

# OpenScape Business V2

## Gamma ITSP SIP Trunk Configuration

### Gamma ITSP SIP Trunk Configuration

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## 1 Introduction

The purpose of this document is to provide an aide memoir for the configuration of SIP trunks for the Gamma ITSP in the UK.

## 2 Configuration

Most of the configuration should be carried-out using the built-in configuration wizards within OpenScape Business Assistant. Launch OpenScape Business Assistant and log-in.

### 2.1 Mandatory SIP Port Configuration

To improve security the default external SIP port on a new OpenScape Business system is now 5070 instead of 5060 from V2 R3 software. For these new security measures to operate correctly the internal and external SIP ports **MUST** have different values.

Gamma will obviously assume the standard external SIP port of 5060 is being used, although a different SIP port can be configured via the Gamma portal (or specified when ordering a new Gamma SIP trunk) to keep the configuration simple and avoid possible problems it is easier to change the external SIP port back to 5060 and change the internal SIP port to be 5070, navigate to:

**Expert mode > Telephony Server > Basic Settings > Port Management**

Change the **SIP\_EXT** parameter **Port Number** back to 5060 and change the **SIP** parameter **Port Number** to 5070, click on the **Apply** button and restart the system.

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	single
SIP_EXT	5060	single
SIP_TLS_SUB	5062	single
SIP_TLS_SUB_EXT	5062	single
SIPS	5061	single
VSL_MULTISITE	8778	single

### 2.2 STUN Configuration

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Gamma only supports a static public IP address, in the OpenScape Business STUN must first be configured to use a static public IP address, navigate to:

**Expert mode > Telephony Server > Voice Gateway > Internet Telephony Service Provider > Edit STUN Configuration**

Change **STUN Mode** to 'Use static IP' using the drop-down list and enter the static **Public IP Address** of the Internet connection in the field underneath.

The screenshot shows the 'Expert mode - Telephony Server' window. On the left is a tree view with 'Internet Telephony Service Provider' selected. The main area is titled 'Internet Telephony Service Provider' and contains an 'Edit STUN Configuration' tab. In this tab, 'STUN Mode' is a dropdown menu set to 'Use static IP'. Below it, 'Public IP Address' is a text field containing '83.157.220.62'. 'Public SIP Port' is a text field containing '5060'. Below these, it says 'Detected Nat-Type: Error: Cannot reach STUN server or server does not exist!'. At the bottom, there is a 'Default STUN Server' section with 'IP Address / Host name' and 'Port: 3478' fields. At the very bottom of the window are 'Apply', 'Undo', and 'Help' buttons.

Click on the **Apply** button.

**NOTE #1** In order to work with a statically configured IP address for a particular ITSP the ITSP profile has to be configured with the **Use STUN** flag enabled and either a real (e.g. `stun3.3cx.com`) or dummy (e.g. `use.static.ip`) STUN server has to be configured in the **IP address / Host name** field as this field **CANNOT** be empty. A real STUN server is preconfigured for the Gamma profile and can be seen in **Expert mode**. However, the STUN server will not be utilised as the **STUN Mode** has been set to 'Use static IP' as a global setting.

The screenshot shows a 'Provider STUN' configuration section. It has a 'Use STUN' checkbox which is checked. Below it, the 'IP Address / Host name' field contains 'stun3.3cx.com'. The 'Port' field contains '3478'.

## 2.3 Internet Telephony Configuration Wizard

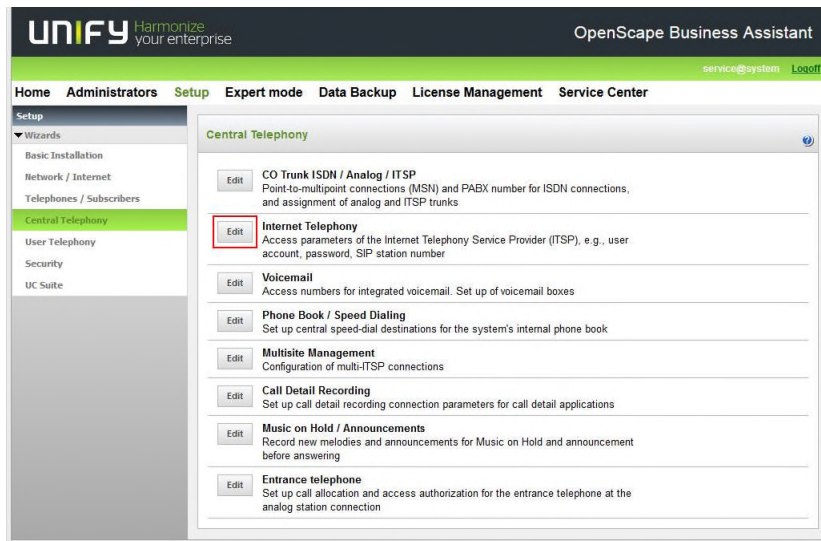
Launch the **Internet Telephony** wizard, navigate to:

