

# OpenScape Business

## How to Configure SIP Trunk for BroadCloud

- Germany
  - France
  - Italy
  - United Kingdom
  - Australia
-

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## Table of History

Date	Version	Changes
06.04.2017	1.0	Released
10.09.2024	1.1	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

The BroadCloud provider is available and released for the countries USA, UK, Germany, France, Italy and Australia.

**This configuration guide is valid for all countries listed above except the USA**

## Trunk Configuration Data provided by BroadCloud

The configuration data needed to setup the SIP trunk can be found on the BroadCloud Enterprise Portal under SIP Trunking Page > Trunk Group > Edit under the selected Trunk Group:

The screenshot shows the BroadCloud Enterprise Portal interface. The left sidebar contains navigation options: DASHBOARD, SIP TRUNKING (selected), ASSIGNMENTS, SERVICES, ANALYTICS, NOTES, and PROFILE. The main content area is titled 'Trunk Capacity' and 'Trunk Groups'. Under 'Trunk Capacity', there is a 'Channels Assigned To Site' input field with the value '8' and a '1 Available' indicator. Below this is a 'Channels In Use By Site' progress bar showing '7/8' and a 'Save' button. The 'Trunk Groups' section contains a table with the following data:

Name	Lead Number	Device Name	Call Forwarding	Device Status
<a href="#">Edit</a> +442038593092	+442038593092	123452315121	Disabled	<a href="#">Device Status</a>
<a href="#">Edit</a> Audiocodes M500	+442034093809	123452315121	Disabled	<a href="#">Device Status</a>
<a href="#">Edit</a> trunkgroupstest	+442034093810	123452315121	Disabled	<a href="#">Device Status</a>

## Configuration Wizard

### Internet Telephony

Go to Central Telephony – “Internet Telephony“

The screenshot shows the 'Central Telephony' configuration wizard. The left sidebar lists various setup options, with 'Central Telephony' highlighted. The main content area displays several configuration sections, 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**: Access parameters of the Internet Telephony Service Provider (ITSP), e.g., user account, password, SIP station number (This section is circled in red)
- 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
- Multisite Management**: Configuration of multi-ITSP connections
- 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

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

Setup - Wizards - Central Telephony - Internet Telephony

Overview

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 49 (mandatory)

Local area code: 0 (optional)

PABX number: (optional)

Click [OK & Next].

Provider configuration and activation for Internet Telephony -> No call via Internet -> uncheck Use County specific view: UK, Germany, France, Italy or Australia and select "**BroadCloud**".

Setup - Wizards - Central Telephony - Internet Telephony

Provider configuration and activation for Internet Telephony

No call via Internet:

Country specific view: Germany

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"/>	1&1
<b>Edit</b>	<input checked="" type="checkbox"/>	<b>BroadCloud</b>
Edit	<input type="checkbox"/>	COLT UK & Europe
Edit	<input type="checkbox"/>	COLT VPN

Activate Provider and click on [Edit].

On the next page you have to enter the following information:

- **Domain Name**

The SIP Domain Name can be found on the **BroadCloud** Enterprise Portal, under SIP Trunking Page > Trunk Group > Edit under the selected Trunk Group. The part required is found on the section called Registered Domain.

!!! The Domain in the screenshot is only an example. !!!

Settings

\* Name  
+442038593092

\* Lead Number  
+442038593092

Outbound Proxy  
uk.sipconnect.broadcloud.eu

Register Domain  
ukdemo.broadcloud.eu

- **Provider Registrar** and the **Provider Proxy**. Use the country individual names:

**BroadCloud UK:** uk.sipconnect-udp.broadcloud.eu

**BroadCloud Germany:** de.sipconnect-udp.broadcloud.eu

**BroadCloud France:** fr.sipconnect-udp.broadcloud.eu

**BroadCloud Italy:** it.sipconnect-udp.broadcloud.eu

**BroadCloud Australia:** me.sipconnect-udp.broadcloud.com.au

The **Provider Outbound Proxy** is not used and therefore left deactivated.

