



Cloud managed & monitored
VoIP Gateways and Appliances

HOW TO N°3:

**Configuration of beroNet FXS ports as internal extensions
in a 3CX environment?**



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Table of Contents

Requirements:.....	3
How to Configure beroNet FXS ports as internal extensions in a 3CX environment?.....	3
1 – Create as many extensions in the 3CX.....	3
2 – Configuration of the FXS ports.....	4
2.1 – Creation of the group of ports.....	4
2.2 – Creation of SIP accounts.....	5
2.3 – Creation of diplan rules.....	7
2.3.1 – Creation of diplan rules via the web Interface.....	7
2.3.2 – Creation of diplan rules via a text editor.....	9

Requirements:

- How to N°1: Getting started with beroNet Gateways
- 3CX software installed on Windows
- 1 beroNet Gateway with FXS ports

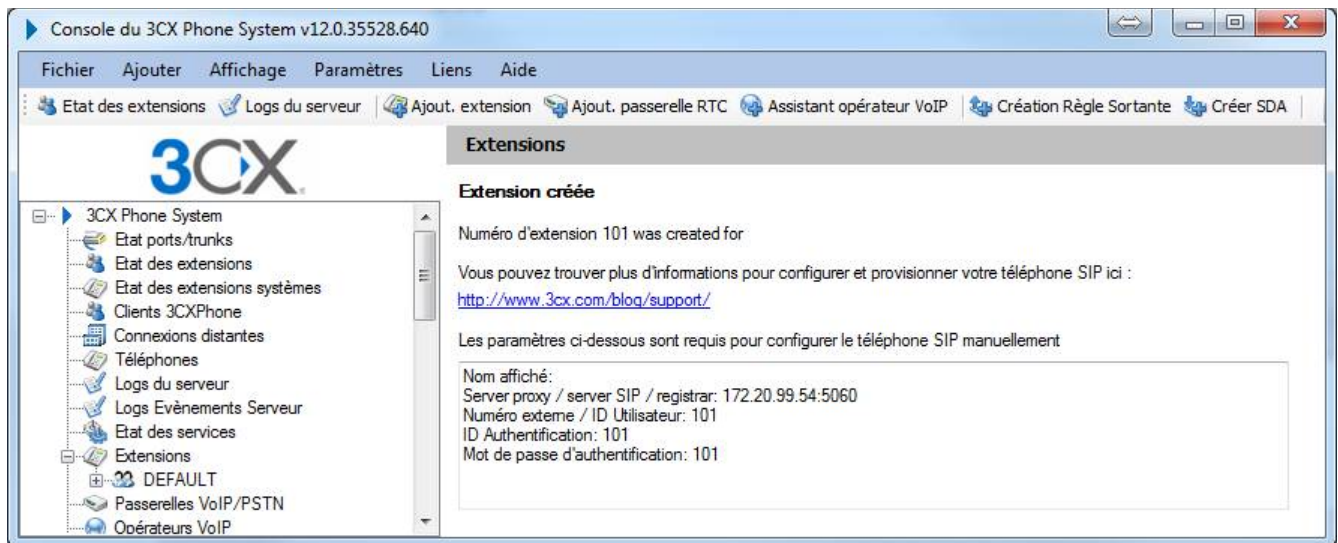
How to Configure beroNet FXS ports as internal extensions in a 3CX environment?

There is no template in the 3CX for beroNet FXS Gateways because, in order to configure them as internal extension in the IPBX, it is necessary to treat them as such.