**Setup > Wizards > Central Telephony > Internet Telephony**

1. Click on the **Edit** button.

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- The **Overview** page appears for entering location data. The most flexible configuration method is to enter only the **Country code** on this page (e.g. 44 for the UK) and then enter the remaining digits as the **DID** number (minus the leading 0) against the station / group.

Click on the **OK & Next** button.

- At the next page disable the **No call via Internet** flag and select 'United Kingdom' using the **Country specific view** drop-down list. Next to 'Gamma' enable the **Activate Provider** flag and then click on the **Edit** button.

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Setup - Wizards - Central Telephony - Internet Telephony

Provider configuration and activation for Internet Telephony

No call via Internet: ☐

Country specific view:

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"/>	Broadcloud
Edit	<input type="checkbox"/>	BT Wholesale Hosted Communications
Edit	<input type="checkbox"/>	BT Wholesale SIP Trunking (WSIPT)
Edit	<input type="checkbox"/>	COLT UK & Europe
Edit	<input type="checkbox"/>	COLT VPN
Edit	<input checked="" type="checkbox"/>	Gamma
Edit	<input type="checkbox"/>	gnTel
Edit	<input type="checkbox"/>	KCOM
Edit	<input type="checkbox"/>	Skype Connect
Edit	<input type="checkbox"/>	Skype for Business
Edit	<input type="checkbox"/>	TalkTalk
Edit	<input type="checkbox"/>	Verizon
Edit	<input type="checkbox"/>	Vodafone Anlagenanschluss R3
Edit	<input type="checkbox"/>	Vodafone UK
Edit	<input type="checkbox"/>	Voiceflex
Edit	<input type="checkbox"/>	VoIP Ltd i-Line

Help Abort Back OK & Next Display Status

4. The **Domain Name** and the **Provider Proxy IP Address / Host name** will contain a dummy value (e.g. enter.ip.address).

Setup - Wizards - Central Telephony - Internet Telephony

Internet Telephony Service Provider

Provider Name: Gamma

Enable Provider: ☒

Secure Trunk: ☐

Domain Name:

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:

Help Abort Back OK & Next Delete Data

Please enter the IP address or host name provided by Gamma into both fields (e.g. 88.215.55.111). The IP address or host name can be found in the 'Gamma SIP Trunks Standard Design Order' document provided by Gamma.

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## Gamma ITSP SIP Trunk Configuration

Click on the **OK & Next** button.

- At the next page click on the **Add** button.

- Enter the lowest DDI number in the range provided by Gamma into the **Internet telephony station** box (including the leading 0 e.g. 01908048013).

The **Authorization name**, **Password** and **Confirm Password** boxes are greyed-out because Gamma do not support registration, only static IP authentication is supported.

Enter one of the numbers in the DDI range as the **Default Number** (including the leading 0 e.g. 01908048013). This number will be presented as the CLI on outgoing calls from stations with no DDI number assigned.

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## Gamma ITSP SIP Trunk Configuration

Setup - Wizards - Central Telephony - Internet Telephony

Internet Telephony Station for Gamma

Internet telephony station: 01908048013

Authorization name:

Password:

Confirm Password:

**Call number assignment**

Use public number (DID)

ITSP-multiple route: ☐

Default Number: 01908048013

**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

Click on the **OK & Next** button.

- At the next page click on the **OK & Next** button.

Setup - Wizards - Central Telephony - Internet Telephony

Internet Telephony Stations for Gamma

Name of Internet Telephony Station
01908048013

Edit

Help Abort Back OK & Next

- At the next page click on the **OK & Next** button as we are routing via the **DID** assigned directly to the station / group.

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9. At the next page click on the **OK & Next** button.

