PaloSanto Solutions
OPEN SOURCE INNOVATION

SANGOMA

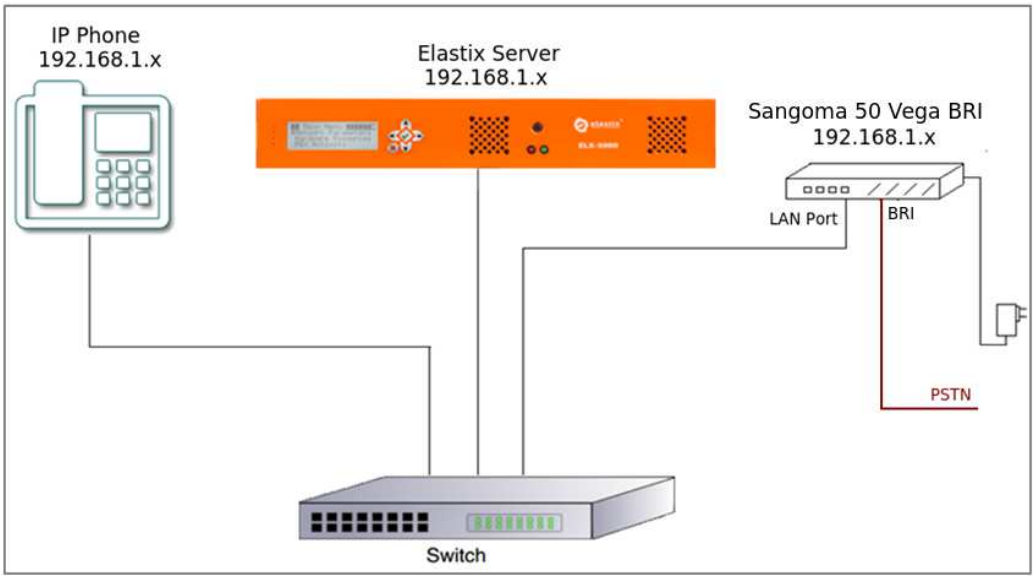
Sangoma Europa Vega 50 BRI and Elastix Server

Setup Guide

1.0 Setup Diagram

Figure 1-1 is a setup diagram for a single Vega 50 BRI gateway configuration. We're going to configure a SIP Trunk for communication between the IP Phone and PSTN.

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	2.3

3.0 Test Setup Equipment

Table 3-1. Test Setup Equipment

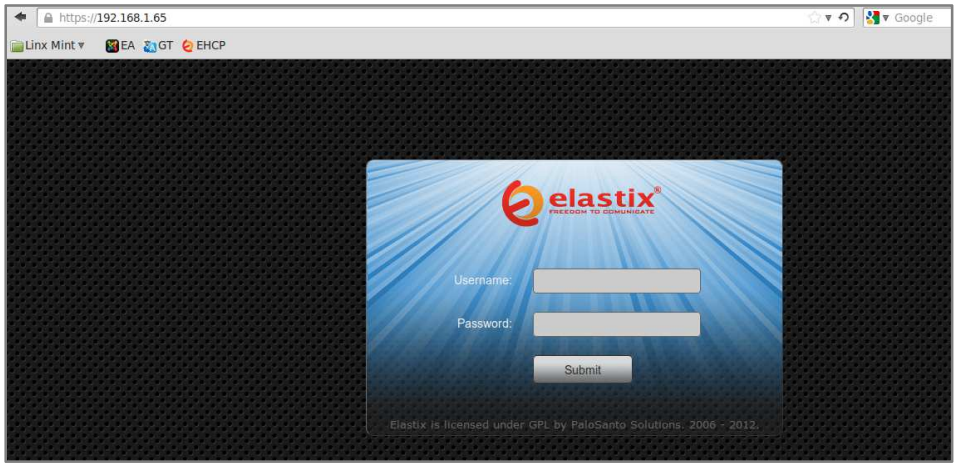
Equipment	Model	Version
IP (SIP) Phone	N/A	N/A
Sangoma	Vega 50	FW: R086S031
Switch	N/A	N/A