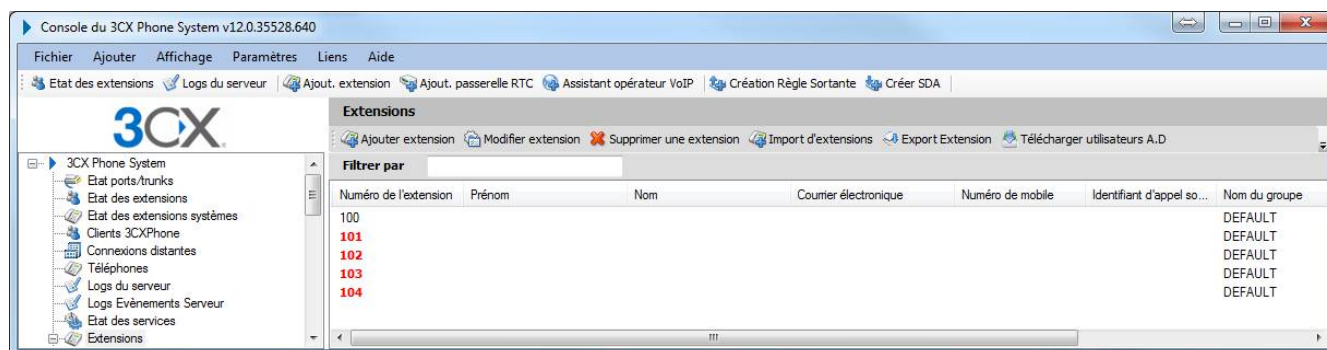
Here is how to configure 4 FXS ports in the 3CX. The same would apply for any other number of FXS ports.

I – Create as many extensions in the 3CX

Add 4 extensions in the 3CX. 101, 102, 103 and 104 for example.



Here is an overview of the 4 extensions just created:



It is then necessary to connect the 4 FXS ports to each extension.

2 – Configuration of the FXS ports

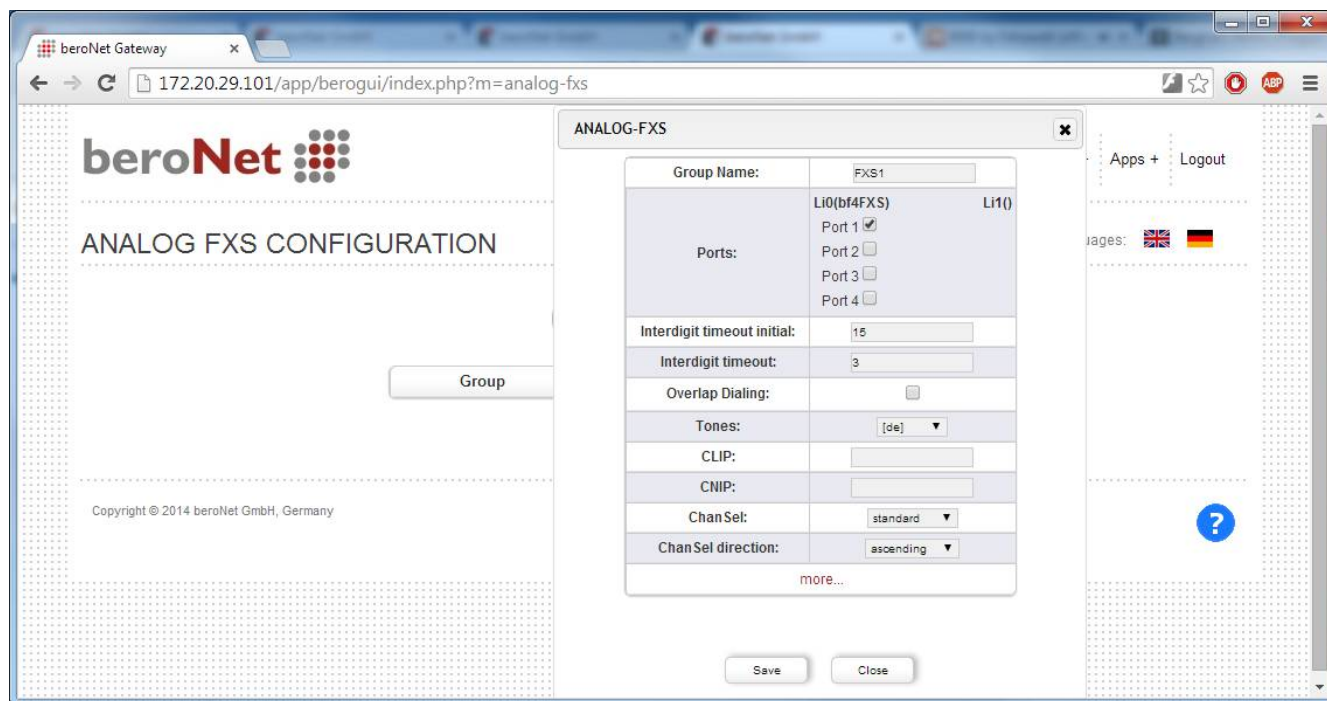
The configuration of the FXS ports in the beroNet WEB Interface is done in 3 steps:

