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Allo PRI Gateway and Elastix Server

Setup Guide

1.0 Setup Diagram

Figure 1-1 is a setup diagram for a single Allo PRI Gateway configuration. We're going to configure a SIP Trunk for communication between a local Phone and the PSTN E1.

Figure 1-1. Setup Diagram
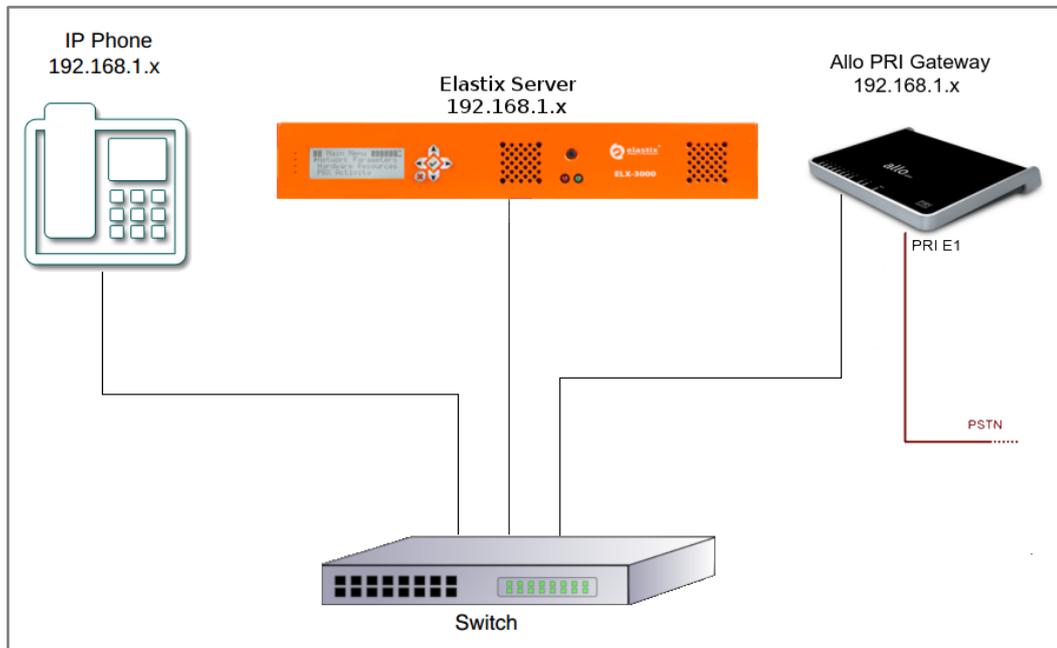
2.0 Host PC Environment

Table 2-1. Host Server Environment Details

	Description
Hardware Type	Elastix Appliance ELX-Series
Hardware Version	ELX-3000
Software Type	Elastix
Software Version	2.4

3.0 Test Setup Equipment

Table 3-1. Test Setup Equipment

Equipment	Model	Version
IP (SIP) Phone	N/A	N/A
Allo Gateway	PRI	2.0.4
Switch	N/A	N/A

4.0 Setup Procedure

To set up the Elastix Server for the Allo PRI Gateway

1. Go to the web address of the Elastix Server Login page. The web address is determined by the customer, for this guide we have used the IP address 192.168.1.75

2. On the Login page, type the username and password for an administrative user into the Username and Password fields, see Figure 4-1. The username and password are determined by the customer.

Figure 4-1. Login

3. Press Enter or click on the Submit button to go to Elastix's Dashboard
4. Once inside, click on the PBX tab on the menu at the top of the screen

