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Inbound Call Routing- Day/Night Switch

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Automatic & Manual Call Routing for Inbound Calls

Additional call routing logic can be applied to incoming calls by processing them in the Call Routing Table (CRT). This allows call routes being in active or disabled states based on the time/day/date of the call (automatic), or user input (manual). Automatic and manual modes can be used independently or in combination. This document discusses configuration of both modes with examples of FXO and SIP calls (the configuration logic also applies to ISDN Quadro PBX's). The most common application for this configuration is for a Day/Night switch. All types of incoming calls (FXO/ISDN/SIP) can be processed through the CRT to allow this functionality.

Configuration of Day and Night Call Routes

Main System Users Te	lephony Internet	Uplink Network						
all Routing Wizard								
Routing Call Type - Add	Entry							
Pattern:	1234	(wildcard sup)	ported)	Enabler Key:	1			
Number of Discarded Symb	ools: 4			Disabler Key:	2			
Prefix:	00			🗌 Require Au	thorization for			
Suffix:				Enabling/Disat	bling			
Call Type:	PBX	~						
Metric:	10							
Description:	Business Hours	3						
Filter on Caller / Call Type / Modify Caller ID Set Date/Time Period(s)								
Previou	S		Next		Help			

Select Call Routing from the Telephony menu and open the CRT.

Click on <u>Add</u> to open the Call Routing Wizard and add a call route which will be the Day route. Set the parameters as follows:

Pattern: Enter a Pattern. This can be whatever numeric digits you choose (1234 in this example).
Number of Discarded Symbols: Number of digits in the pattern (4 in this example).
Prefix: The extension or Auto Attendant (AA) where the call will be sent.
Call Type: PBX
Metric: Leave at default (10).
Description: This setting is optional.
Set Date/Time Period(s): Tick the box to enable.

You can set an **Enabler Key** and **Disabler Key** which will enable users of the system to manually switch between day/night modes by enabling and disabling calls routes as required. This will over-ride the automatic switching.

ate/Time Ru	ıles - Add Ent	ry	Specify the rules that w route. In the	time/day/date ill apply to the example below
💿 Typical	O Daily		from 8am –	6.30pm on
	⊙ Weekly	Sunday Monday Tuesday Wednesday Thursday Friday Saturday	times, incon be sent to th extension 0	During these ning calls to will he AA at 0 as directed by
	O Monthly	Available days 1 🕑 - 31 🕑	the prefix se	et in the previou
	O Annually	Available months Jan - Dec Available days 1 - 31		
	Available Time	e Period (hh : mm - hh : mm) 30 💌 - 18 💌 : 30 💌		
O Custom	Available Perio	ds		
		[Month,Month-Month,][Day-Da	',Day,][hh:mm-hh:mm,];	

You will be presented with a summary page displaying all settings. Review the settings and click Finish to save the route to the CRT.

Call Routing Wizard								
Summary - Edit Entry								
Routing C	all Type	Routing Call S	Settings					
Pattern:	1234	AAA Required:	AAA disabled.					
Number of Discarded Symbols:	4	Fail Reason:	None					
Prefix:	00							
Suffix:		Routing Call Availa	ble Period(s)					
Call Type:	PBX	Available Days of Weel	k: Mon-Fri					
Metric:	10	Available Hours:	08:00-18:30					
Description:	Business Hours							
Enabler Key:	1							
Disabler Key:	2							
Require Authorization for Enabling/Disabling:	No							
Previous		Finish	Cancel					

PAdd a second route which will be the Night route. The settings will be the same as the Day route with the following exceptions:

Prefix: This will be the extension where you want the incoming call to be routed outside the time/day/date rules specified in the Day route configured in the previous example. Set the description as After Hours.

Date/Time Rules: Not required in the After Hours example as this call route will be used at any time outside the times specified in the Business Hours example. Untick the Set Date/Time Periods box.

Enabler/Disabler Keys: Not required for Night mode in this scenario as we are only tuning the Day mode on or off (Night mode enabled when Day mode. Leave these fields empty.

Call Routing Wizard				
Summary - Edit Entry				
	Routi	ing Call Type		Routing Call Settings
Pattern:	1234	AAA Required:	AAA disal	bled.
Number of Discarded Symbols:	4	Fail Reason:	None	
Prefix:	50			
Suffix:				
Call Type:	PBX			
Metric:	10			
Description:	After Hours			
Previous		Cancel		Help

On the confirmation page for this route, you can see that incoming calls are routed to extension 50, which may be configured as a different AA menu or an After Hours extension.