1. Creation of 4 FXS group of ports
2. Creation of 4 SIP accounts
3. Creation of 2 rules for each port / SIP account (8 rules at the end) in the dialplan.

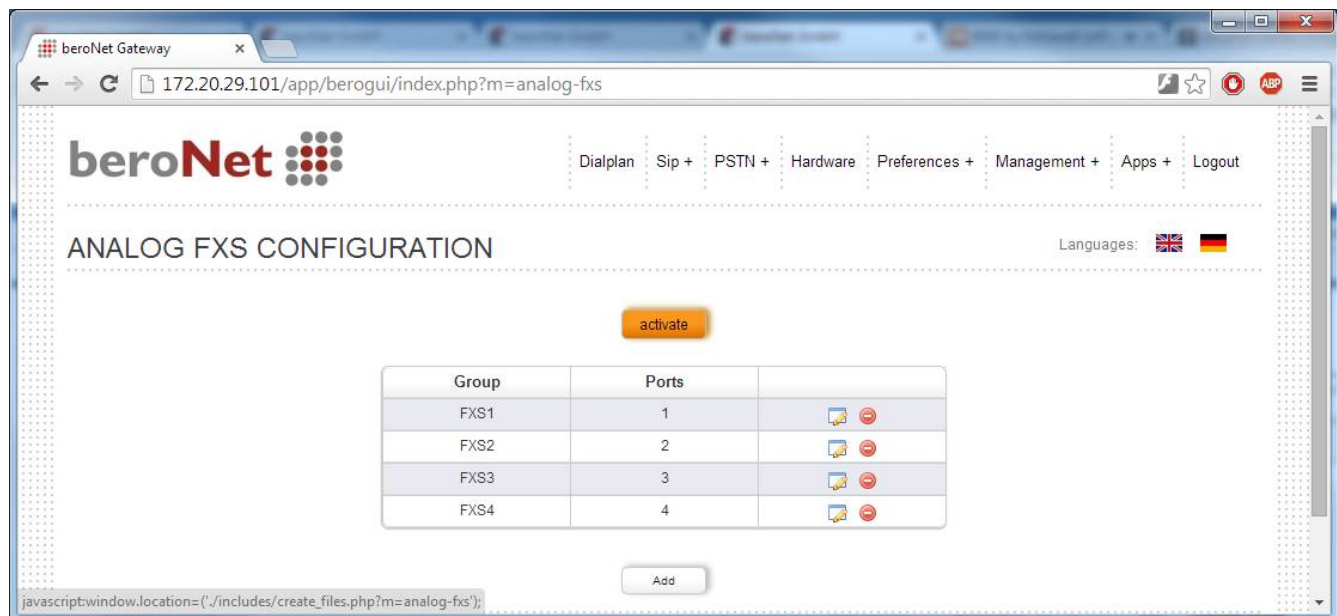
2.1 – Creation of the group of ports

Click on “ANALOG FXS” in the drop-down menu under “PSTN+” and on “Add” to add a new group of ports.

Give it a name and add the first port in it.

