

# OpenScape Business V3

## SIP Trunk for Chunghwa Telecom IP Centrex - Taiwan

OpenScape Business V3 Mainboard Family  
OpenScape Business S

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## 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
<b>Chunghwa Telecom IP Centrex</b>	Features & Capabilities
Account (DID/Client)	DID
Multisite	no
CLIP / CLIR	no
CLIP no Screening	no
COLP	no
Call Forwarding (302)	no
DTMF (RFC2833/4733)	yes
Codecs G.722/G.711/G.729	no / yes / yes
G.711 Fax / T.38 Fax	no / no
Secure trunk	no

### Remarks:

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

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

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## Table of History

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

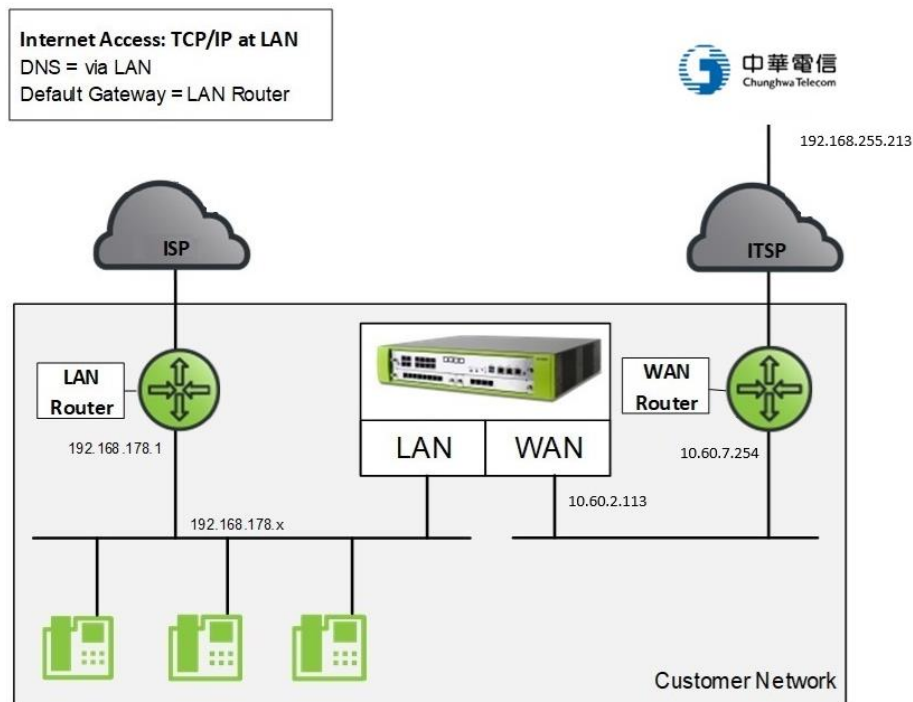
Applying for **Chunghwa Telecom IP Centrex** requires providing the OpenScape Business IP information (configured as WAN IP), Domain Name for SIP Trunk, SIP Proxy Domain, and Outbound Proxy IP Address. This information can also be provided by the **Chunghwa Telecom** installer who provides the ITSP.

## Configuration Wizard

### Internet Configuration (WAN Interface dedicated to ITSP)

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

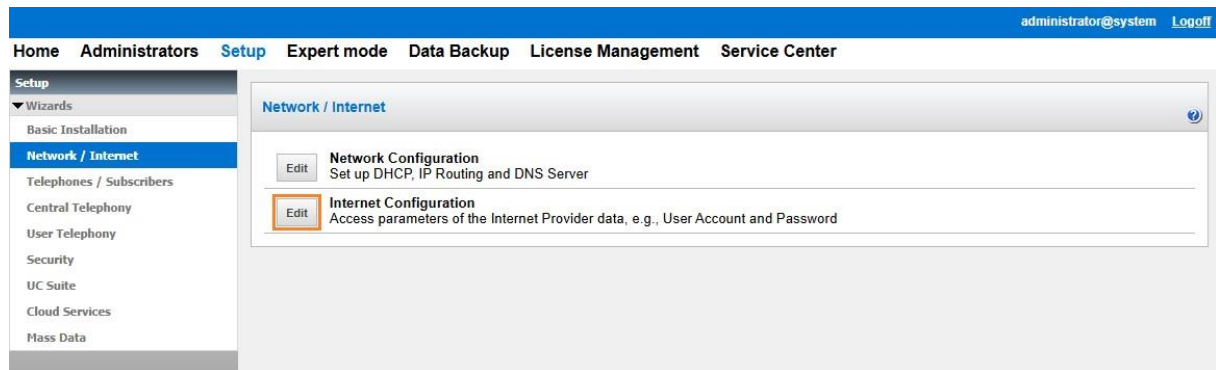
The IP address for the OpenScape Business is listed in the customer data and must be configured on the WAN interface, e.g.:



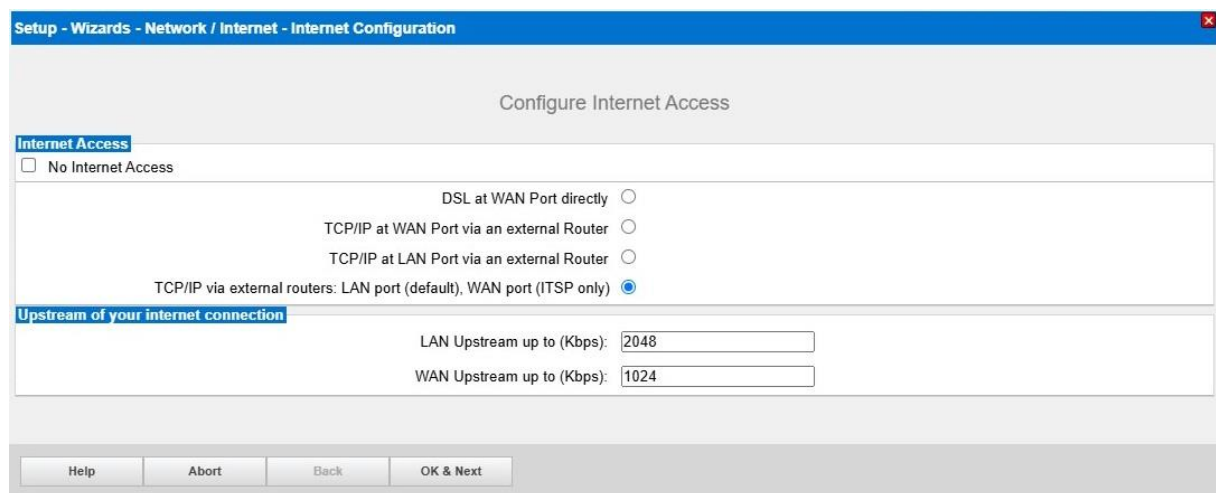
No static route is required for the default configuration.

## 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:

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: ☐

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:

Routing Configuration

**DNS Server**

IP Address of primary DNS Server: 192.168.178.1

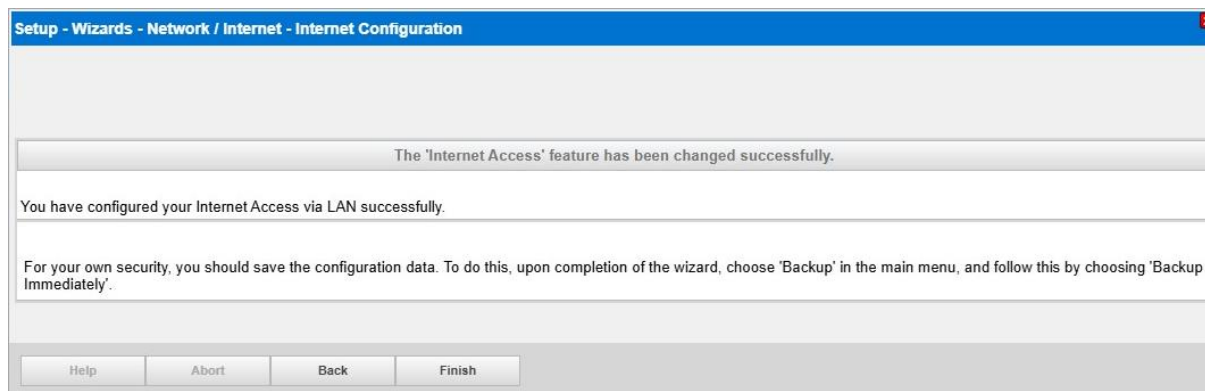
**Default Router**

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].