Setup - Wizards - Central Telephony - Internet Telephony

Internet Telephony Service Provider

Provider Name: BroadCloud  
Enable Provider:   
Secure Trunk:   
Domain Name: please.enter.domain

Provider Registrar

Use Registrar:   
IP Address / Host name: please.enter.here  
Port: 0  
Reregistration Interval at Provider (sec) 600

Provider Proxy

IP Address / Host name: please.enter.here  
Port: 0

Provider Outbound Proxy

Use Outbound Proxy:   
IP Address / Host name: 0.0.0.0  
Port: 0

Help Abort Back OK & Next Delete Data

Click [OK & Next].

OpenScape Business – Configure SIP Trunk for BroadCloud

Germany, France, Italy, United Kingdom, Australia

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

Setup - Wizards - Central Telephony - Internet Telephony

### Internet Telephony Stations for BroadCloud

	Name of Internet Telephony Station
<b>Add</b>	New Internet Telephony Station

Click on [Add].

Data provided on the BroadCloud Enterprise Portal, under SIP Trunking Page > Trunk Group > Edit under the selected Trunk Group:

The screenshot shows the BroadCloud Enterprise Portal interface. On the left is a navigation menu with options: DASHBOARD, SIP TRUNKING (selected), ASSIGNMENTS, SERVICES, ANALYTICS, NOTES, and PROFILE. The main content area is titled "Device" and contains the following configuration fields:

- \* Device:** A dropdown menu with the value "123452315121".
- MAC Address:** A text field with the value "123452315121".
- Username:** A text field with the value "+4922116534616".
- Password:** A text field with the placeholder "Password" and a "Reset" button.
- Settings:**
  - \* Name:** A text field with the value "+4922116534616".
  - \* Lead Number:** A dropdown menu with the value "+4922116534616".

The data provided on this page are used to fill the following fields:

**Internet telephony station:** Username is inserted here (e.g: +4922116534624)

**Authorization name:** Username is inserted here (e.g: +4922116534624)

**Password:** Password provided by BroadCloud

**Default number:** Main number of connection. The default number is used as outgoing number when no DDI number is assigned to a station. (e.g: +4922116534615). Usually the **Lead Number** is entered here.

Setup - Wizards - Central Telephony - Internet Telephony

Internet Telephony Station for BroadCloud

Internet telephony station: +4922116534624  
Authorization name: +4922116534624  
Password: .....  
Confirm Password: .....

Call number assignment  
Use public number (DID)

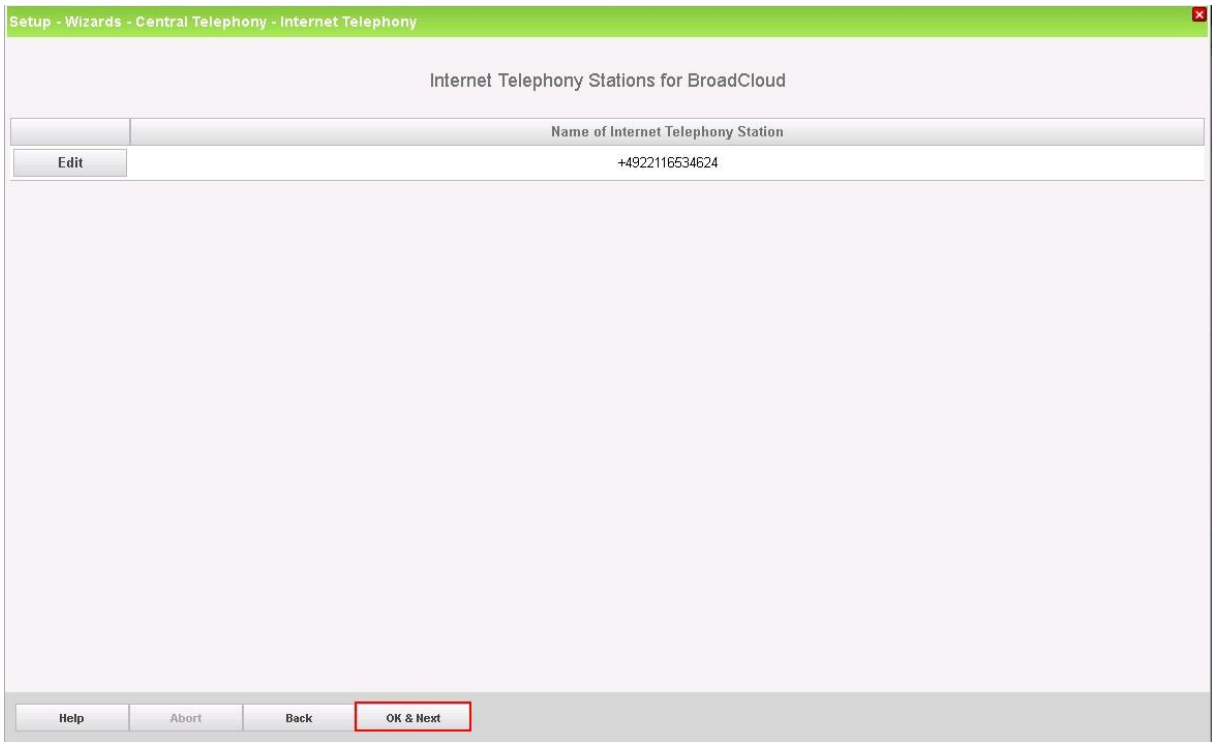
If using 'configurable clip' you have to change the configuration to 'Use public number (DID)' here!  
Changing trunk parameters in case of internal subscriber no. is not allowed!