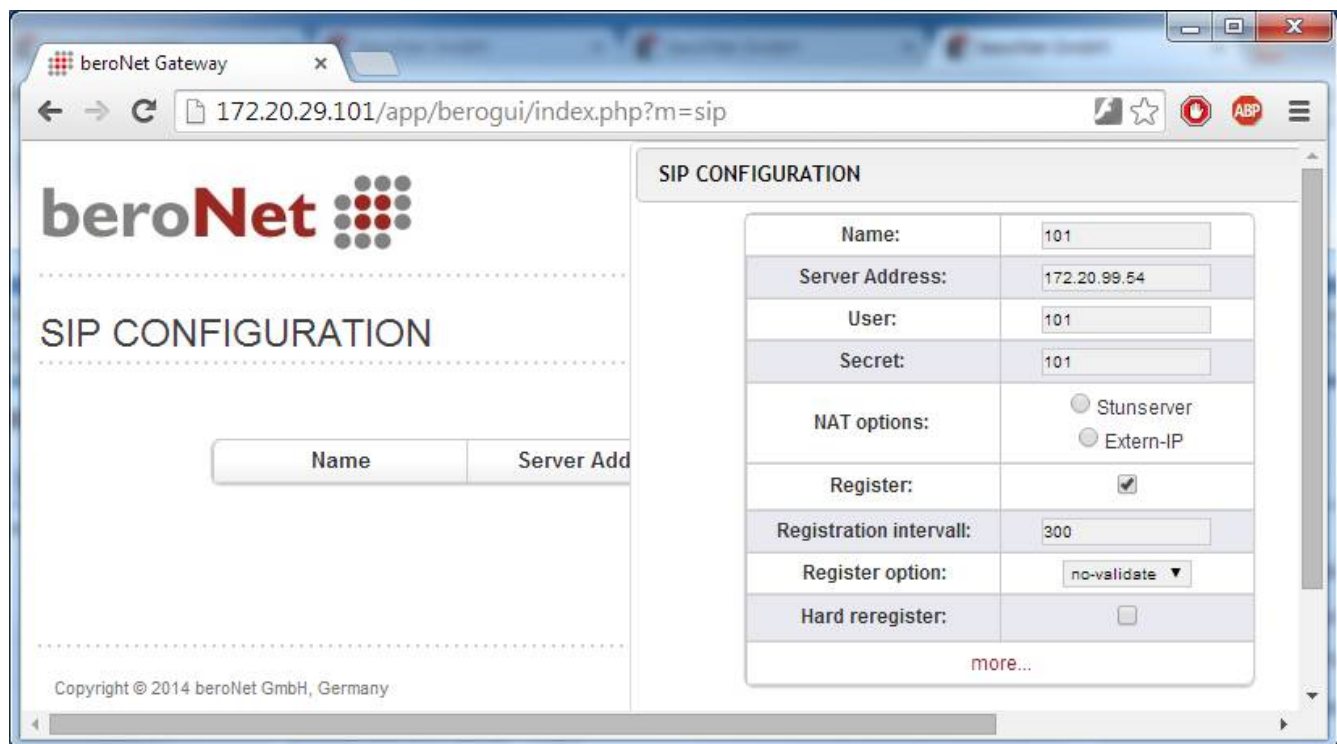


Do the same for the 3 other ports (1 port in one group) and then click on the orange “activate”.