4.0 Setup Procedure

To set up the Elastix Server for the Vega 50

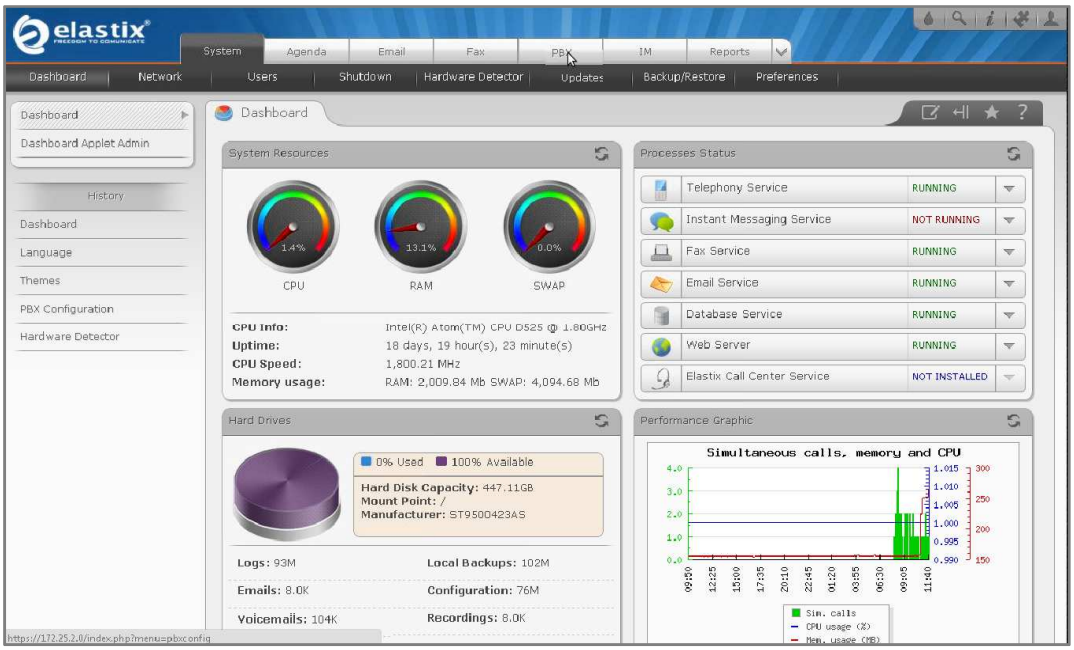
1. Go to the web address of the Elastix Server Login page. The web address is determined by the customer, for this guide we have used the IP address 192.168.1.65
2. On the Login page, type the username and password for an administrative user into the Username and Password fields, see Figure 4-1. The username and password are determined by the customer.

Figure 4-1. Login



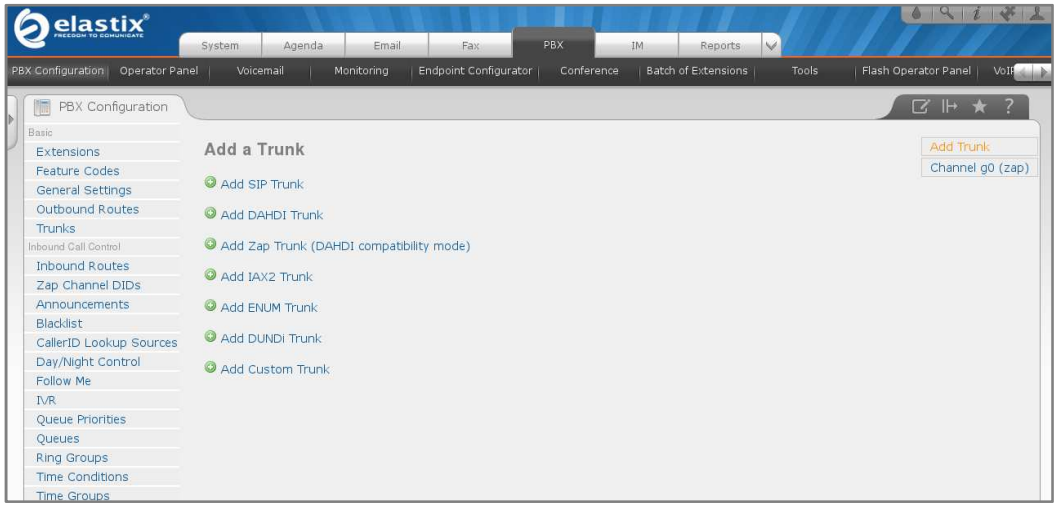
3. Press Enter or click on the Submit button to go to Elastix's Dashboard
4. Once inside, click on the PBX tab on the menu at the top of the screen