Both Call routes are now in the CRT. For the Day/Night switch scenario described, the route with the time/day/date rules and Enabler/Disabler Key should be higher in the CRT. This is because the routes are processed from the highest down. With CRT configuration completed, incoming calls must be directed to the CRT.

16	Enabled	1234	NDS: 4 Prefix: 00	РВХ	None	No	[Mon-Fri][08:30-18:30]	Enabler Key: 1 Disabler Key:2 Authorization: Disabled	Business Hours
17	Enabled	1234	NDS: 4 Prefix: 50	РВХ	None	No			After Hours

Main System Users Tele	phony Inter	met Uplink	LAN Services
FXO Settings			
Enable FXO			
Allowed Call Type:	Both incoming	and outgoing	y calls 🔽
	O Extension	00 🗸	
Route incoming FXO call to:	Routing	1234	
PSTN Number:	92635267		
Save Back			

Select FXO settings from the Telephony menu. Select an FXO port to open the settings page for that port.

Select Route incoming FXO Call to Routing. This will send the call to the CRT where the previously configured rules can be applied. Add a routing pattern that matches the one set in the Day & Night call routes. This is how the incoming call will be matched to those routes in the CRT.

Directing Incoming Calls to the CRT - SIP Calls

If your ITSP has provided you with a DID (Direct In Dial) phone number, you can configure inbound calls to that number to be routed to the CRT. There is a different configuration for this than for FXO ports.

When you configure your ITSP account on the Quadro using the VoIP Carrier Wizard, an entry will be created in the CRT and a Virtual Extension (VE) will also be created. This VE will be used by the Quadro to register the account with the SIP server of the ITSP.

Extensions Management

Extension	Display Name	Attached Line	SIP Address	Percentage of System Memory	Call Relay	Codecs
00	Attendant		76893500@sip.epygi.com:5060	3% (5 min 33 sec)		<u>PCMU,</u>
<u>50</u>			50	1% (1 min 51 sec)		<u>PCMU,</u>
<u>11</u>		Line 1	76893511@sip.epygi.com:5060	20% (37 min 5 sec)	No	<u>PCMU,</u>
<u>12</u>		Line 2	76893512@sip.epygi.com:5060	20% (37 min 5 sec)	No	<u>PCMU,</u>
<u>31</u>		IP Line 1	76893531@sip.epygi.com:5060	20% (37 min 5 sec)	No	<u>PCMU,</u>
<u>32</u>		IP Line 2	76893532@sip.epygi.com:5060	20% (37 min 5 sec)	No	<u>PCMU,</u>
<u>79</u>	MyITSP	None	09503234@sip.myitsp.com.au:5060	0% (0 sec)	No	<u>PCMU,</u>

In the example VE 79 has been created. By default, all incoming calls to the DID of the MyITSP account in the example are sent to this VE. From here they are forwarded to the extension selected for incoming calls during configuration of the account using the VoIP Carrier Wizard.

