**OpenScape Business** 

How to Configure SIP Trunk for Vodafone

UK

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## **Table of History**

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**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.

## 1 Introduction

The purpose of this document is to provide an aide memoir for the configuration of SIP trunks for the Vodafone 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 Internet Telephony Configuration Wizard

Launch the Internet Telephony wizard, navigate to:

#### Setup > Wizards > Central Telephony > Internet Telephony

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

							Logoff
Home	Administrators	Setup	Expert mode	Data Backup	License Management	Service Center	
Setup							
▼ Wizard	s	C	entral Telephony				()
Basic I	nstallation						
Netwo	rk / Internet		Edit CO Trunk	ISDN / Analog / IT	SP		
Teleph	ones / Subscribers		and assign	ultipoint connection: iment of analog and	s (MSN) and PABX number for IS ITSP trunks	DN connections,	
Centra	I Telephony		Internet T	elephony			
User T	elephony		Access pa	rameters of the Inte	rnet Telephony Service Provider (	ITSP), e.g., user	
Securit	ty		account, p	assword, SIP statio	n number		
UC Suil	te		Edit Voicemail Access nu	l mbers for integrated	d voicemail. Set up of voicemail b	oxes	
			Edit Phone Bo Set up cer	ok / Speed Dialing tral speed-dial dest	9 inations for the system's internal	phone book	
			Edit Multisite I Configurati	Management on of multi-ITSP cor	nnections		
			Edit Call Detai Set up call	I Recording detail recording co	nnection parameters for call deta	il applications	
			Edit Music on Record net before ans	Hold / Announcem w melodies and ann wering	nents ouncements for Music on Hold a	nd announcement	
			Edit Entrance Set up call analog star	telephone allocation and acce tion connection	ess authorization for the entrance	e telephone at the	

 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.

p - Wizards - Central Telephony - Internet Telephony			
Over	view		
changes done in expert mode must be reviewed/repeated after running through the wizard.	and Monthly confer	ano)	
K number	and meetive comen	ence.	
Country code: 00	44	(mandatory)	
Local area code: 0		(optional)	
PABX number:		(optional)	

Click on the OK & Next button.

3. 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 'Vodafone UK' enable the **Activate Provider** flag and then click on the **Edit** button.

		Provider configuration and activation for Internet Telephony	Ŷ
Note: changes don	e in expert mode must be reviewed/r	No call via linternet: Country specific view: [United Kingdom ↓] apsated after running through the viacard.	
	Activate Provider	Internet Telephony Service Provider	
Add		Other Provider	
Edit		BTIPVS	
Edit		COLT UK & Europe	
Edit		COLT VPN	
Edit		Gamma StaticIP	
Edit		Gamma with Register	
Edit		HIPCOM	
Edit		KCOM	
Edit		OPAL	
Edit		Skype Connect	
Edit		TalkTalk	
Edit		Tipicall	
Edit		Verizon	
Edit		Vodafone Anlagenanschluss R3	
Edit		Vodafone UK	
Edit		Voiceflex	
Edit		VolP 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	_0
Internet Telephon	y Service Provider
Provider Name:	Vodafone UK
Enable Provider.	
Secure Trunk:	
Domain Name:	enter ip.address
Provider Registrat Use Registrat	
IP Address / Host name:	
Port:	5060
Reregistration Interval at Provider (sec)	600
Provider Proxy IP Address / Host name:	enter ip address
Port:	5060
Provider Outbound Proxy Use Outbound Proxy	
IP Address / Host name:	0.0.0.0
Port	0
Help Abort Back OK & Next Delete Data	

Please enter the IP address or host name provided by Vodafone into each field (e.g. 192.168.71.197). The IP address or host name will be communicated via an e-mail from the Vodafone Solution Consultant.

p - Wizards - Central Telephony - Internet Telephony	
Internet Telephor	ny Service Provider
Devide News	Valder III
Provider Name:	vodatone UK
Enable Provider.	
Secure Hunk	
Domain Name.	192.168.71.197
Use Registrar	
IP Address / Host name:	
Port	5060
Reregistration Interval at Provider (sec)	) 600
rider Proxy	
IP Address / Host name:	192.168.71.197
Port	5060
ider Outbound Proxy	
Use Outbound Proxy:	
IP Address / Host name:	0.0.0
Port	p

Click on the OK & Next button.