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

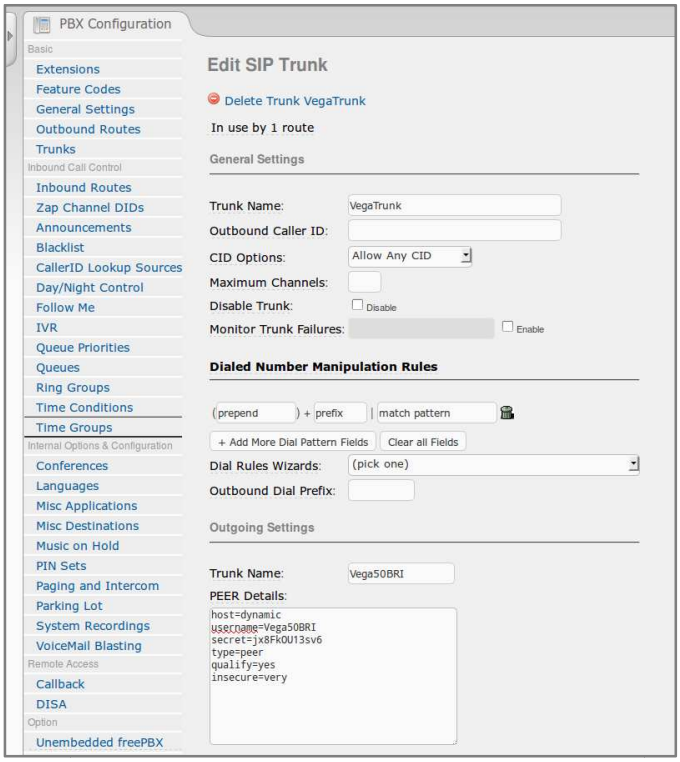
- **Trunk Name:** (VegaTrunk in this example)

Outgoing Settings

- **Trunk Name:** (Vega50BRI in this example)
- **Peer Details:**

  host=dynamic
  username=(Vega50BRI in this example)
  secret=(jx8FkOU13sv6 in this example)
  qualify=yes
  type=peer
  insecure=very

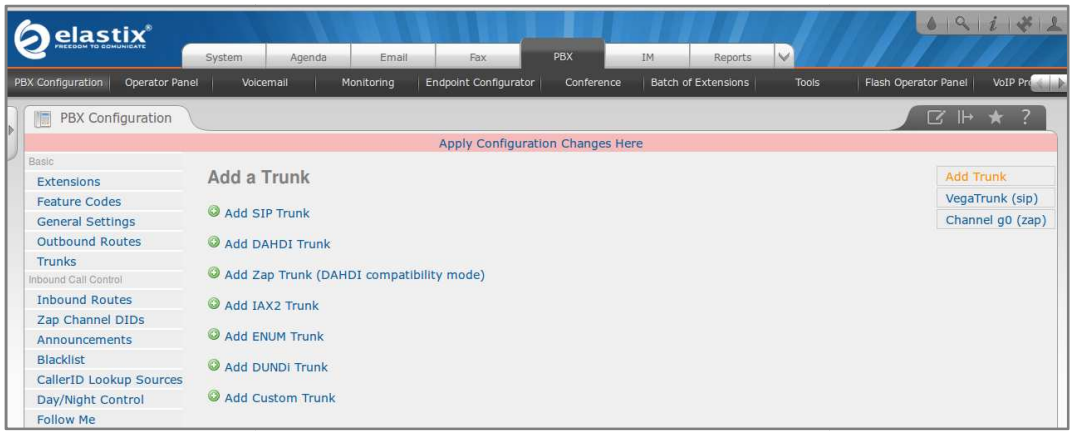
Figure 4-4. Add SIP Trunk



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 on 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 Vega 50 to register with the Elastix Server. Now, go to "PBX => PBX Configuration => Outbound Routes" to configure the outbound route to the Vega 50 Gateway. Fill in the following information: (Figure 4-6)