Figure 4-2. Dashboard
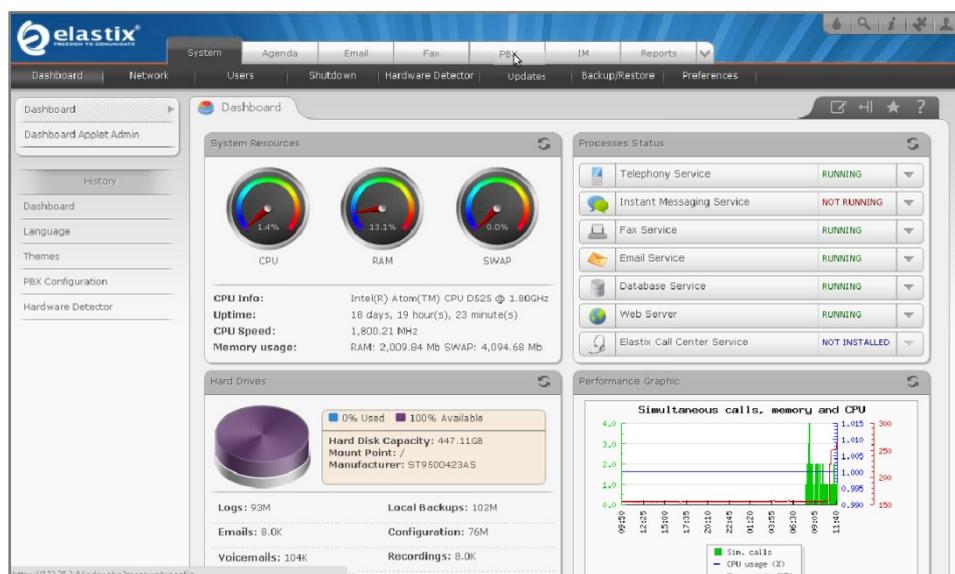
5. Go to "PBX Configuration => Trunks => Add SIP Trunk", see Figure 4-3. This will take you to configure a SIP Trunk.

Figure 4-3. Add a SIP Trunk
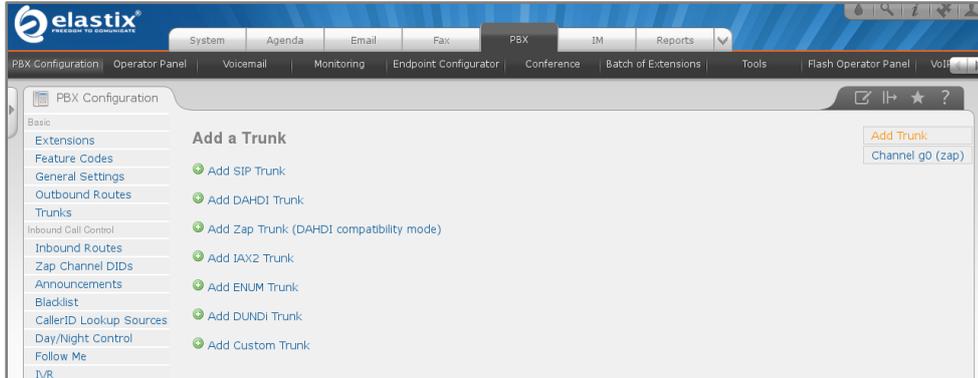
6. On the "Add SIP Trunk" page (Figure 4-4), fill in the following information:

General Settings

    • **Trunk Name:** (AlloGateway in this example)

Outgoing Settings

- **Trunk Name:** (80004 in this example)
- **Peer Details:**
  - host=dynamic
  - username=80004
  - secret=jx8FkOU13sv6
  - qualify=yes
  - type=peer
  - insecure=very

Figure 4-4. Add SIP Trunk

7. Click on the 'Submit' button at the end of the page. The SIP Trunk will be created and you will see the page on Figure 4-5 displaying the "Apply Configuration Changes Here" pink ribbon on top of the screen.