Default Number: +4922116534615

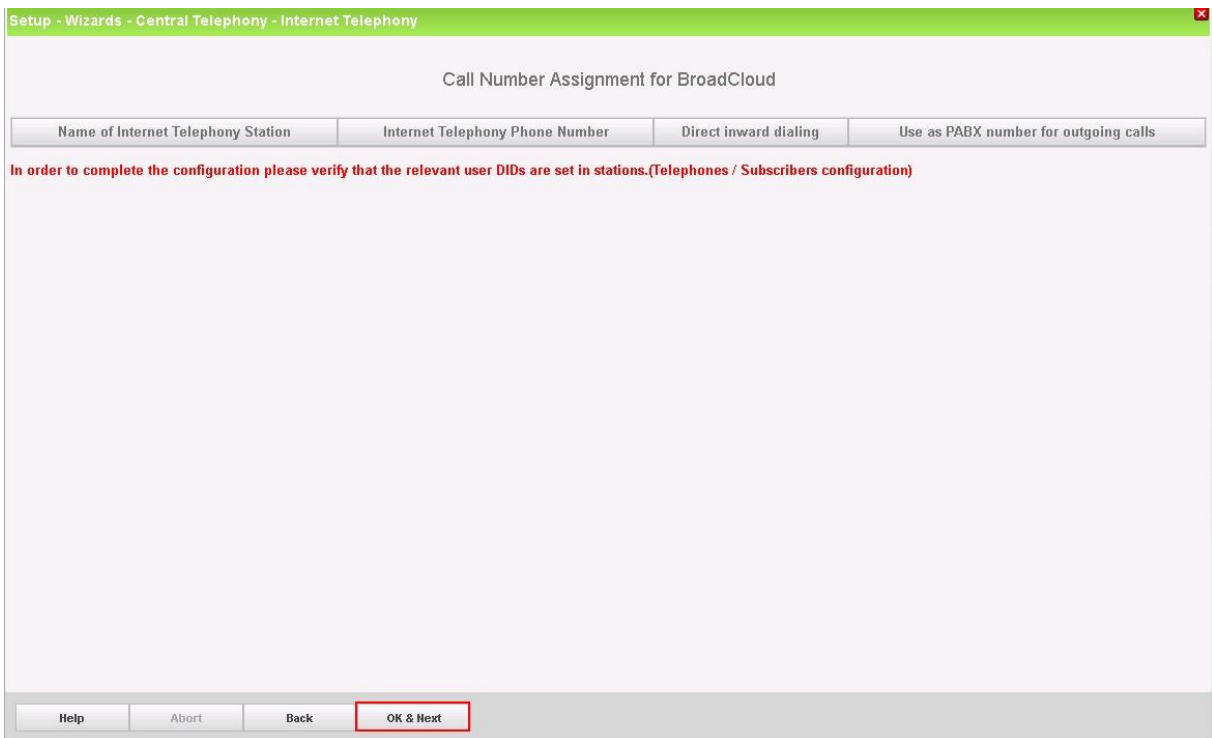
**Default Number**  
ITSP as primary CO access  
Enter one of the call numbers supplied by your network provider here. This will be used in outgoing calls as the calling party number in case no other number is available for the respective call.  
All call numbers supplied by your network provider are to be entered within the trunk and telephones configuration (DID field) primary CO access.

