dialog, the access data is entered, as described in the instructions from **Figure 5** onwards.



Extended SIP Provider Data

To ensure compatibility with the **Chunghwa Telecom IP Centrex**, the following settings must be made in Expert Mode → Voice Gateway → Internet Telephony Service Provider → **Chunghwa_2** for the extended SIP provider data:

Internet Telephony Service Provider	
Edit Internet Telephony Service Provider Delete Internet Telephony Service Provider Add Internet Telephony Station	
Extended SIP Provider Data	
Show Extended SIP Provider Data: <input checked="" type="checkbox"/>	
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.	
CLIP / CLIR	
CLIP outgoing in From header - display part: <input type="button" value="omit"/>	
CLIP outgoing in From header - user part: <input type="button" value="call number"/>	
Outgoing From Header - domain/host part: <input type="button" value="domainName"/>	
Diversion: From contains original CallingPartyNumber: <input type="checkbox"/>	
Diversion: PAI contains original CallingPartyNumber: <input type="checkbox"/>	
CLIP outgoing in P-Asserted-Id header - display part: <input type="button" value="omit"/>	
CLIP outgoing in P-Asserted-Id header - user part: <input type="button" value="call number"/>	
CLIP outgoing in P-Preferred-Id header - display part: <input type="button" value="omit"/>	
CLIP outgoing in P-Preferred-Id header - user part: <input type="button" value="omit"/>	
CLIP outgoing in Diversion header - display part: <input type="button" value="omit"/>	
CLIP outgoing in Diversion header - user part: <input type="button" value="call number"/>	
CLIP outgoing in History-Info header - user part: <input type="button" value="omit"/>	
CLIR outgoing in From header - display part: <input type="button" value="anonymous"/>	
CLIR outgoing in From header - user part: <input type="button" value="fully anonymous"/>	
CLIR outgoing Privacy header: <input type="button" value="id"/>	
COLP / TIP supported for outgoing calls: <input type="button" value="COLP not supported"/>	

Call number formatting	
Incoming call - Called party number:	<input type="button" value="To header user part"/>
Incoming call - Calling party number:	<input type="button" value="From header user part"/>
Incoming call - Type of number (calling):	<input type="button" value="automatic"/>
Incoming call - Type of number (called):	<input type="button" value="automatic"/>
Outgoing call - Type of number (calling):	<input type="button" value="automatic"/>
Outgoing call - Type of number (called):	<input type="button" value="automatic"/>
Mapping of provider number:	<input type="button" value="off"/>
CLIP no Screening support:	<input type="button" value="not supported"/>
Call No. with international/national prefix:	<input type="button" value="no"/>
Called number in E164 format:	<input type="button" value="yes"/>
Route optimization:	<input type="button" value="not allowed"/>
MEX supported:	<input type="button" value="no"/>
Contact URI contains:	<input type="button" value="call number"/>
TCP port used in Contact URI:	<input type="button" value="ephem. src-port"/>
Registration	
Register Contact contains IP-Address:	<input type="button" value="localIPAddr"/>
ContactUriWithProtocol:	<input type="checkbox"/>
BNC Registration (SIPconnect):	<input type="button" value="normal registration"/>
ReRegistration interval after failure (sec):	<input type="button" value="120"/>
ReRegistration mode:	<input type="button" value="continuous"/>
ReRegistration after call failure:	<input type="button" value="CallFailureIsNoRegFailure"/>

Security
UDP mode: <input type="button" value="symmetric UDP"/>
Approved Peer selection: <input type="button" value="trust configured Servers only"/>
Miscellaneous
Direct Payload: <input type="checkbox"/>
Media Renegotiation Avoidance: <input checked="" type="checkbox"/>
Change direction attribute: <input type="button" value="keep attribute"/>
Silence Suppression attribute: <input type="button" value="supported"/>
Mediasec extension: <input type="button" value="not supported"/>
SDP Filter: <input type="button" value="Default"/>
Check Redirection: <input type="button" value="Not supported"/>
UseRouteURIAuthentication: <input checked="" type="checkbox"/>
Ignore 100 Rel: <input checked="" type="checkbox"/>
Support 100rel: <input checked="" type="checkbox"/>
UseViaRPort: <input checked="" type="checkbox"/>
UPDATE Supported: <input checked="" type="checkbox"/>
P-Early-Media header support: <input type="button" value="not supported"/>
Session Timer support: <input type="button" value="not active"/>
Send automatic 183 response timer (sec): <input type="text" value="0"/>
UDP-Keep Alive: <input type="button" value="UdpKeepAliveON"/>
Keep Alive interval for OPTIONS (sec): <input type="text" value="60"/>
Reregistration on OPTIONS Failure: <input type="button" value="NoRegisterOnFailure"/>
Answer to OPTIONS: <input type="button" value="Without Body"/>

Click on [Apply] and restart the ITSP [Restart ITSP].

Please close the window and run through the ITSP Wizard for **Chunghwa_2** again ([Figure 3](#)).