8. Click in the "Apply Configuration Changes Here" link

Figure 4-5. Apply Configuration Changes Here
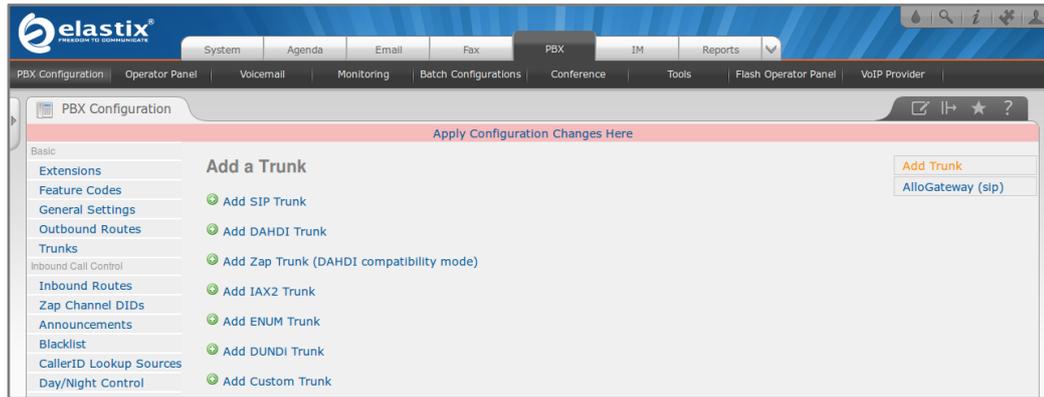
9. With this you have finished creating a SIP Trunk that will be used by the Allo PRI Gateway to register with the Elastix Server. Now, go to "PBX => PBX Configuration => Outbound Routes" to configure the outbound route to the SIP Trunk. Fill in the following information: (Figure 4-6)

Route Settings
- **Route Name:** ("Outbound_Route_Allo" in this example)

Dial patterns
- **Prefix:** ("8" in this example) | **Match pattern:** ("." in this example)

Trunk Sequence for Matched Routes
- **0:** ("AlloGateway" in this example)

Figure 4-6. Add Route

10. Click on "Submit" at the end of the page and Apply changes. Once we have configured the main parameters for SIP communication to Allo Gateway in Elastix, we'll create an extension for an IP Phone. Go to "PBX => PBX Configuration => Extensions" and click on "Submit" having the "Generic SIP Device" option selected. (Figure 4-7)

Figure 4-7. Add SIP Extension
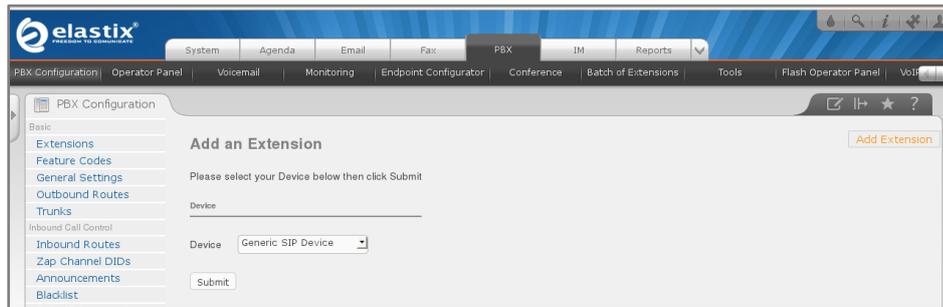
11. Fill in the following information on the Add SIP Extension page:

   • **User Extension** (302 in this example)
   • **Display Name** ("IPPhone" in this example)
   • **secret** ("h7Dka3Rf9si0t" in this example)

Figure 4-8. Add SIP Extension

12. Click on "Submit" at the end of the page and Apply changes. To register the Allo PRI Gateway with Elastix, you will need to enter the information from the trunk created on the Elastix Server into the gateway by logging into the Allo PRI Gateway's WebUI.

   Go to the gateway's WebUI by pointing your browser to the Allo PRI Gateway's IP address (Figure 4-9).

Figure 4-9. Allo PRI Gateway's Login Page
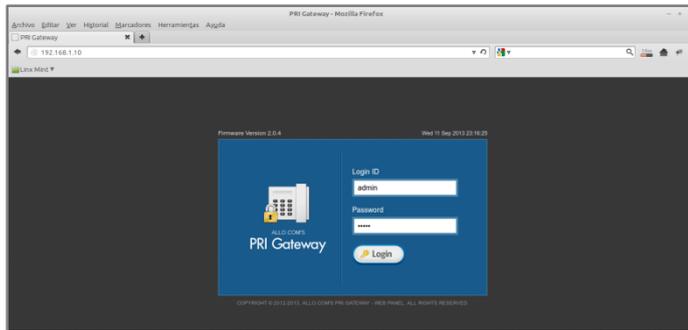
For the initial configuration, refer to the Allo PRI Gateway User Manual found at: http://www.allo.com/documents/pri-voip-gateway/pri-gw-user-manual.pdf