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

			Inte	ernet Telephony Stations for Vodafone UK	
				Name of Internet Telephony Station	
Add				New Internet Telephony Station	
Help	Abort	Back	OK & Next		

 Enter the lowest DDI number in the range provided by Vodafone UK into the Internet telephony station box. This number should be entered in canonical format for Vodafone UK as shown in the screenshot (e.g. +441491601160).

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

Enter the main number in the DDI range as the **Default Number**; this number will be presented as the CLI on outgoing calls from stations with no DDI number assigned. This number should be entered in canonical format for Vodafone UK as shown in the screenshot (e.g. +441491601160).

Setup - Wizards - Central Telephony - Internet Telephony	
Internet Telephony Sta	ation for Vodafone UK
Internet telephony station: Authorization name: Password: Confirm Password:	+44 1491601160
(20) Mumber and purchase (Use public number (200) If using 'configurable cip' you have to change the Change that warmeres in case of	configuration to Use power (DID) here! internal subscribe no. is not allowed
ITSP-multiple route: Default Number:	+441491601160
Default Number ITSP as primary CO access Enter one of the call numbers supplied by your network provider hero. This will be used in outgoing cal All call numbers supplied by your network provider are to be entered within the trunk and telephones c	is as the calling party number in case no other number is available for the respective call. onfiguration (DID field) primary CO access.
Help Abort Back OK & Next Delete Data	-

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

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

Setup - Wizards	Central Telephony - Internet Telephony
	Internet Telephony Stations for Vodafone UK
	Name of Internet Telephony Station
Edit	+441491601160
Help	Abort Back OK & Next

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

tup - Wizards - Central Telephony - Internet Telephony					
Call Number Assignment for Vodafone UK					
Name of Internet Telephony Station	Internet Telephony Phone Number	Direct inward dialing	Use as PABX number for outgoing calls		
er to complete the configuration please verify	that the relevant user DIDs are set in stations.(Te	lephones / Subscribers configurat	ion)		

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

		Provider configuration and activation for Internet Telephony	
		No call via Internet:	
		Country specific view: United Kingdom	
hanges done:	in expert mode must be reviewed/r	epeated after running through the wizard.	
Add	House Fromat	Other Provider	
Edit		BT IPVS	
Edit		COLT UK & Europe	
Edit		COLT VPN	
Edit		Gamma StaticIP	
Edit		Gamma with Register	
Edit		HIPCOM	
Edit		KCOM	
Edit		OPAL	
Edit		Skype Connect	
Edit		TaikTaik	
Edit		Tipicall	
Edit		Verizon	
Edit		Vodafone Anlagenanschluss R3	
Edit		Vodafone UK	
Edit		Voiceflex	
Edit		VoIP Ltd i-Line	

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.

m of your Internet connection communicat is upstream allows you to conduct up to 4	ed by your Provider. Yo Internet phone calls si	ou have typed in	
m of your Internet connection communicat is upstream allows you to conduct up to 4	ed by your Provider. Yo Internet phone calls si	ou have typed in	
m of your Internet connection communicat is upstream allows you to conduct up to 4	ed by your Provider. Yo Internet phone calls si	ou have typed in	
is upstream allows you to conduct up to 4	Internet phone calls si	in demonstration with a set of the set	
		imultaneously. If the call quality o	leteriorates due to the network load, you w
the licensing.			
Upstream up to (Kbps):	512		
Number of Simultaneous Internet Calls:	4	Distribute Lines	
Configur	ed Lines		Assigned Lines
	0	4	
	Upstream up to (KOps): Number of Simultaneous Internet Calls: Configure	Upstream up to (Kbps): 512 Number of Simultaneous Internet Calls: Configured Lines 0	Upstream up to (K0ps) 512  Number of Simultaneous Internet Calls:   Configured Lines  0  4

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

11. 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 'Vodafone UK' using the drop-down list for these numbers.