10. At the next page enter the upstream speed of your Internet connection in the **Upstream up to (Kbps)** box, the wizard will then automatically calculate the maximum **Number of simultaneous Internet Calls** possible. Click on the **Distribute Lines** button to automatically configure the correct number of SIP trunks.

**NOTE #2** The maximum number of SIP trunks ordered from the ITSP may be less than the maximum **Number of simultaneous Internet Calls** supported by the Internet connection, in this case change the **Assigned Lines** value to be the number of SIP trunks ordered from Gamma. This is defined as the number of 'Channels' assigned to the 'Endpoint' in the 'Gamma SIP Trunks Standard Design Order' document supplied by Gamma.

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Setup - Wizards - Central Telephony - Internet Telephony

Settings for Internet Telephony

**Simultaneous Internet Calls**

Available Lines for ITSP: 167

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) = 512**

In the 'Change Feature -> Internet Telephony' Assistant. This upstream allows you to conduct up to 4 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): 512

Number of Simultaneous Internet Calls: 4 **Distribute Lines**

**Line assignment**

Internet Telephony Service Provider	Configured Lines	Assigned Lines
Gamma	0	4

Help Abort Back OK & Next

Click on the **OK & Next** button.

- On the next page emergency and special numbers that cannot be routed via the ITSP must be configured. Usually emergency calls are routed via ISDN or analogue trunks if possible. However, if the customer does not have ISDN or analogue trunks then emergency calls can be routed over the ITSP trunks. If this is the case change the **Dial over Provider** to 'Gamma' using the drop-down list for these numbers.

Setup - Wizards - Central Telephony - Internet Telephony

Special phone numbers

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.

Special phone number	Dialed digits	Dial over Provider
1	9C112	ISDN
2	9C999	ISDN
3		ISDN
4		ISDN
5		ISDN
6		ISDN
7		ISDN
8		ISDN
9		ISDN
10		ISDN
11		ISDN
12		ISDN
13		ISDN
14		ISDN
15		ISDN

Help Abort Back OK & Next

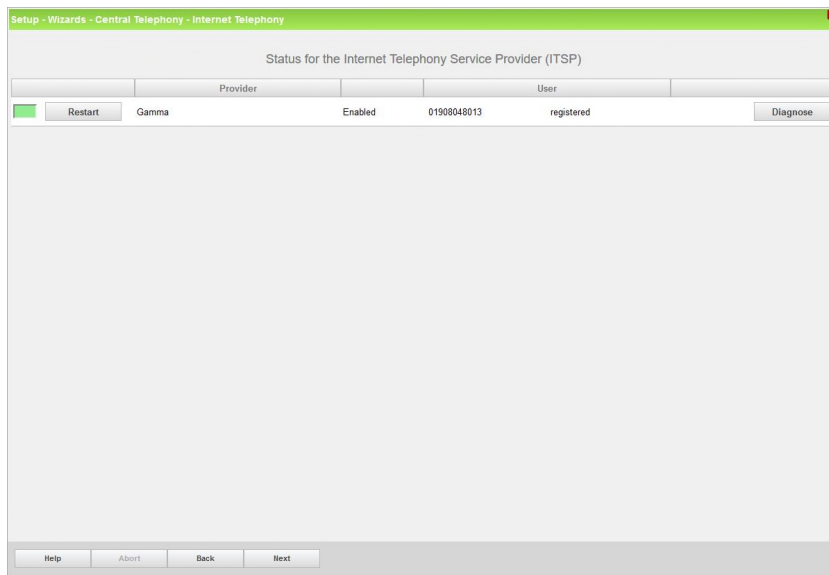
Make any required changes and then click on the **OK & Next** button.

- At the next screen 'Gamma' should be shown with a green indicator, if this is not the case click on the **Diagnose** button for additional diagnostic information.