	<p>After activating the „<b>TCP/IP via external routers: LAN port (default), WAN port (ITSP only)</b>” settings the OpenScape Business must be restarted.</p>
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## Internet Telephony

Go to Central Telephony – “Internet Telephony”

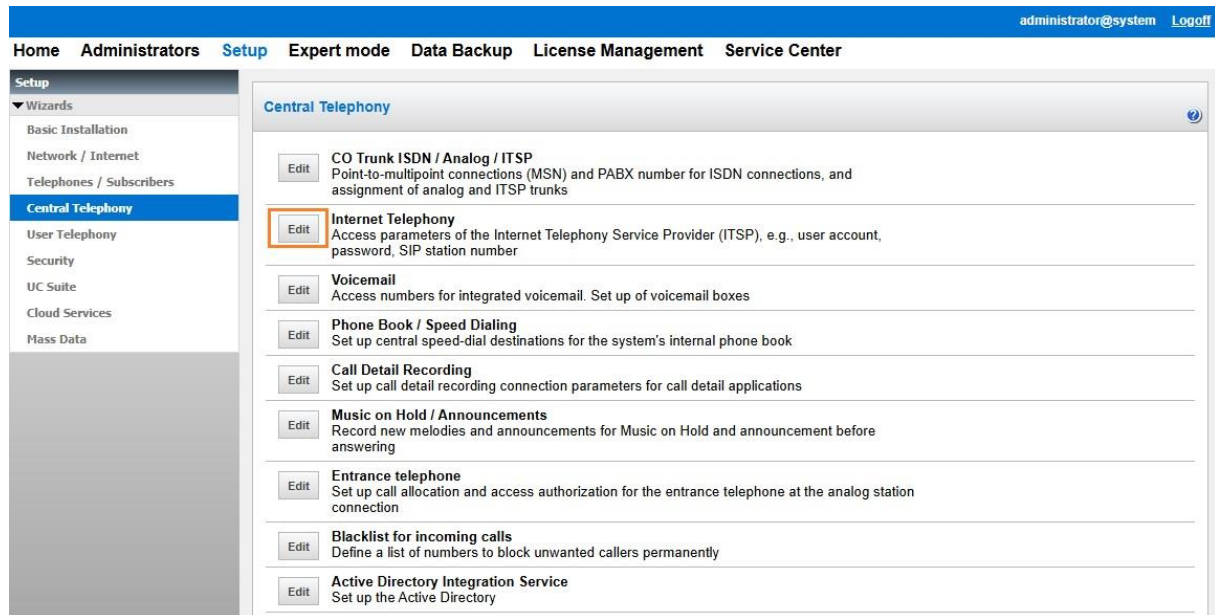


Figure 1

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

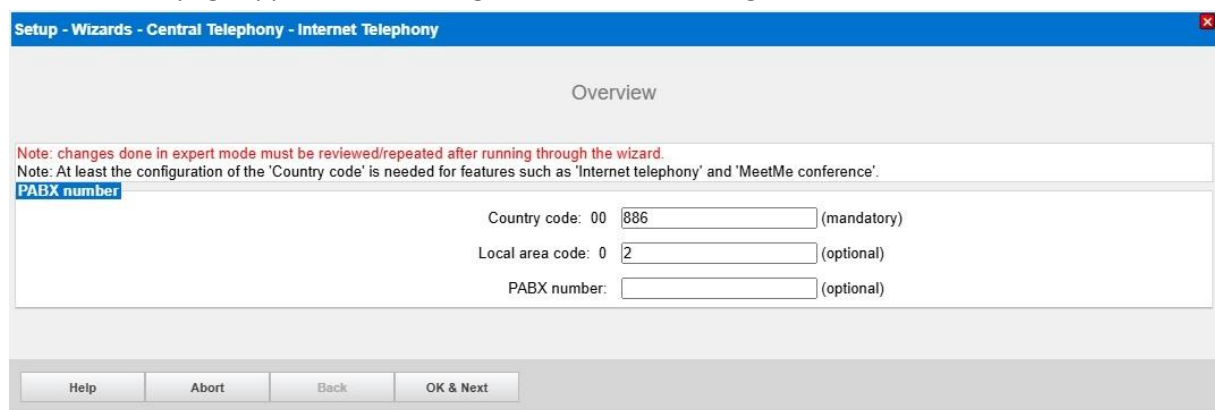



Figure 2

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).