	Special phone numbers	
E		
mency calls should always be built up wit	h ISDN or Analog Trunk for safety reasons	
ise make sure that all special call numbers	are supported by the selected provider without fail	
Special phone number	Dialed digits	Dial over Provide
1	9C112	ISDN 🗸
2	9C999	ISDN ¥
3		ISDN 🗸
4		ISDN V
5		ISDN 🗸
6		ISDN 🗸
7		ISDN 🗸
8		ISDN 🗸
9		ISDN 🗸
10		ISDN 🗸
11		ISDN 🗸
12		ISDN 🗸
13		ISDN 🗸
14		ISDN 🗸
15		ISDN ¥

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

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

				0	
	Provider			User	
Restart	Vodatone UK	Enabled	+441491601160	registered	Diagno

Click on the Next button.

13. At the next screen assign the **Trunk Access Code** to the 'Vodafone UK' route and enter the **Local area code** for this Internet telephony station minus the leading 0 (e.g. 1491).

Setup - Wizards - Central Telephony - Internet	t Telephony	
	Exchange Line Seizure	
Exchange Line Seizure	Trunk Access Code 88	
	Dial over Provider Vodafone UK V	
Area Code Please enter the local area code.		
	Local area code: 0 1491	
Help Abort Back	OK & Hext	

Click on the OK & Next button.

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

			Se	eizure Code for the 'Outside line	Seizure'	
			Seizur	e code for 'Outside line Seizure'		
ISDN			88			
Vodafone UK			9			
Help	Abort	Back	OK & Next			

Click on the OK & Next button.

15. Configuration is complete.

			The share	one for the feature flater	and Talankand are some	alated	
			the chang	Jes for the reature inter	met relephony are com	histed	
e Internet Telepi	nony is switched on	and configured.					
ce an "Internet	Telephony Service P	rovider" has been ad	ctivated/deactivated,	it is necessary to run thro	ough the "Central Telephon	y - CO Trunk ISDN / Analog" wiza	rd again.
r your own sec	unity, you should say	e the configuration of	lata. To do this, upor	n completion of the wizard	l, choose 'Backup' in the n	nain menu, and follow this by choo	sing 'Backup Immediately'

Click on the Finish button.

## 2.2 Route Configuration

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

Navigate to:

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

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

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

runks/Routing	Route		
Trunks	Change Route	Change Routing Parameters	s Special Parameter change
Route			
ISDN	Routing flags		-
Trk Grp. 2		Digit repetition on:	
Trk Grp. 3	Analy	sis of second dial tone / Trunk monitoring:	
Trk Grp. 4		Intercept per direction	
Trk Grp. 5		0	-
Trk Grp. 6		Over. service 3.1 KHZ audio:	
Trk Grp. 7		Add direction prefix incoming:	
Trk Gro 9		Add direction prefix outgoing:	
Trk Grp. 10		Call No with international / national prefix:	
SIP INT 2		sai no. with international / national preix.	
Vodatone U		Ringback tone to CO:	
Trk Grp. 13		Name in CO:	
Trk Grp. 14		Segmentation	Ves
Trk Grp. 15			
Networking		deactivate UUS per route:	
QSIG-Feature		Always use DSP:	
MSN assign			
ISDN Parameters		Analog trunk seizure	no pause
		Trunk call pause:	Pause 2 s 🗸
		Type of seizure:	linear 🗸
		Pouto turo:	60
		Route type.	
		No. and type, outgoing:	Country code V
		Call number type:	Direct inward dialing V
		and the second s	
	Rerouting		
		Change route allowed:	
			_
		Route optimize active:	No

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

## 2.3 Station / Group DDI Assignment

#### 2.3.1 Station DDI Assignment

The DDI numbers provided by Vodafone UK 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 Vodafone UK are entered directly at the station in the **DID** column (minus the leading 0), e.g. 01491601160 would be entered as 1491601160.