Route Settings

- **Route Name:** (“8_Vega” in this example)

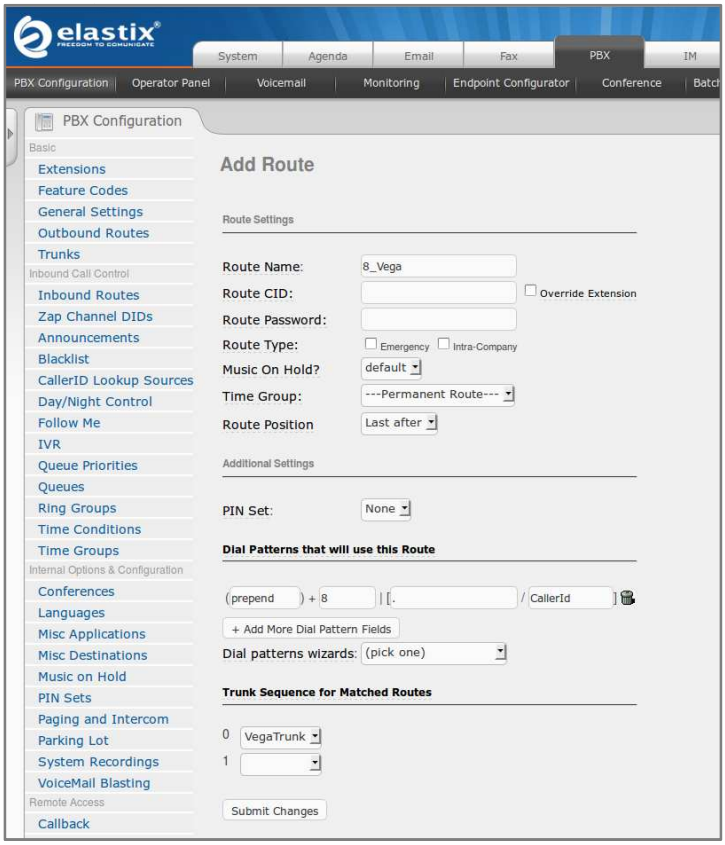
Dial patterns

- **Prefix:** (“8” in this example) | **Match pattern:** (“.” in this example)

Trunk Sequence for Matched Routes

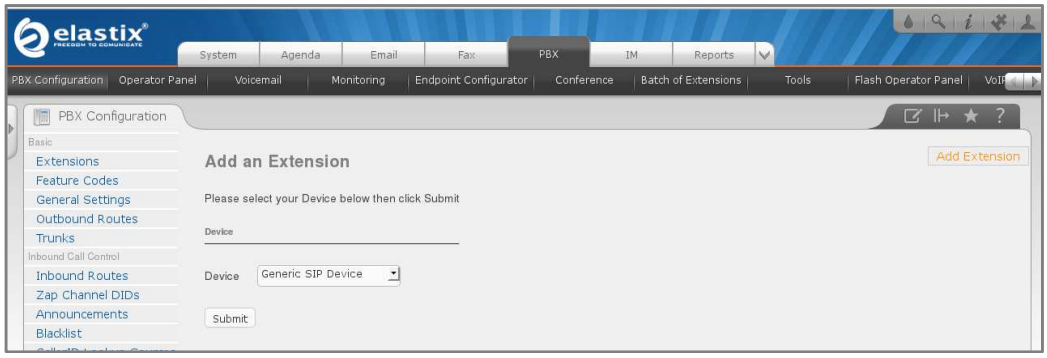
- **0:** (“VegaTrunk” in this example)

Figure 4-6. Add Route



10. Click on “Submit” at the end of the page and Apply changes. Now, 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)