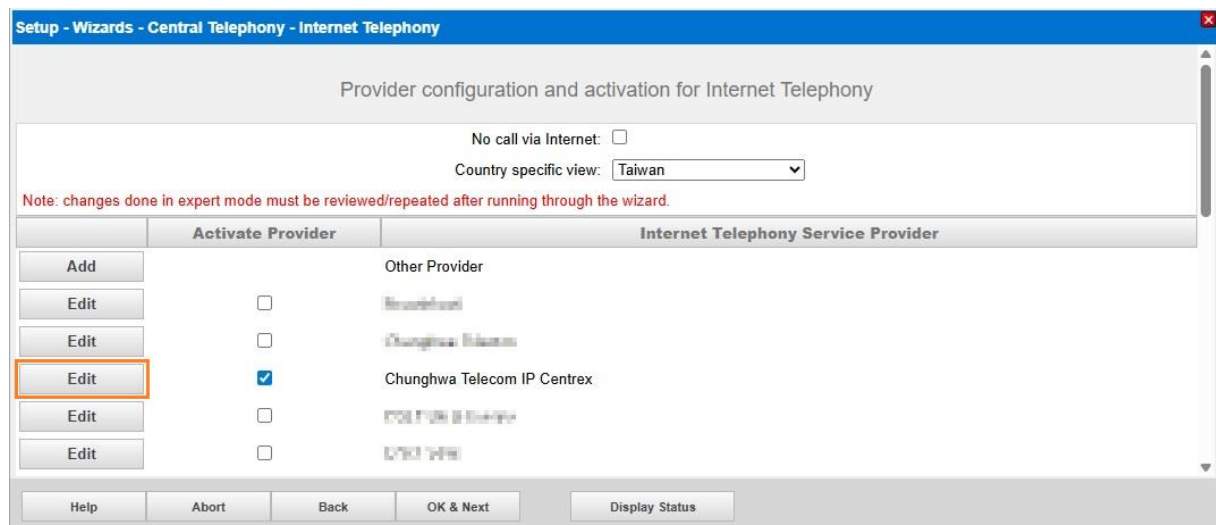


Figure 3

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

Setup - Wizards - Central Telephony - Internet Telephony

Internet Telephony Service Provider

Provider Name: Chunghwa Telecom IP Centrex

Enable Provider: ☒

Secure Trunk: ☐

Domain Name:

Transport protocol:

**Provider Registrar**

Use Registrar: ☐

IP Address / Host name:

Port:

Reregistration Interval at Provider (sec)

**Provider Proxy**

IP Address / Host name:

Port:

**Provider Outbound Proxy**

Use Outbound Proxy: ☒

IP Address / Host name:

Port:

**Provider Inbound Proxy**

Use Inbound Proxy: ☐

IP Address / Host name:

Port:

Help Abort Back OK & Next Delete Data

Figure 4

Click [OK & Next].

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

Name of Internet Telephony Station
New Internet Telephony Station

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.

Internet telephony station: +8862897

Authorization name:

Password:

Confirm Password:

**Call number assignment**

Use public number (DID)

ITSP-multiple route: ☐

Default Number: +8862897

**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.

Figure 6

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

Setup - Wizards - Central Telephony - Internet Telephony

Internet Telephony Stations for Chunghwa Telecom IP Centrex

	Name of Internet Telephony Station
Edit	+8862897

Help Abort Back OK & Next

Figure 7

Click [OK & Next]

Setup - Wizards - Central Telephony - Internet Telephony

Call Number Assignment for Chunghwa Telecom IP Centrex

Name of Internet Telephony Station	Internet Telephony Phone Number	Direct inward dialing	Use as PABX number for outgoing calls
In order to complete the configuration please verify that the relevant user DIDs are set in stations.(Telephones / Subscribers configuration)			

Help Abort Back OK & Next

Figure 8

Click [OK & Next] (no input needed)

Setup - Wizards - Central Telephony - Internet Telephony

Provider configuration and activation for Internet Telephony

No call via Internet: ☐

Country specific view: Taiwan

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"/>	Brookline
Edit	<input type="checkbox"/>	Chunghwa Telecom
Edit	<input checked="" type="checkbox"/>	Chunghwa Telecom IP Centrex
Edit	<input type="checkbox"/>	COLTUM
Edit	<input type="checkbox"/>	COLTUM

Help Abort Back OK & Next Display Status

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**.

Setup - Wizards - Central Telephony - Internet Telephony

Settings for Internet Telephony

**Simultaneous Internet Calls**

Available Lines for ITSP: 174

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) = 2048**

In the 'Change Feature --> Internet Telephony' Assistant. This upstream allows you to conduct up to 16 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
Chunghwa Telecom IP Centrex	0	<input type="text" value="4"/>

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.