Help Abort Back OK & Next Delete Data

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

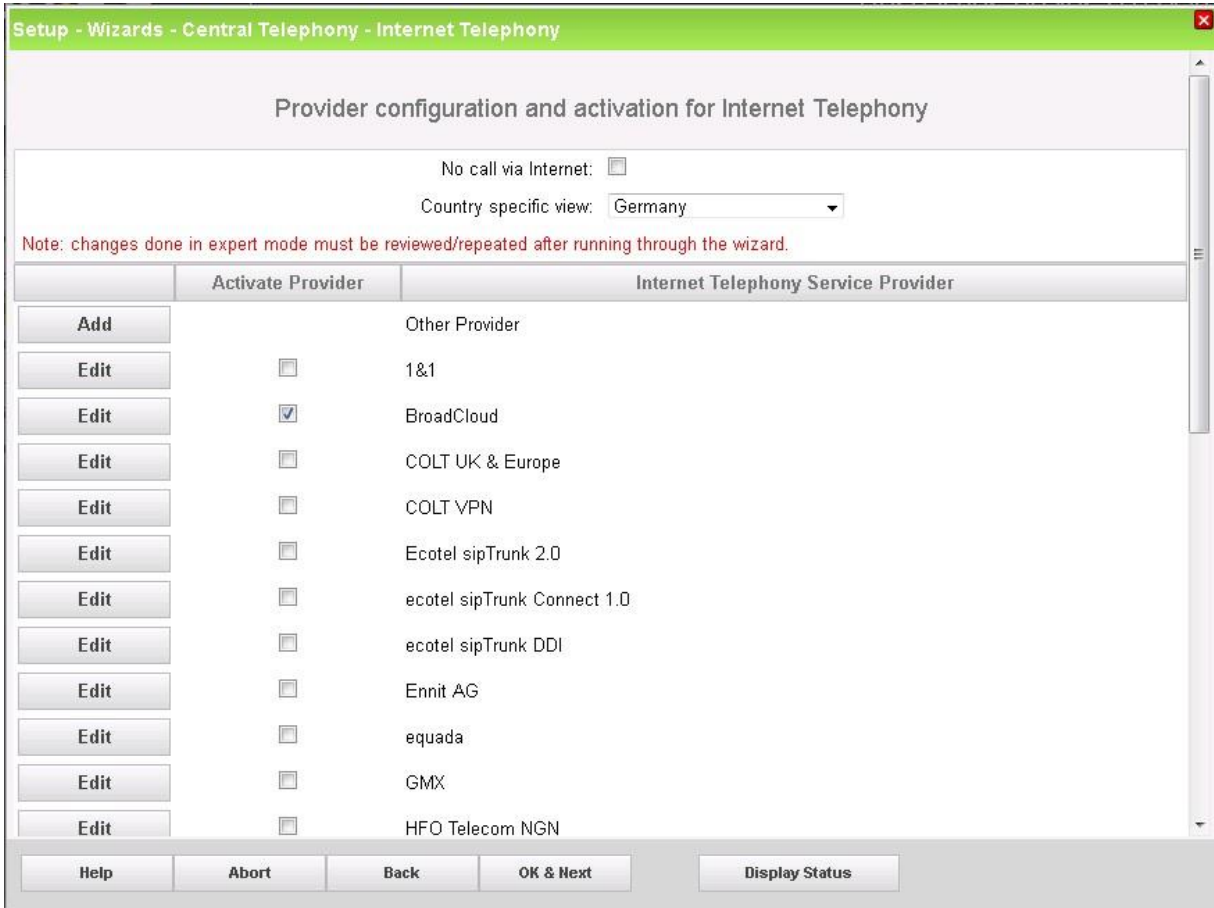


Click [OK & Next]



Click [OK & Next] (no input needed)





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 BroadCloud Enterprise Portal.

Capacity

\* **Maximum Active Calls**

10

**Max Incoming**

Max Incoming

**Max Outgoing**

Max Outgoing

**More Options**

Bursting

Setup - Wizards - Central Telephony - Internet Telephony

Settings for Internet Telephony

**Simultaneous Internet Calls**

Available Lines for ITSP: 170

Under 'Setup - Wizards - Network / Internet - Internet Access', you have entered the value **Upstream up to (Kbps) = 10000**

In the 'Change Feature --> Internet Telephony' Assistant. This upstream allows you to conduct up to **60** 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.