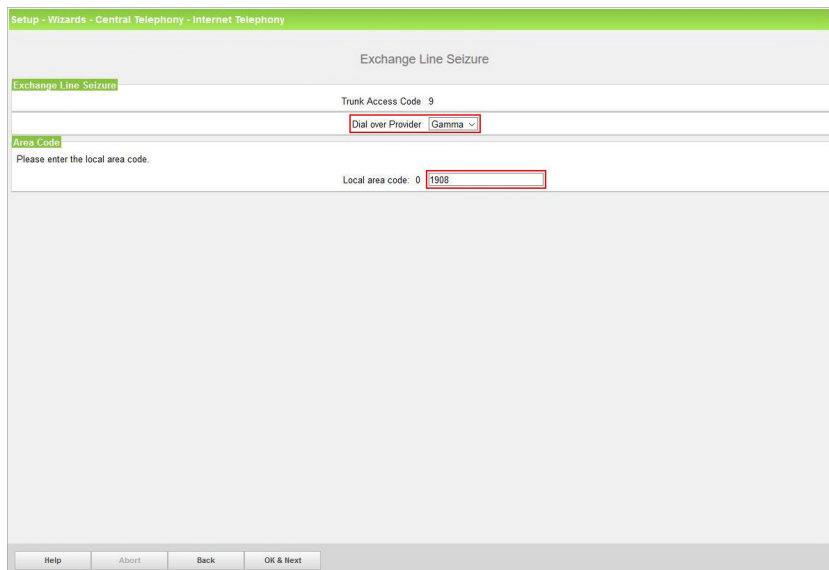
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Click on the **Next** button.

- At the next screen assign the **Trunk Access Code** to the 'Gamma' route and enter the **Local area code** for this Internet telephony station minus the leading 0 (e.g. 1908).



Click on the **OK & Next** button.

- At the next screen the seizure codes for external calls are displayed.

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Setup - Wizards - Central Telephony - Internet Telephony

Seizure Code for the 'Outside line Seizure'

	Seizure code for 'Outside line Seizure'
ISDN	88
Gamma	9

Help Abort Back OK & Next

Click on the **OK & Next** button.

15. Configuration is complete.

Setup - Wizards - Central Telephony - Internet Telephony

The changes for the feature 'Internet Telephony' are completed

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'.

Help Abort Back Finish

Click on the **Finish** button.

## 2.4 Route Configuration

The Gamma SIP trunk route configuration will be automatically configured by the Gamma profile. However, it is worth checking that the **No. and type, outgoing** parameter is set correctly for the 'Gamma' trunk route. This parameter can be checked in **Expert mode**.

Navigate to:

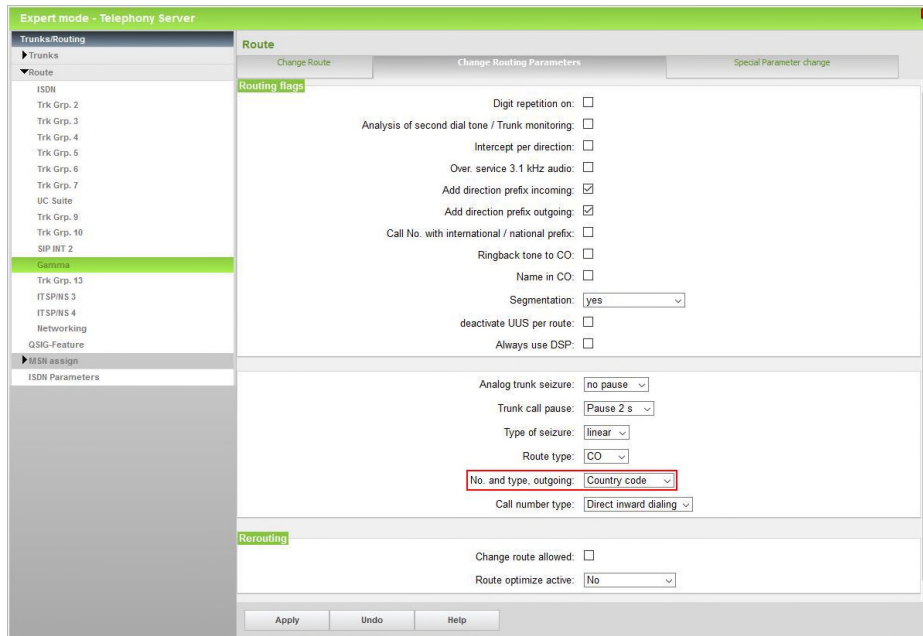
**Expert mode > Telephony Server > Trunks/Routing > Route**

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## Gamma ITSP SIP Trunk Configuration

Select the 'Gamma' route in the left-hand pane and select the **Change Routing Parameters** tab in the right-hand pane.

For Gamma the **No. and type, outgoing** parameter should be set to 'Country code' using the drop-down list.



Click on the **Apply** button if any changes were made.

**NOTE #3** Any changes made to the trunk route configuration may be lost if the **Internet Telephony** wizard is run again for this ITSP.