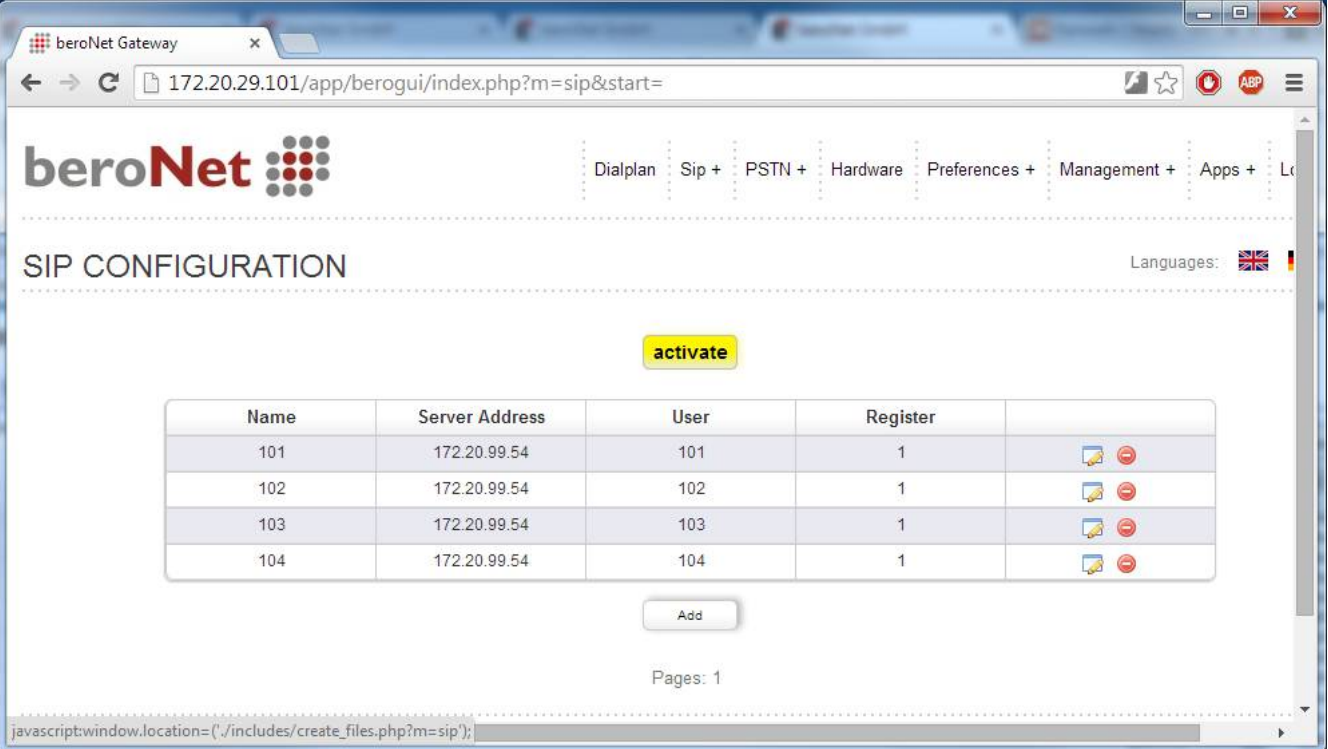


2.2 – Creation of SIP accounts

It is then necessary to create one SIP account per FXS port. In order to do that, click on “Sip” in the drop-down menu under “Sip+”. Click on “Add” and create 4 different SIP accounts. Each of them have to fit the matching extension created in 3CX earlier (101, 102, 103 and 104).



Once all SIP accounts have been created, click on the yellow activate.



beroNet Gateway

172.20.29.101/app/berogui/index.php?m=sip&start=

beroNet

Dialplan Sip + PSTN + Hardware Preferences + Management + Apps +

SIP CONFIGURATION

Languages:  

activate

Name	Server Address	User	Register	
101	172.20.99.54	101	1	 
102	172.20.99.54	102	1	 
103	172.20.99.54	103	1	 
104	172.20.99.54	104	1	 

Add

Pages: 1

javascript:window.location=('./includes/create_files.php?m=sip');

If everything has been well configured, the following should appear in the “state” page under “management +”:

beroNet Gateway

172.20.29.101/app/berogui/index.php?m=state

beroNet

Dialplan Sip + PSTN + Hardware Preferences + Management + Apps + Logout

STATE Languages:

Port	Type	Status	Line voltage
1	FXS	FXS_IDLE	
2	FXS	FXS_IDLE	
3	FXS	FXS_IDLE	
4	FXS	FXS_IDLE	

Account name	Registrar	User	Status
101	172.20.99.54	101	
102	172.20.99.54	102	
103	172.20.99.54	103	
104	172.20.99.54	104	

2.3 – Creation of dialplan rules

It is now necessary to create 2 dialplan rules for from / to each SIP account to / from each group of ports. If the gateway has 4 FXS ports, then 8 rules must be created. There is a way to create rules quickly from a text editor.

2.3.1 – Creation of dialplan rules via the web Interface

Go to “Dialplan” and click on “Add.” Create one rule SIP to ANALOG and one rule ANALOG to SIP. Each SIP account has to be configured with the matching group of ports.

For SIP to ANALOG rules, be sure to add the number of the extension you created in the 3CX in the field “Destination” so that the call will be routed to the right port.