Number of Simultaneous Internet Calls: 10 **Distribute Lines**

**Line assignment**

Internet Telephony Service Provider	Configured Lines	Assigned Lines
BroadCloud	0	10

Click [OK & Next]

## Special phone numbers

In this dialog it is possible to route special phone numbers.

The dialog box is titled "Special phone numbers" and contains a note: "Emergency calls should always be built up with ISDN or Analog Trunk for safety reasons. Please make sure that all special call numbers are supported by the selected provider without fail." Below the note is a table with 15 rows, each representing a special phone number. The columns are "Special phone number", "Dialed digits", and "Dial over Provider".

Special phone number	Dialed digits	Dial over Provider
1	0C112	BroadCloud
2	0C110	BroadCloud
3	0C0137Z	BroadCloud
4	0C0138Z	BroadCloud
5	0C0900Z	BroadCloud
6	0C118Z	BroadCloud
7	0C116Z	BroadCloud
8	0C115	BroadCloud
9	0C010Z	BroadCloud
10		ISDN
11		ISDN
12		ISDN
13		ISDN
14		ISDN
15		ISDN

At the bottom of the dialog are buttons for "Help", "Abort", "Back", and "OK & Next".

Click [OK & Next]

On next page status of ITSP is displayed.

The dialog box is titled "Status for the Internet Telephony Service Provider (ITSP)". It displays the status of the ITSP. The status is "Enabled" and the user is "registered". The provider is "BroadCloud" and the phone number is "+4922116534624". There are "Restart" and "Diagnose" buttons.

Provider	Status	Phone Number	User
BroadCloud	Enabled	+4922116534624	registered

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 dialog box is titled "Exchange Line Seizure". It contains the following fields:

- Trunk Access Code: 855
- Dial over Provider: BroadCloud
- Area Code: Please enter the local area code. Local area code: 221

Click [OK & Next]

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

Seizure Code for the 'Outside line Seizure'	
	Seizure code for 'Outside line Seizure'
ISDN	88
BroadCloud	0

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.

All numbers shown in the BroadCloud **Trunk user DDI** can be used as DID and can be found on the BroadCloud Enterprise Portal under the SIP Trunking Page > Trunk Group > **Assigned** in the column **Phone Number**:

Search Available Users

Available		Assigned		
Name	Phone Number	Name	Phone Number	Station Type
<input type="checkbox"/>	.4922116534605	<input type="checkbox"/>	.4922116534615	<input type="radio"/> Basic <input type="radio"/> Standard <input type="radio"/> Premium
<input type="checkbox"/>	.4922116534607	<input type="checkbox"/>	.4922116534624	<input type="radio"/>
<input type="checkbox"/>	.4922116534608	<input type="checkbox"/>	.4922116534616	<input type="radio"/>
<input type="checkbox"/>	.4922116534609	<input type="checkbox"/>	.4922116534616	<input type="radio"/>
<input type="checkbox"/>	.4922116534610	<input type="checkbox"/>	.4922116534616	<input type="radio"/>

Expert mode - Telephony Server										
System Clients										
Callno	DID	First Name	Last Name	Display	Type	Clip/Lin	Active	Fax Callno	Fax DID	ITSP Loc-ID
114	22116534615	-	-	-	System Client	-	✓	7799	22116534624	-
115	-	-	-	-	System Client	-	✓	-	-	-

## Additional Configuration

### License

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

Home Administrators Setup Expert mode Data Backup License Management Service Center

The screenshot shows the 'License Management' section of the OpenScope interface. The left sidebar lists 'License Management' and 'CO Trunks'. The main content area is titled 'CO Trunks' and contains the following text:

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: 32

**SIP trunks**

The configured number of simultaneous Internet calls for each Internet Telephony Service Provider is: 10

License number of simultaneous Internet calls in this node: 10

License demand for number of simultaneous Internet calls in this node: 10

**PRI (S2M/T1)**

Type	Slot	Port	Feature	Demands
------	------	------	---------	---------

### Route configuration (optional)

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

Best praxis 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.