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	0C1Z	Chunghwa Telecom IP Centrex ▼
2	0C2Z	Chunghwa Telecom IP Centrex ▼
3	0C03Z	Chunghwa Telecom IP Centrex ▼
4	0C04Z	Chunghwa Telecom IP Centrex ▼
5	0C05Z	Chunghwa Telecom IP Centrex ▼
6	0C06Z	Chunghwa Telecom IP Centrex ▼
7	0C07Z	Chunghwa Telecom IP Centrex ▼
8	0C08Z	Chunghwa Telecom IP Centrex ▼
9	0C09Z	Chunghwa Telecom IP Centrex ▼
10	0C4Z	Chunghwa Telecom IP Centrex ▼
11	0C8Z	Chunghwa Telecom IP Centrex ▼

Help Abort Back OK & Next

Figure 11

Click [OK & Next]

On next page status of ITSP is displayed.

Setup - Wizards - Central Telephony - Internet Telephony

Status for the Internet Telephony Service Provider (ITSP)

Provider	Status	User
Chunghwa Telecom IP Centrex	Enabled	+8862897XXXX registered

Restart Diagnose

Help Abort Back Next

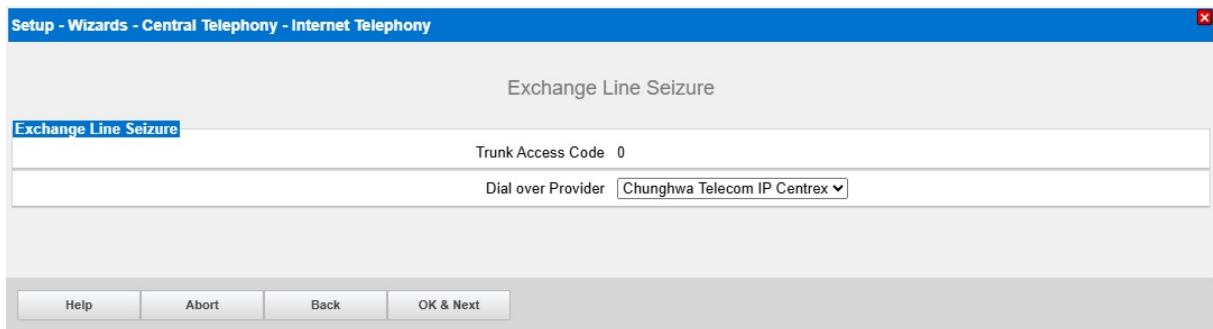
Figure 12

- 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).

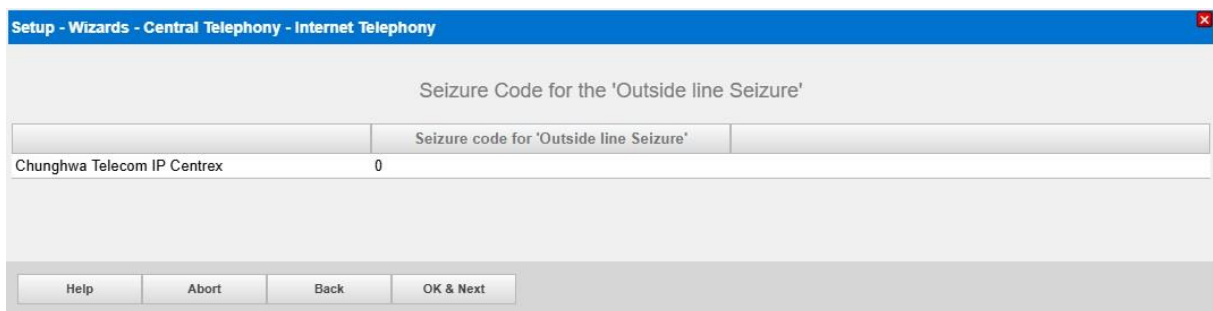


The screenshot shows a window titled "Setup - Wizards - Central Telephony - Internet Telephony". The main heading is "Exchange Line Seizure". Below it, there is a sub-heading "Exchange Line Seizure". The form contains two input fields: "Trunk Access Code" with the value "0" and "Dial over Provider" with a dropdown menu showing "Chunghwa Telecom IP Centrex". At the bottom, there are four buttons: "Help", "Abort", "Back", and "OK & Next".