## 2.5 Station / Group DDI Assignment

### 2.5.1 Station DDI Assignment

The DDI numbers provided by Gamma should now be assigned to stations' using the appropriate wizard.

Navigate to:

**Setup > Wizards > Telephones / Subscribers**

Select the appropriate wizard (e.g. **UP0 Telephones**) depending on the installed telephone type.

If only the **Country code** was configured in section 2.1 step 2 (recommended) then the DDI numbers provided by Gamma are entered directly at the station in the **DID** column (minus the leading 0), e.g. 01908048013 would be entered as 1908048013.

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## Gamma ITSP SIP Trunk Configuration

Setup - Wizards - Telephones / Subscribers - UP0 Telephones

Select a station -UP0 Phones

☒ Take DID from changed call number

Box	Slot	UP0-Port	CallNo	First Name	Last Name	Display	DID	Fax CallNo	Fax DID	Class of service
1	1	1 M	139				1191234567			International
1	1	2 M	140				1908048013			International
1	1	3 M	141							International
1	1	4 M	142							International
1	1	5 M	143							International
1	1	6 M	144							International
1	1	7 M	145							International
1	1	8 M	146							International
1	1	9 M	147							International
1	1	10 M	148							International

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Help Abort Back OK & Next Save Data

Click on the **Save Data** button after assigning all the required Gamma DDI numbers. Either click on the **OK & Next** button to continue with the wizard or close the window.

Repeat the procedure with the other wizards in this area if the customer has other telephone types and DDI numbers need to be assigned.

### 2.5.2 Group Call / Hunt Group DDI Assignment

DDI numbers can be assigned to group call / hunt groups using the **Group Call / Hunt Group** wizard.

Navigate to:

**Setup > Wizards > User Telephony > Group Call / Hunt Group**

Enter any required DDI numbers into the **DID** column of the required group call / hunt group.

Click on the **OK & Next** button followed by the **Finish** button to complete the wizard.

## 2.6 Multi-Site Configuration

If ITSPs are configured with different area codes (e.g. area code 01908 and 0119) either from the same ITSP or different ITSPs the system should be configured for multi-site. This allows each area code / location to be tied to a particular station and ITSP trunk route.

This has the advantage of allowing a station to dial a local number without the area code and the OpenScape Business system can then automatically insert the correct area code to enable the call to route successfully and also seize the correct ITSP trunk route.

Proceed as follows to configure multi-site working.

Navigate to:

**Setup > Wizards > Central Telephony > Multisite Management**

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## Gamma ITSP SIP Trunk Configuration

1. Define each **Area Code** provided by all configured ITSPs. The **Area Code** at the top of the table (default value 0) is the default area code that will be applied to all stations (e.g. 01908). Enter additional area codes below the default entry (e.g. 0119). For each area code enter a descriptive location in the **Area** field (e.g. MK, Newtown). Also define the **Dedicated Route** to be used for each area code (e.g. 'Gamma').

Delete	Area Code	Area	Dedicated Route
<input type="checkbox"/>	01908	MK	Gamma
<input type="checkbox"/>	0119	Newtown	-
<input type="checkbox"/>			-
<input type="checkbox"/>			-
<input type="checkbox"/>			-
<input type="checkbox"/>			-
<input type="checkbox"/>			-
<input type="checkbox"/>			-

Click on the **OK & Next** button.

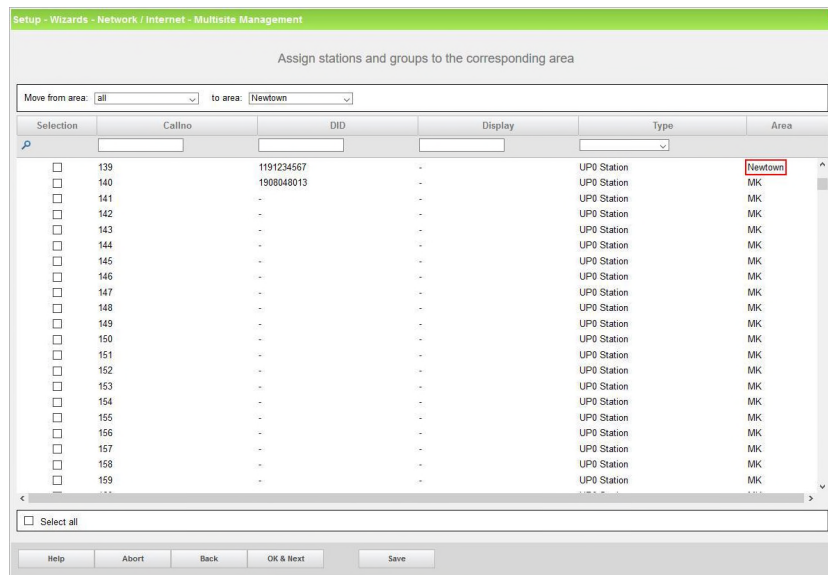
2. On the next screen all stations will be set to the default **Area** (e.g. MK). Next, using the **Selection** flag select all stations that share one of the other area codes (e.g. Newtown). Select 'Newtown' from the **to area** drop-down list and click on the **Save** button.