The screenshot shows the 'Route' configuration page for 'BroadCloud' in the 'Expert mode - Telephony Server'. The left sidebar shows 'Trunks/Routing' with 'BroadCloud' selected. The main content area is titled 'Route' and contains the following configuration fields:

**Change Route** | **Change Routing Parameters** | **Special Param**

Route Name: BroadCloud

Seizure code: 0

CO code (2nd trunk code):

**Gateway Location**

Country code: 49

Local area code:

PABX number:

**PABX number-incoming**

Country code: 49

Local area code:

PABX number:

Location number:

**PABX number-outgoing**

Country code:

Local area code:

PABX number:

Suppress station number:

**Overflow route**

Overflow route: None

**Digit transmission**

Digit transmission: en-bloc sending

**Mobile Extension Number (MEX)**

MEX Number:

Apply | Undo | Help

The route parameters:

The screenshot displays the 'Expert mode - Telephony Server' interface. On the left, a navigation tree shows 'Trunks/Routing' expanded to 'Route', with 'BroadCloud' selected. The main area is titled 'Route' and contains two tabs: 'Change Route' and 'Change Routing Parameters'. The 'Change Routing Parameters' tab is active, showing a 'Routing flags' section with the following settings:

- Digit repetition on:
- Analysis of second dial tone / Trunk monitoring:
- Intercept per direction:
- Over. service 3.1 kHz audio:
- Add direction prefix incoming:
- Add direction prefix outgoing:
- Call No. with international / national prefix:
- Ringback tone to CO:
- Name in CO:
- Segmentation: yes (dropdown)
- deactivate UUS per route:
- Always use DSP:

Below the 'Routing flags' section, there are several dropdown menus for trunk and seizure parameters:

- Analog trunk seizure: no pause (dropdown)
- Trunk call pause: Pause 2 s (dropdown)
- Type of seizure: linear (dropdown)
- Route type: CO (dropdown)
- No. and type, outgoing: Country code (dropdown)
- Call number type: Direct inward dialing (dropdown)

The 'Rerouting' section at the bottom contains:

- Change route allowed:
- Route optimize active: No (dropdown)

At the bottom of the interface, there are three buttons: 'Apply', 'Undo', and 'Help'.

## LCR changes (optional)

In V2R2 all necessary LCR rule will be created automatically. It should look like below.

In expert mode, Telephony Server, LCR , - change the "Routing Table" in the way that **local calls will be routed to Routing Table 5 – dial rule "local"**, **national calls will be routed to Routing Table 28 – dial rule "national"** and **international calls will be routed to Routing Table 38 dial rule "international"**  
The dial rule manipulates the number so that the called party number is always in the international format.

Dial Plan	Name	Dialed digits	Routing Table	Acc. code	Classes of service	Emergency
1	Notruf	0C112	4		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2	Notruf	0C110	4		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3	Televoting	0C0137Z	4		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4	Televoting	0C0138Z	4		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
5	Premium Dienste	0C0900Z	4		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
6	Auskunftsdienst	0C118Z	4		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
7	Sondernummer	0C116Z	4		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
8	Sondernummer	0C115	4		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
9	Preselection	0C010Z	4		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
10	Sondernummer		1		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
11	Sondernummer		1		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
12	Sondernummer		1		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
13	Sondernummer		1		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
14	Sondernummer		1		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
15	Sondernummer		1		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
16	Services	856CZ	4		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
17	National	856C0-Z	28		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
18	Local	856C1Z	5		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
19	Local	856C2Z	5		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
20	International	856C00-Z	38		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
21	BroadCloud	0CZ	4		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
22	BroadCloud	0C0-Z	28		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
23	BroadCloud	0C1Z	5		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
24	BroadCloud	0C2Z	5		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
25	BroadCloud	0C00-Z	38		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
26	Standard	856CZ	6		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### Routing table 5:

- 3 - Table
- 4 - Table
- 5 - Table
- 6 - Table
- ...