Figure 13

Click [OK & Next]

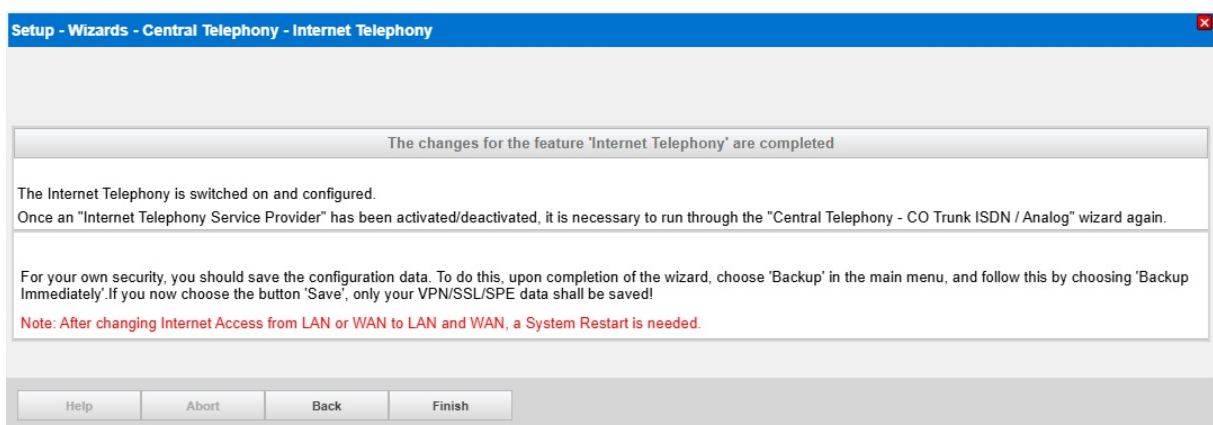
Overview with all configured „Outside line Seizure“ are displayed.



The screenshot shows a window titled "Setup - Wizards - Central Telephony - Internet Telephony". The main heading is "Seizure Code for the 'Outside line Seizure'". Below it, there is a table with two columns: "Seizure code for 'Outside line Seizure'" and "Seizure code for 'Outside line Seizure'". The first row shows "Chunghwa Telecom IP Centrex" and "0". At the bottom, there are four buttons: "Help", "Abort", "Back", and "OK & Next".

Figure 14

Click [OK & Next] and



The screenshot shows a window titled "Setup - Wizards - Central Telephony - Internet Telephony". The main heading is "The changes for the feature 'Internet Telephony' are completed". Below it, there is a text box with the following content: "The Internet Telephony is switched on and configured. Once an 'Internet Telephony Service Provider' has been activated/deactivated, it is necessary to run through the 'Central Telephony - CO Trunk ISDN / Analog' wizard again. 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'. If you now choose the button 'Save', only your VPN/SSL/SPE data shall be saved! Note: After changing Internet Access from LAN or WAN to LAN and WAN, a System Restart is needed." At the bottom, there are four buttons: "Help", "Abort", "Back", and "Finish".

Figure 15

on the next page [Finish].



## DID configuration

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

Box	Slot	Callno	First Name	Last Name	Display	DID	Type	Fax Callno
1	0	7-880	-	-	-	7-880	System Client	-
1	0	7-884	-	-	-	7-884	System Client	-
1	0	7-885	-	-	-	7-885	System Client	-
-	-	-	-	-	-	-	No Port	-

Figure 16

In the trunk route outgoing, always use the same outbound number to dial (activate "Supress station number").

**Route**

Change Route | Change Routing Parameters | Special Parameter change

Route Name: Chunghwa T

Seizure code: 0

CO code (2nd trunk code):

**Gateway Location**

Country code: 886

Local area code: 2

PABX number:

**PABX number-incoming**

Country code: 886

Local area code: 2

PABX number:

Location number: ☒

**PABX number-outgoing**

Country code: 886

Local area code: 2

PABX number: 897

Suppress station number: ☒

Apply | Undo | Help

Figure 17

For inbound calls the PABX number outgoing of [Figure 17](#) is configured as AutoAttendant group.

Expert mode - Telephony Server

Incoming calls

- Groups/Hunt groups
  - (2)- VOICEMAIL
    - (3)70544 AutoAttendant
  - Team/top
  - Call pickup
  - UCD
  - Call Forwarding

Groups/Hunt groups

Edit Group Call Numbers Display Used Groups Display All Group Members Add Group Check Basic MULAPs Check MULAP Preference

Index	Call no.	DID	First Name	Last Name	Display	Type
3	70544	897	-	-	AutoAttendant	Cyclical hunt group