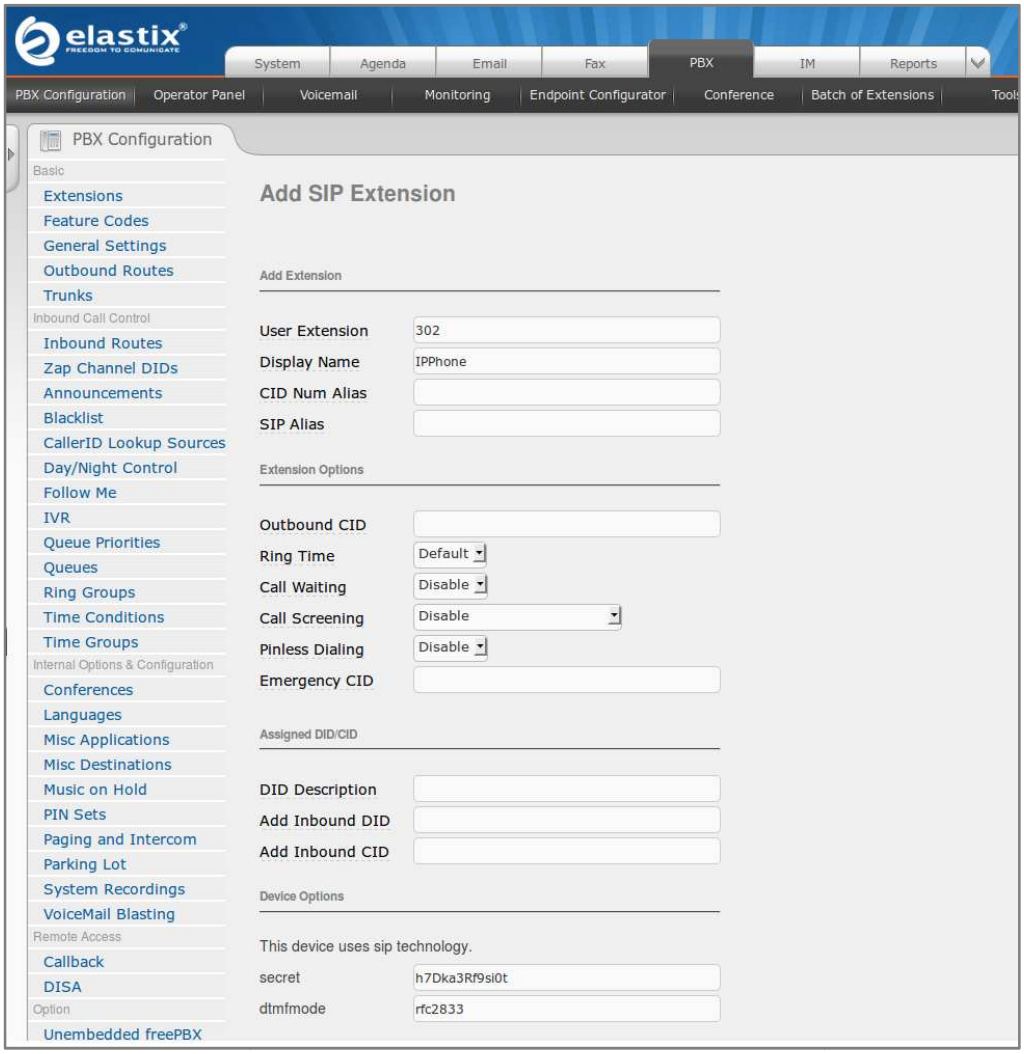
Figure 4-7. Add SIP Extension



11. Fill in the following information on the Add SIP Extension page (Figure 4-8):

- **User Extension** (302 in this example)
- **Display Name** ('IPPhone' in this example)
- **secret** ('h7Dka3Rf9si0t' in this example)