Factory default settings

WAN IP Address	DHCP
LAN IP Address	192.168.113.2
Web Access Administrator Username	admin
Web Access Administrator Password	admin

13. When the WebUI is loaded, go to the menu "SETUP => SIP Trunks". See figure 4-10.

Figure 4-10. Sip Trunks
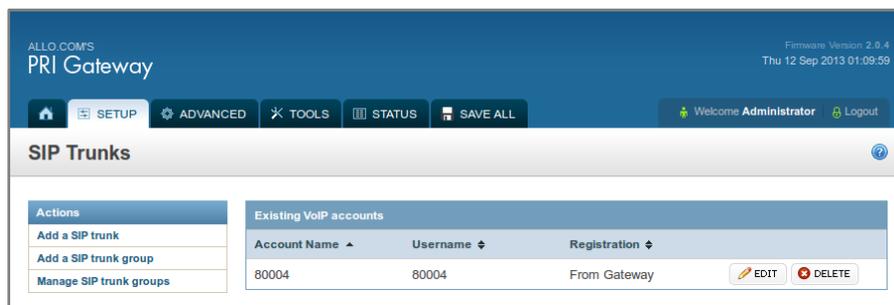
14. Click on the link "Add a SIP trunk" and enter the required information to register with Elastix Server (Figure 4-11):

- **Account Name:** (80004 in this example)
- **Username:** (80004 in this example)
- **Registration Mode:** From Gateway
- **Proxy Address:** (Elastix's IP Address, in this example 192.168.1.75)
- **Authentication:** Tick
- **Auth Username:** (80004 in this example)
- **Password:** (jx8FkOU13sv6 in this example)
- **Register:** Tick
- **Registrar Address:** (Elastix's IP Address, in this example 192.168.1.75)

Figure 4-11. SIP Configuration

15. Click on CREATE button. Now we have to create a PRI trunk that is going to use one of the PRI ports in the gateway. From the main screen, go to the menu "SETUP => ISDN PRI Trunks" (Figure 4-12).

Figure 4-12. PRI Trunk

16. Click on the link "Create PRI Trunk" and enter the following information (see Figure 4-13)

- **Span Name**: PRI1 (We are going to use the first PRI port)
- **Trunk Name**: PRITRUNK

Figure 4-13. PRI Trunk

17. Click on CREATE button. Now we need to create call routes in the gateway to give the calls a correct destination. To create an outbound and incoming route, go to the menu "SETUP => Call Routing Rules" (See figure 4-14).

Figure 4-14. Call Routing Rules
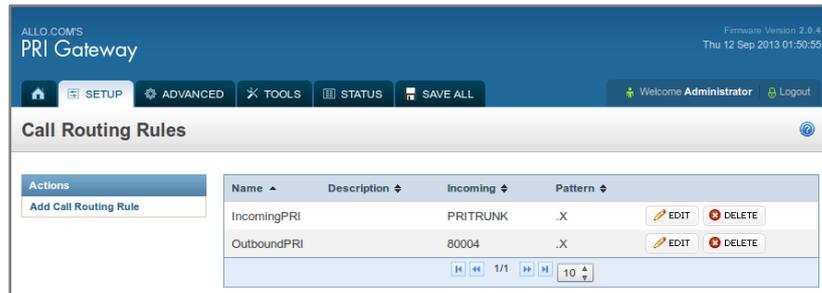
18. Click on the link "Add Call Routing Rule" and create two routes. (See Figure 4-15)

Outbound Route
- Name: OutboundPRI
- Incoming Type: SIP Trunk
- Incoming From: 80004
- Pattern: .X
- Outbound Call Route: PRITRUNK

Incoming Route
- Name: IncomingPRI
- Incoming Type: PRI Trunk
- Incoming From: PRITRUNK
- Pattern: .X
- Outbound Call Route: 80004