Example of a SIP to ANALOG rule:

beroNet Gateway

172.20.29.101/app/berogui/index.php?m=dialplan&start=0

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Dialplan Sip + PSTN + Hardware Preferences + Manager

DIALPLAN

From direction: SIP To direction: ANALOG

Match type: IP Address To ID: g:FXS1

From ID: 101

Destination: 101 New destination:

Source: New source:

Comments:

Activ: ☒

First position: ☐

Save Close

Example of a ANALOG to SIP rule:

beroNet Gateway

172.20.29.101/app/berogui/index.php?m=dialplan&start=0&dir=&search=

beroNet

DIALPLAN

From direction: ANALOG To direction: SIP

From ID: g:FXS1 To ID: p:101

Destination: New destination:

Source: New source:

Comments:

Activ: ☒

First position: ☐

Save Close

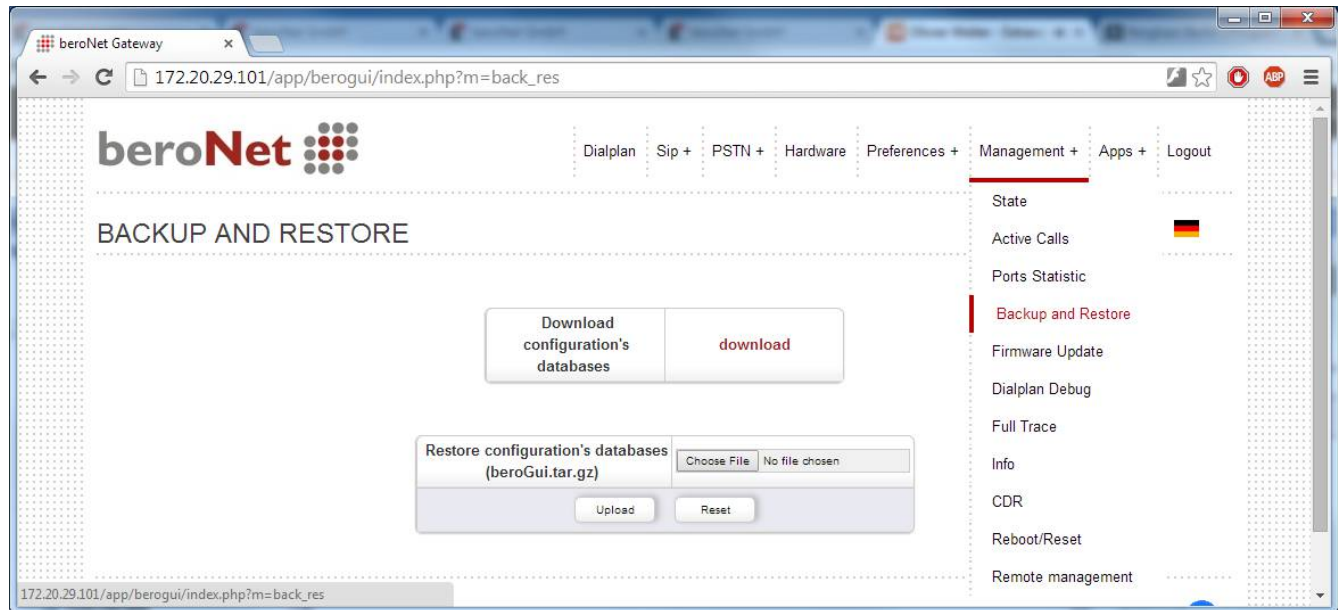
Once the first 2 rules have been created click on the yellow “activate”. The first FXS port is now

considered as an intern extension in the 3CX.

The same needs to be done for all the other FXS ports. It can be done via the WEB Interface or via a text editor (it is necessary to have at least 2 rules first).

2.3.2 – Creation of dialplan rules via a text editor

First it is necessary to export the configuration of the gateway. Click on “Backup and Restore” in the drop-down menu under “Management +”. Export the configuration by clicking on “download”.