Selection	Callno	DID	Display	Type	Area
<input checked="" type="checkbox"/>	139	1191234567	-	UP0 Station	MK
<input type="checkbox"/>	140	1908048013	-	UP0 Station	MK
<input type="checkbox"/>	141	-	-	UP0 Station	MK
<input type="checkbox"/>	142	-	-	UP0 Station	MK
<input type="checkbox"/>	143	-	-	UP0 Station	MK
<input type="checkbox"/>	144	-	-	UP0 Station	MK
<input type="checkbox"/>	145	-	-	UP0 Station	MK
<input type="checkbox"/>	146	-	-	UP0 Station	MK
<input type="checkbox"/>	147	-	-	UP0 Station	MK
<input type="checkbox"/>	148	-	-	UP0 Station	MK
<input type="checkbox"/>	149	-	-	UP0 Station	MK
<input type="checkbox"/>	150	-	-	UP0 Station	MK
<input type="checkbox"/>	151	-	-	UP0 Station	MK
<input type="checkbox"/>	152	-	-	UP0 Station	MK
<input type="checkbox"/>	153	-	-	UP0 Station	MK
<input type="checkbox"/>	154	-	-	UP0 Station	MK
<input type="checkbox"/>	155	-	-	UP0 Station	MK
<input type="checkbox"/>	156	-	-	UP0 Station	MK
<input type="checkbox"/>	157	-	-	UP0 Station	MK
<input type="checkbox"/>	158	-	-	UP0 Station	MK
<input type="checkbox"/>	159	-	-	UP0 Station	MK
<input type="checkbox"/>	160	-	-	UP0 Station	MK

The **Area** for the selected stations will now change to the selected location (e.g. Newtown).

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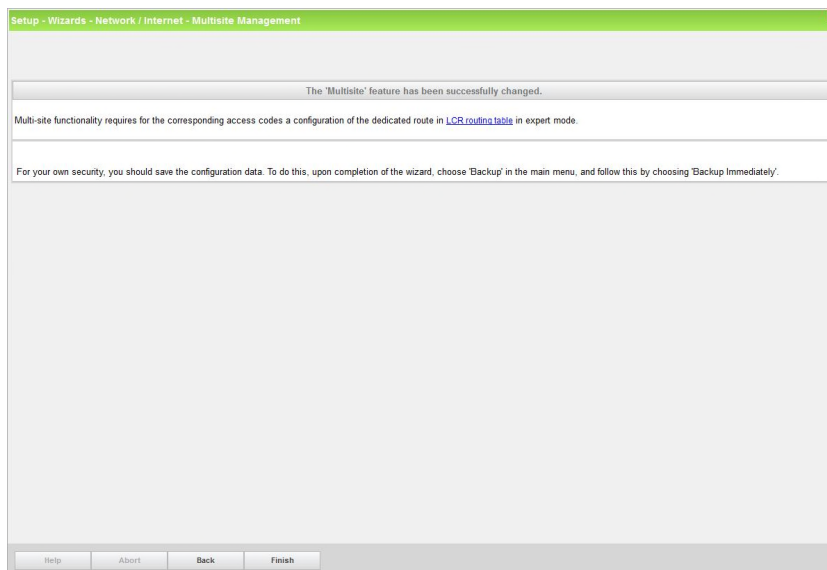
## Gamma ITSP SIP Trunk Configuration



Repeat the procedure for other stations and areas.

Click on the **OK & Next** button.

- Multi-site configuration is complete, click on the **Finish** button.



As stated on the final screen, LCR must be configured to route all configured area codes to their respective dedicated route.