Apply Undo Help

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 web interface. The top navigation bar includes 'Home', 'Administrators', 'Setup', 'Expert mode', 'Data Backup', 'License Management' (highlighted), and 'Service Center'. The user is logged in as 'administrator@system'. The left sidebar shows a tree structure with 'License Management' expanded, containing 'License information', 'Additional Products' (OpenScape Personal Edition), 'Local User licenses' (Overview, IP User, TDM User, Mobility User, Deskshare User), 'CO Trunks' (highlighted), 'System Licenses', and 'License Profiles' (Create Profiles, Assign Profiles). The main content area is titled 'CO Trunks' and contains the following information:

- A message: 'The access to central office via PRI(S2m/T1) trunks or via Internet telephony is licensed by CO trunk licenses. Available licenses for SIP and PRI(S2m/T1) trunks: 8'.
- A section titled 'SIP trunks' with the following details:
  - 'The configured number of simultaneous Internet calls for each Internet Telephony Service Provider is: 4'.
  - 'License number of simultaneous Internet calls in this node: 4'.
  - 'License demand for number of simultaneous Internet calls in this node: 4' (with a dropdown arrow).
- A section titled 'PRI (S2M/T1)' with a table:

Type	Slot	Port	Feature	Demands	used licenses

At the bottom of the 'PRI (S2M/T1)' section 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 Transfer Call from far end was not tested.

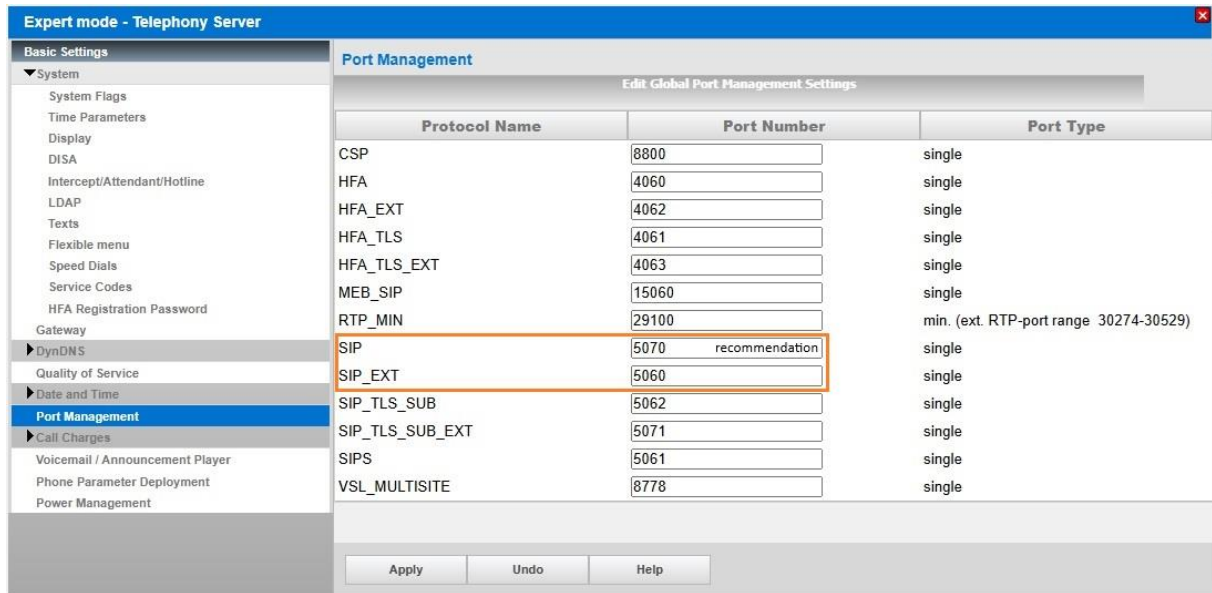
## Mandatory configuration in Expert Mode

### 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	single
SIP_EXT	5060	single
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.

**Expert mode - Telephony Server**

**Voice Gateway**

- SIP Parameters
- ITSP Loc-ID Settings
- Codec Parameters**
- Destination Codec Parameters
  - Internet Telephony Service Provider
  - Networking
  - SIPQ-Interconnection
  - Native SIP Server Trunk