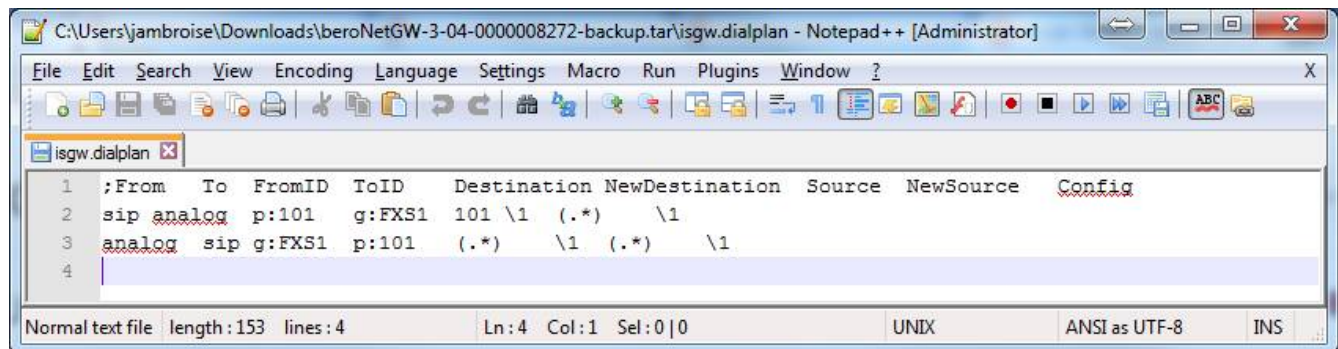


A file with such a name has been downloaded: “beroNetGW-3-04-0000008272-backup.tar.gz”.

Unzip it twice with a software like 7zip.

Open the file “isgw.dialplan” with a text editor such as Notepad++.

The two rules of the dialplan are visible in the text editor.



To create new rules, simply copy the two existing ones and modify them accordingly like in the following example:

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```

* C:\Users\jambroise\Downloads\isgw.dialplan - Notepad++ [Administrator]
File Edit Search View Encoding Language Settings Macro Run Plugins Window ?
isgw.dialplan
1 ;From To FromID ToID Destination NewDestination Source NewSource Config
2 sip analog p:101 g:FXS1 (101) \1 (.*) \1
3 analog sip g:FXS1 p:101 (.*) \1 (.*) \1
4 sip analog p:102 g:FXS2 (102) \1 (.*) \1
5 analog sip g:FXS2 p:102 (.*) \1 (.*) \1
6 sip analog p:103 g:FXS3 (103) \1 (.*) \1
7 analog sip g:FXS3 p:103 (.*) \1 (.*) \1
8 sip analog p:104 g:FXS4 (101) \1 (.*) \1
9 analog sip g:FXS4 p:104 (.*) \1 (.*) \1
length: 403 lines: 9 Ln: 9 Col: 19 Sel: 0|0 UNIX UTF-8 w/o BOM INS

```

NOTE: Don't jump lines in the text editor.

Save the file the new dialplan. In order to apply the modifications, it is possible to upload the dialplan (isgw.dialplan) in via the backup and restore tool of the gateway.

Once the file has been uploaded, click on the red “activate”.

beronet Gateway

172.20.29.101/app/berogui/index.php?m=dialplan

beronet

Dialplan Sip + PSTN + Hardware Preferences + Management + Apps + Logout

DIALPLAN Languages:  

Direction	From ID	To ID	Destination	New destination	Source	New source	Position	
sip-analog	p:101	g:FXS1	101	\1	(.*)	\1	1	  
analog-sip	g:FXS1	p:101	(.*)	\1	(.*)	\1	2	  
sip-analog	p:102	g:FXS2	102	\1	(.*)	\1	3	  
analog-sip	g:FXS2	p:102	(.*)	\1	(.*)	\1	4	  
sip-analog	p:103	g:FXS3	103	\1	(.*)	\1	5	  
analog-sip	g:FXS3	p:103	(.*)	\1	(.*)	\1	6	  
sip-analog	p:104	g:FXS4	104	\1	(.*)	\1	7	  
analog-sip	g:FXS4	p:104	(.*)	\1	(.*)	\1	8	  

Add

The analog devices are now configured as internal extensions in the 3CX.