Iter Deased Services The first retreating the first retrest retreating the first retreating the first retreating		Mail	Your Extensio	n Si	upplementary Se	rvices					C	zer
In the control of the	ler If) Rae	ed Serv	ices								
Instant. 79 The Units Status Mathematical M		. 70		1003								
Link Can the <u>Any Addresses</u> link in the Addresses column. This opens the Caller ID Based Services page for the Any Address caller ID patern. Click the link for <u>Unconditional Call Forwards</u> from the list of available services. By defau the forward in the Addresses to forward all incoming calls to the extension you selected in the VoIP Carrier Wizard. In the xample below, it is the AA (extension 00). Net Voie Net You Common Services and the Services and the Caller ID Based Services page for the Any Caller ID Based Services for Any Addresse Extension : 79 Unconditional Call Forwards in the Caller ID Based Services and the Services in the Service in the Services in the Service in the Service in the Services in the Service in the	nsion	. 79										
Image: Second	scription	Address	es Hiding Ca	ler	Incoming Call	Outgoing Call	Distinctive	Many Extension	Unconditional Call	Busy Call	No Answ	er Call
Total of the set	Jonption	Anv	<u>Information</u>	<u>n</u>	Blocking	Blocking	Ringing	Ringing	Forwarding	Forwarding	Forwardi	ng
etc		Address	UFF		OFF			OFF	ON	OFF	UFF	_
Lick on the <u>Any Addresses</u> link in the Addresses column. This opens the Caller ID Based Services page for the Any defense caller ID pattern. Click the link for <u>Unconditional Call Forwarding</u> from the list of available services. By defau te forwarding rule is set to forward all incoming calls to the extension you selected in the VoIP Carrier Wizard. In the xample below, it is the Addresses Caller ID Based Services for Any Address Extension: 79	ack											ЦН
	Addres	s calle warding le belo	r ID patte g rule is s w, it is the	rn. Cli et to fo e AA (e	ck the link rward all ir extension 0	for <u>Uncondit</u> coming calls 0).	ional Call F s to the ext	Forwarding fro ension you se	m the list of ava lected in the Vo	ailable servi oIP Carrier V	ces. By c Vizard. In	lefaul h the
Caller ID Based Services for Any Address Extension : 7	Main	Voice Ma	ail Your Ex	tension	Supplementary	/ Services					Ce	oyg1
Extension: 79 Hdmacaliterationalita Market Selection de Deter Se	Cal	or ID	Docod S	orvio	se for Ap	Address						
Extension: 79 Hito::Calificitization Distinct Calification Distin	Cal	erib	based c	ervice	es for An	y Address						
Linkan Karmakan Pin Parke Berrie Adde Calific Kardanan Adde Calific Karmakan Datasahan Rinagan Marka Karmakan Marka Kanstan Rinagan Marka Karmakan Marka Kanstan Rinagan Marka Kanstan Rinagan Marka Kanstan Rinagan Marka Kanstan Rinagan <t< td=""><td>Exte</td><td>nsion: 7</td><td>79</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	Exte	nsion: 7	79									
Imperiate Call Beachan Imperiate Call Construction Dataset An Region Imperiate Call Construction March Education Imperiate Call Construction	Hidir	q Caller Info	rmation	Enable	Service ate Selectali Inv	erse Selection						
Istinutive Rinama Marcadi Romano Burcadi Foraziona Burcadi Foraziona Burcadi Foraziona Burcadi Foraziona	<u>Outq</u>	ning Call Blo bing Call Blo	ocking ocking	Forv	ward to							
Marculands Call Forwardina Busy Call Forwardina Da Answer Call Forwardina Bet	Disti	nctive Ringin	<u>iq</u>	PBX	-00							
Bur Call Envandina Swe Betk Help	Many Unco	<u>Extension F</u> nditional Ca	Ringing Il Forwarding									
Do Answer Call Forwarding Save Halp	Busy	Call Forwar	dinq									
	<u>No A</u>	nswer Call F	orwarding	Save	Back						H	elp
	Unco Busy No A	nditional Ca Call Forwan hswer Call F	<u>II Forwarding</u> ding orwarding	Save	Back						H	elp

Delete the PBX-00 entry and Add another entry with the following settings:

Call Type: Auto - This will send the incoming call to the CRT.

Forward To: Set this to match the pattern of the entries that you created in the CRT earlier in this configuration (1234)

Main	Voice Mail	Your Extension	Supplementary Services
	vo reline	Lict Add	Entry (
FOR	varding	List - Add	Entry
Exter	nsion: 79		
Call Typ	e Auto	•	
Forward	i To 1234		SIP-Clipboard
Sav	/e Ba	ck	

Main Voi	ce Mail Your E	Extensior	Supplementary Services		
Caller I	D Based	Serv	ices for Any Addre	ess	
Hiding Calle Incoming Ca Outgoing Ca Distinctive R Many Extens Uncondition	er Information all Blocking all Blocking Ringing Sion Ringing all Call Forwarding	Add	able Service <u>Delete Select all Inverse Selection</u> <u>Forward to</u> CR-1234	1	
Busy Call Fo	orwarding Call Forwarding	S	ave Back		Help

Tick the Enable Service box to activate the call forward.

Once you have completed this configuration, all incoming calls via the ITSP account will be sent to the CRT. From here they will be directed to the appropriate AA or extension based on the rules applied to the routes in the CRT.

If you want to have additional routes for incoming calls to direct them to other extensions or AA's during different days/times, you can <u>Add</u> more routes with alternate time/day/date rules and different enabler/disabler keys into the CRT. The majority of the settings will be the same as in the above example with the following exceptions:

NOTE: You can use multiple additional call routes for other scenario's like public holiday's etc. configure them as in these examples, with their own time/day/date rules & different enabler/disabler keys. These routes should be ordered in the CRT with those with the most restrictive time/day/date rules (highest) to least restrictive rules (lowest).

Outgoing Calls

Time/Day/Date rules and Enabler/Disabler Keys can also be set on call routes for outgoing calls. Calls can only be made through call routes that are enabled according to these rules. A typical application for this would be of least cost routing using different carriers for different times of the day. For example, using one ITSP during business hours and another ITSP after-hours (off-peak).

To configure this, <u>Edit</u> any call route in the CRT used for outbound calls and apply the rules described previously in this document.