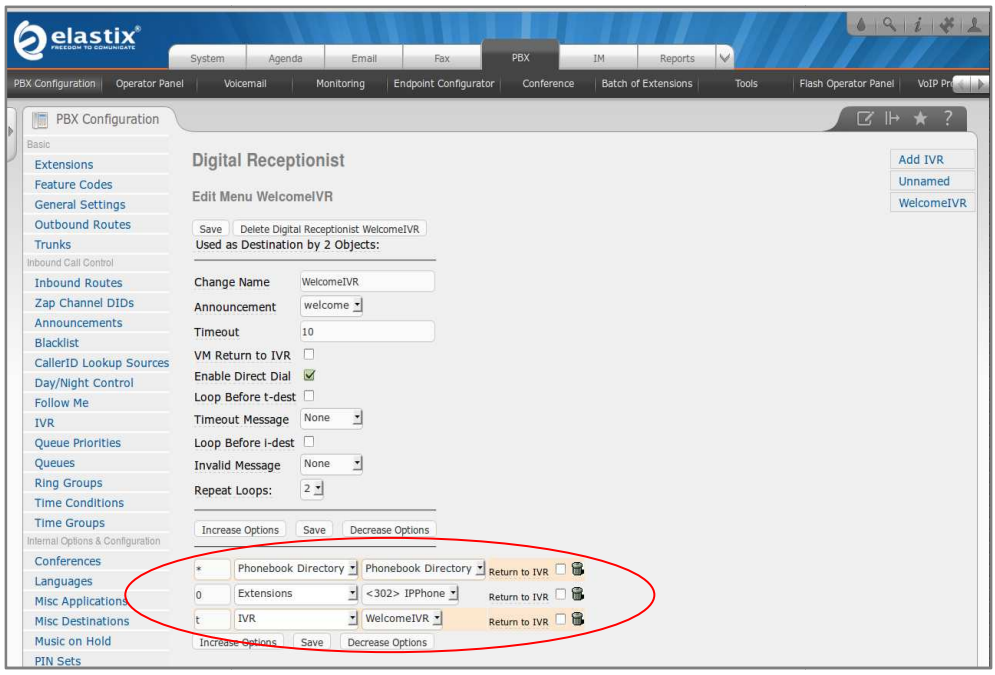
Figure 4-8. Add SIP Extension



12. Click on "Submit" at the end of the page and Apply changes. Create an IVR for the incoming calls to Elastix. To do this, go to "PBX => PBX Configuration => IVR". Click on "Add IVR" link (Figure 4.9). Set the following:

- **Name:** Name of IVR (WelcomeIVR in this example)
- **Announcement:** Voice prompt which will be played for incoming calls.
- **Options:**
  - * - Phone book.
  - 0 - 302 Extension
  - t - Repeat the options of IVR (Add this option by modifying the IVR after creation)