Index	Dedicated Route	Route	Dial Rule	min. COS	Warning	Dedicated Gateway	GW Node ID
1	<input type="checkbox"/>	Broadcloud	SIP lokal_Canoni →	15	None	No	
2	<input type="checkbox"/>	None	None	15	None	No	

### Routing table 28:

- 26 - Table
- 27 - Table
- 28 - Table
- 29 - Table

Index	Dedicated Route	Route	Dial Rule	min. COS	Warning	Dedicated Gateway	GW Node ID
1	<input type="checkbox"/>	Broadcloud	National_to_Cant →	15	None	No	
2	<input type="checkbox"/>	None	None	15	None	No	

### Routing table 38:

- 37 - Table
- 38 - Table
- 39 - Table

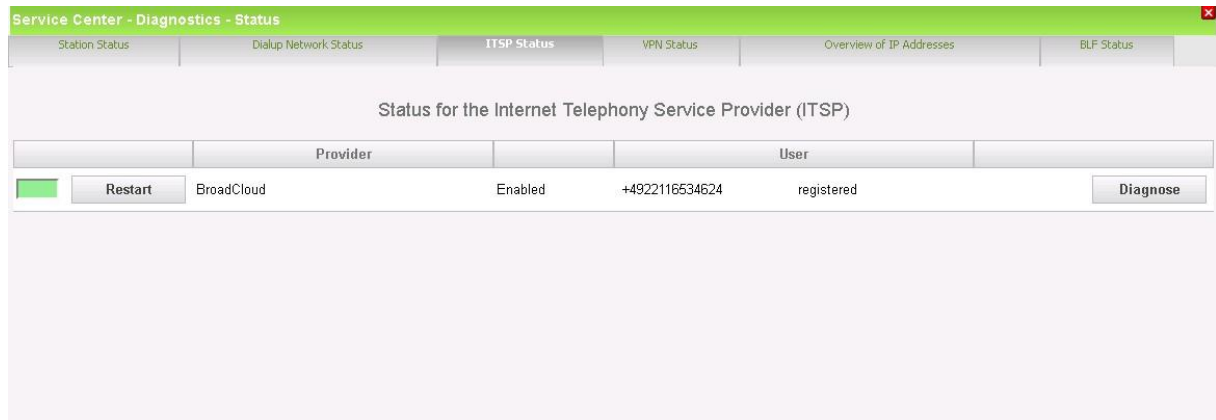
Index	Dedicated Route	Route	Dial Rule	min. COS	Warning	Dedicated Gateway	GW Node ID
1	<input type="checkbox"/>	Broadcloud	Internat_to_Can →	15	None	No	
2	<input type="checkbox"/>	None	None	15	None	No	

### Dial rules:

Rule Name	Dial rule format	Network access	Type
1 ISDN	A	Main network supplier	Unknown
2 SIP	A	Main network supplier	Unknown
3 SIP lokal	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	DOE4A	Main network supplier	Unknown
9 Add_cc_to_Canoni	D49E2A	Main network supplier	Country code
10 National_to_Cano	D49E3A	Main network supplier	Country code
11 Internat_to_Can	E3A	Main network supplier	Country code
12 SIP lokal_Canoni	HE2A	Main network supplier	Country code
13		Unknown	Unknown

## How to check the status of SIP connection with BroadCloud

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



### Known restrictions:

1. CLIP No Screening is not supported for outgoing calls. A phone cannot present a number which is not owned by the provider trunk.
2. COLP: Provider doesn't support Connected Line Identification Presentation
3. Special scenario in case of non-DID phone and forwarded attendant phone.  
Description in detail: A non-DID Phone usually present the attendant DID for external calls. In case the attendant activates call-forwarding to an external destination and the non-DID phone is calling the attendant, the call will be rejected by the provider. Reason: The provider does not accept calls with the same FROM and DIVERSION number.



## Appendix

### Supported Features

1. The Provider use dynamic Registration
2. The Provider support codec G.711, G.729 and G.722. But it is not allowed to use G.722 only
3. Fax: T.38 is supported by the provider.
4. Diverted calls present the number of the caller:  
In a transit call forwarding scenario the provider provides the number of the caller.  
e.g. external A calls internal B. B is forwarded to external C. C get the number information of A
5. The MultiSite Scenario is supported: The Provider is able to provided numbers in different Areas in the same country at the same sip-trunk.
6. DTMF: RFC2833 out-of-band is supported

### Supported Numbering Formats

#### Outgoing call

**Called Party (REQUEST, TO): GNF:**

**+498944234199905@<SP FQDN>**

**Calling Party (FROM, PAI, Diversion):**

**GNF: +4922116534615@<SP FQDN>**

#### Incoming call

**Called Party (REQUEST, TO): GNF:**

**+4922116534615@<SP FQDN>**

**Calling Party (FROM):**

**GNF: +498944234199905@<SP FQDN>**