Setup - Wizards - Telephones	Subscribers - UP0 Telep	hones					×
		Sele	ect a station -U	P0 Phones			
Take DID from changed call nur	nber						
Box Slot UP0-Port Calln	o First Name	Last Name	Display	DID	Fax Callno	Fax DID	Class of service
P	Í		1	1	Ì		
/ 1 1 1 M 100			1.	1191234567	1.	1.	International
	-	-		1491601160	-	-	International
✓ 1 1 3 M 102		-	-	-	-	1-	International
✓ 1 1 4 M 103	]-	6	]-	-	]-	16	International
✓ 1 1 5 M 104	]-	ŀ	-	]-	]-	1-	International
A 1 1 6 M 105	]-		]-	]-	- )-	][-	International
A 1 1 7 M 106	]-	E	]-	]-	)-	][]	International
A 1 1 8 M 107	)-	le	]-	]-	)-	][	International
1 27 1 749	-	-		-	-	]-	International
<				-			>
Page 1 of 1							Items per page 10 25 50 100
Help Abort	Back OK	& Next	Save Data				

Click on the **Save Data** button after assigning all the required Vodafone UK 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.

#### 2.3.2 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.

## 2.4 Multi-Site Configuration

If ITSPs are configured with different area codes (e.g. area code 01491 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

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. 01491). Enter additional area codes below the default entry (e.g. 0119). For
each area code enter the location in the Area field (e.g. Henley, Newtown). Also
define the Dedicated Route to be used for each area code (e.g. 'Vodafone UK').

o to 8 areas with free	ely editable names and an optional max 15 d allows users to dial a local destination w/o a	git area dialing code with leading national prefix (0) rea dialing string	
Delete	Area Code	Area	Dedicated Route
	01491	Henley	Vodafone U 🗸
	0119	Newtown	. ~
			·
			- ~
			· ·
			- ~
			- *
			· •
Help	Abort Back OK &	Next Save	

Click on the OK & Next button.

On the next screen all stations will be set to the default Area (e.g. Henley). 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.

ove from area:	all	o to an	ea: Newtown 🤍			
Selection		Callno	DID	Display	Туре	Area
	100		1191234567	-	UP0 Station	Henley
	101		1491601160		UP0 Station	Henley
	102			-	UP0 Station	Henley
	103		-		UP0 Station	Henley
	104			-	UP0 Station	Henley
	105				UP0 Station	Henley
	106		100		UP0 Station	Henley
	107				UP0 Station	Henley
	108			AA	Virtual Stn	Henley
	109		-	IVM SDD	Virtual Stn	Henley
	110		(4)		ISDN station	Henley
	111				ISDN station	Henley
	112				ISDN station	Henley
	113				ISDN station	Henley
	114				ISDN station	Henley
	115		(*)		System Client	Henley
	124				System Client	Henley
	125		1491601161		System Client	Henley
	126				POT	Henley
	127		1491601163		P.O.T.	Henley
	128			1. C	P.O.T.	Henley
	129				P.O.T.	Henley
					~~~	

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

Move from area:	all	U to area: New	vtown 🗸				
Selection		Callno	DID	E.	isplay	Туре	Area
D						v	
	100	1'	91234567			UP0 Station	Newtown
	101	1-	91601160	10		UP0 Station	Henley
	102			101		UP0 Station	Henley
	103					UP0 Station	Henley
	104	-		-		UP0 Station	Henley
	105	1		(*)		UP0 Station	Henley
	106			121		UP0 Station	Henley
	107					UP0 Station	Henley
	108			AA		Virtual Stn	Henley
	109			IVM SDD		Virtual Stn	Henley
	110	1.5				ISDN station	Henley
	111					ISDN station	Henley
	112					ISDN station	Henley
	113					ISDN station	Henley
	114					ISDN station	Henley
	115					System Client	Henley
	124					System Client	Henley
	125	1-	91601161			System Client	Henley
	126					P.O.T.	Henley
	127	1-	91601163			P.O.T.	Henley
	128					P.O.T.	Henley
	129					POT	Henley

Repeat the procedure for other stations and areas.

Click on the OK & Next button.

3. 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.