**Codec Parameters**

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

**Enhanced DSP Channels**

Use G.711 only: ☐

**T.38 Fax**

T.38 Fax: ☐

Use FillBitRemoval: ☒

Max. UDP Datagram Size for T.38 Fax (bytes): 1472

Error Correction Used for T.38 Fax (UDP): t38UDPRedundancy

**T.30 Fax**

Enable ECM: ☒

**Misc.**

ClearChannel: ☒ Frame Size: 20 msec

**RFC2833**

Transmission of Fax/Modem Tones according to RFC2833: ☐

Transmission of DTMF Tones according to RFC2833: ☒

Payload Type for RFC2833: 100

Redundant Transmission of RFC2833 Tones according to RFC2198: ☐

Apply Undo Help

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

## Appendix

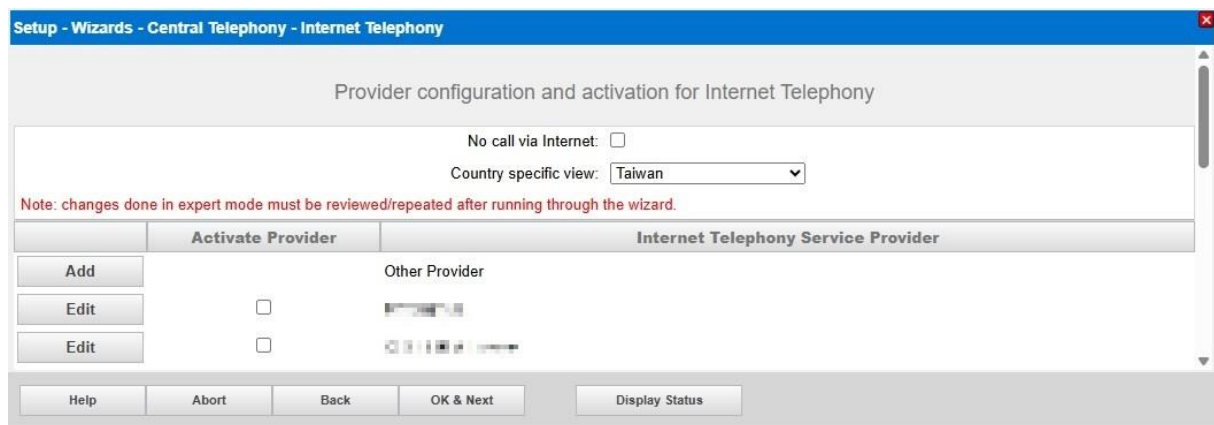
### Create profile

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
- “Country 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**):

Setup - Wizards - Central Telephony - Internet Telephony

Internet Telephony Service Provider

Base Template: default

Provider Name: Chunghwa\_2

Enable Provider: ☒

Secure Trunk: ☐

Domain Name: ims2.cht.com.tw

Transport protocol: udp

**Provider Registrar**

Use Registrar: ☐

IP Address / Host name:

Port: 5060

Reregistration Interval at Provider (sec) 600

**Provider Proxy**

IP Address / Host name: ims2.cht.com.tw

Port: 5080

**Provider Outbound Proxy**

Use Outbound Proxy: ☒

IP Address / Host name: 192.168.255.213

Port: 5080

**Provider Inbound Proxy**

Use Inbound Proxy: ☐

IP Address / Host name: 0.0.0.0

Port: 0

Help Abort Back OK & Next Delete Data

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:



Call number formatting

Incoming call - Called party number: To header user part

Incoming call - Calling party number: From header user part

Incoming call - Type of number (calling): automatic

Incoming call - Type of number (called): automatic

Outgoing call - Type of number (calling): automatic

Outgoing call - Type of number (called): automatic

Mapping of provider number: off

CLIP no Screening support: not supported

Call No. with international/national prefix: no

Called number in E164 format: yes

Route optimization: not allowed

MEX supported: no

Contact URI contains: call number

TCP port used in Contact URI: ephem. src-port

Registration

Register Contact contains IP-Address: localIPAddr

ContactUriWithProtocol: ☐

BNC Registration (SIPconnect): normal registration

ReRegistration interval after failure (sec): 120

ReRegistration mode: continuous

ReRegistration after call failure: CallFailureIsNoRegFailure

Security

UDP mode: symmetric UDP

Approved Peer selection: trust configured Servers only

Miscellaneous

Direct Payload: ☐

Media Renegotiation Avoidance: ☒

Change direction attribute: keep attribute

Silence Suppression attribute: supported

Mediasec extension: not supported

SDP Filter: Default

Check Redirection: Not supported

UseRouteURIAuthentication: ☒

Ignore 100 Rel: ☒

Support 100rel: ☒

UseViaRPort: ☒

UPDATE Supported: ☒

P-Early-Media header support: not supported

Session Timer support: not active

Send automatic 183 response timer (sec): 0

UDP-Keep Alive: UdpKeepAliveON

Keep Alive interval for OPTIONS (sec): 60

Reregistration on OPTIONS Failure: NoRegisterOnFailure

Answer to OPTIONS: 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).