Figure 4-15. Call Routing Rules
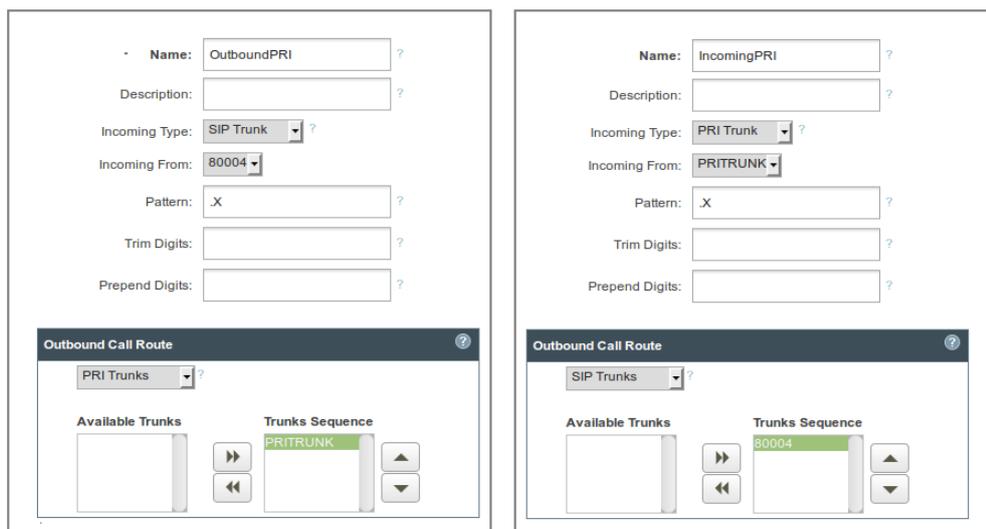
19. Once you have entered the required information, click on CREATE button. Now, we are going to configure the signaling and switch type of the PRI port. Go to "Advanced => ISDN PRI Settings" (See Figure 4-16).

Figure 4-16. ISDN PRI Settings
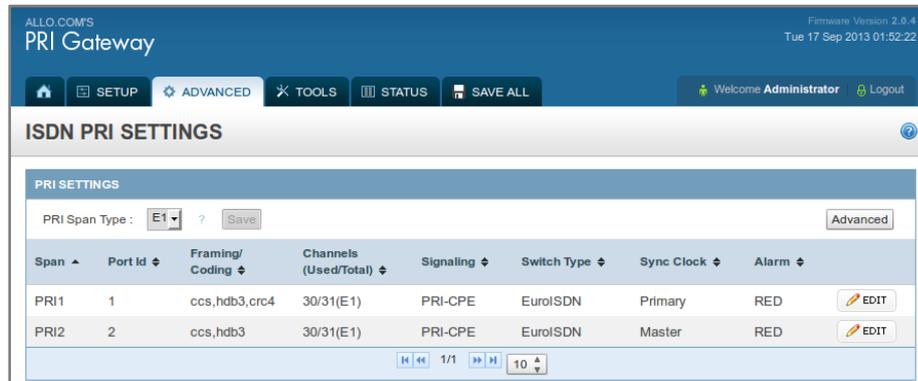
20. Click on the button EDIT from the Span you are going to use for the PSTN. In this case we have chosen PRI1. Configure the required parameters according to your ISDN provider. In this case we've configured the PRI1 port to receive the clock signal from the ISDN provider (See Figure 4-17).

- **Span Name**: PRI1
- **Framing/Coding**: CCS/HDB3/CRC4
- **Signaling**: PRI-CPE
- **Switch Type**: EuroISDN
- **Sync/Clock Source**: Primary

Figure 4-17. Edit PRI1
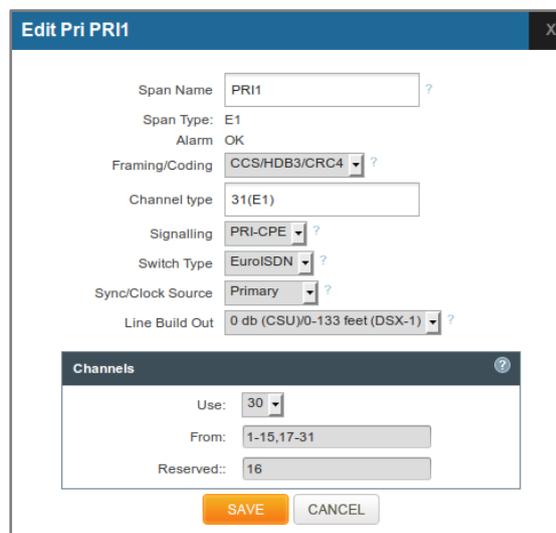
21. When finished click on the button SAVE. Now, to apply all the changes you have to click on the orange button SAVE ALL as shown in Figure 4-18. The Allo gateway will reboot automatically.

Figure 4-18. Save All
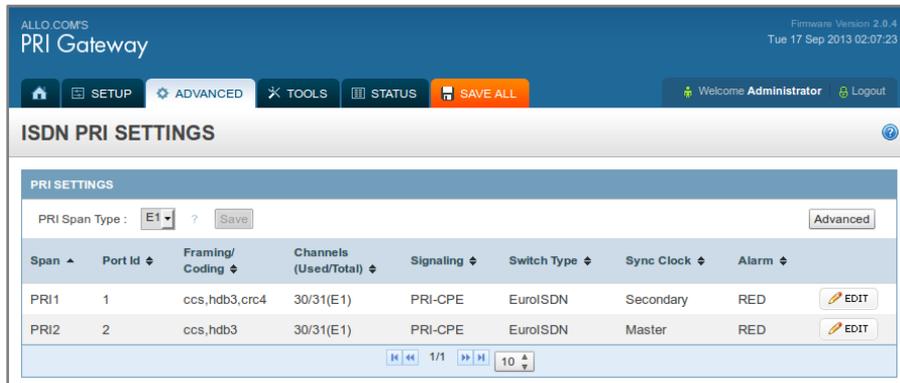
22. When it boots up, connect the PRI cable to the configured port in the gateway, and go to the home page of the Allo PRI Gateway's WebUI. Check that the SIP trunk is registered with Elastix and the PRI port is Active (see Figure 4-19).

Figure 4-19. Save All
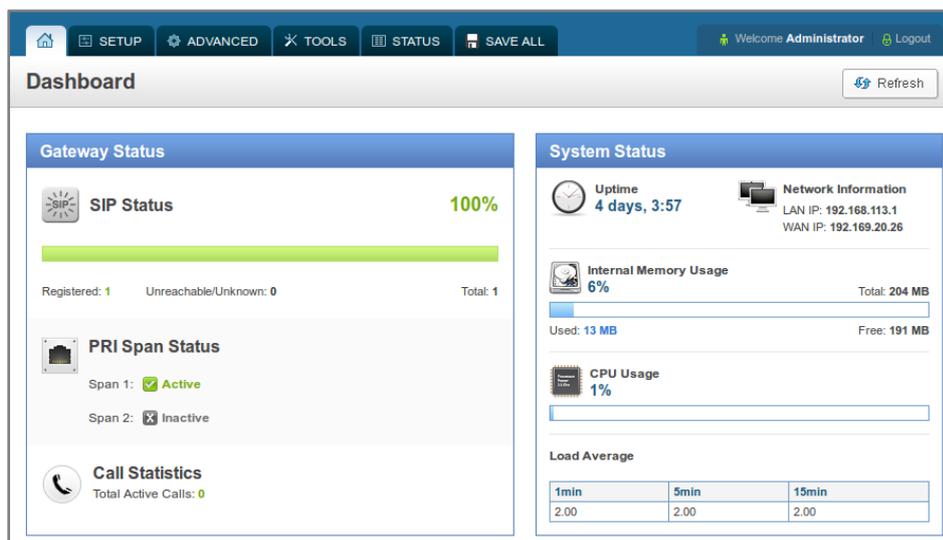
23. Configure the IP (SIP) Phone with the correct parameters.

24. To test the Allo PRI Gateway, pick up the previously configured IP (SIP) Phone and call to the PSTN by using the prefix configured in the Outbound Routes in Elastix (8-number). The call must be established. On the other hand, when you receive a

call the caller should hear the IVR configured in the Inbound Route in Elastix server. This step completes the procedure.