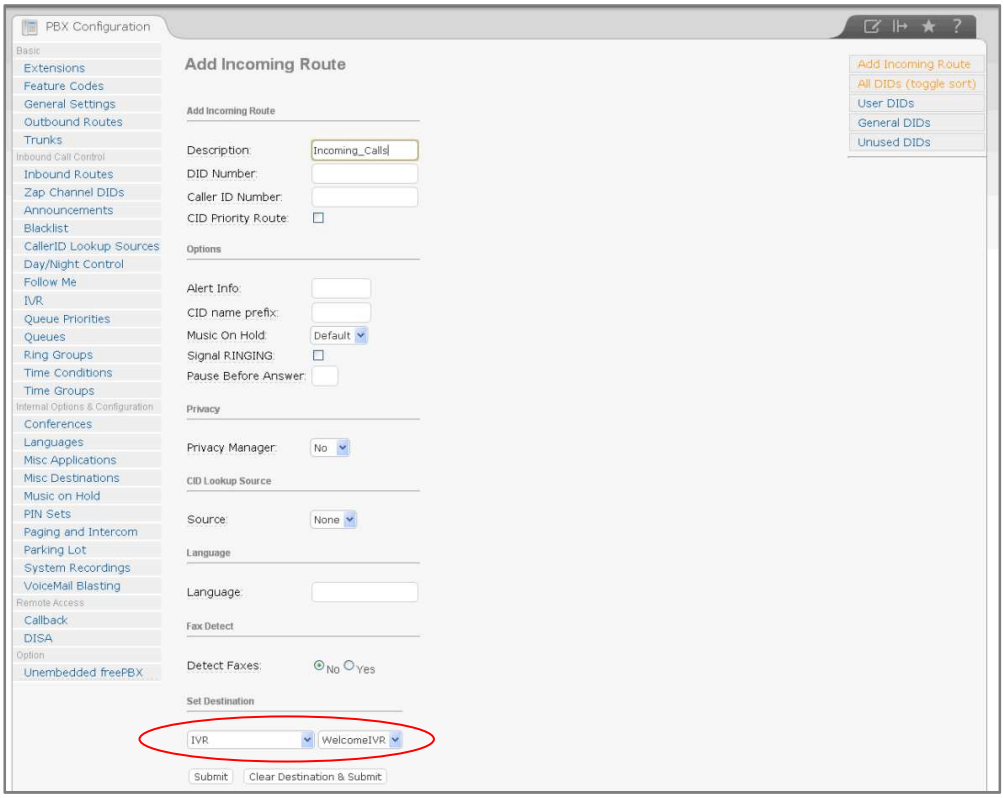
Figure 4-9. IVR



13. Click on “Save” and Apply changes by clicking on the pink ribbon that appears at the top of the page. Now go to “PBX => PBX Configuration => Inbound Routes”. Click on “Add Incoming Route” link (Figure 4.10). Set the following:

- **Description:** Name of inbound route (“Incoming_Calls” in this example)
- **Set destination:** Where the call will be routed. (“WelcomeIVR” IVR in this example)

Figure 4-10. Incoming Route



14. Click on "Submit" and apply changes. Now when we receive calls the "WelcomeIVR" IVR will play to the caller giving him choices to interact with Elastix Server.

15. To configure the gateway, you will need to enter the information from the trunk created on the Elastix Server into the Vega 50 and set other parameters by logging into the WebUI.

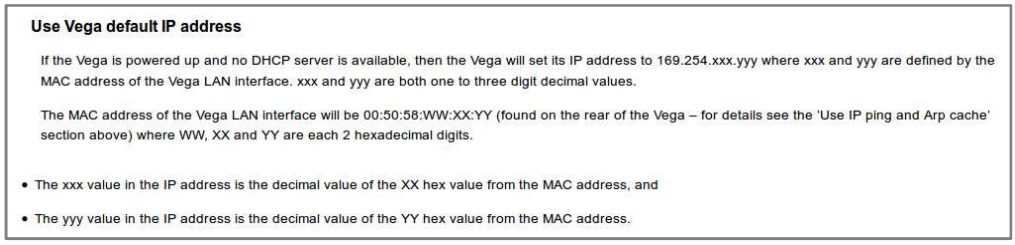
Go to the Vega 50's WebUI by pointing your browser to the Vega's IP address (Figure 4-11).

Figure 4-11. Vega 50's WebUI

For the initial configuration, refer to the Vega 50 Admin Guide found at: http://wiki.sangoma.com/Vega-50-Technical-Documentation

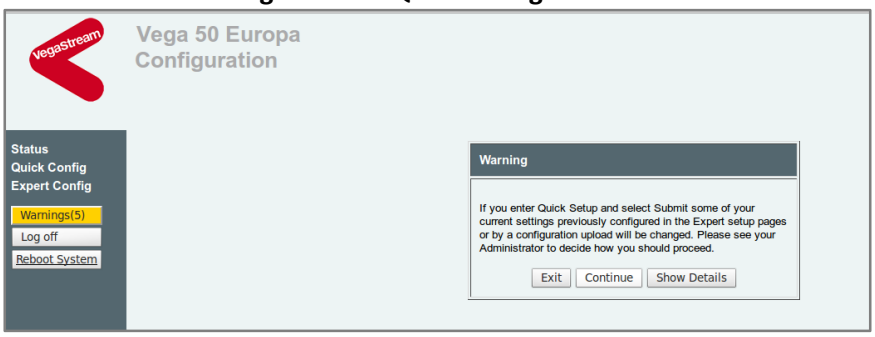
Factory default settings

LAN1 IP Address	DHCP
LAN1 IP Address (If DHCP no available)	169.254.xxx.yyy
Web Access Administrator User	admin
Web Access Administrator Password	admin



16. When the WebUI is loaded, go to "Quick Configuration" located on the left side of the page and click on "Continue" button (Figure 4-12).

Figure 4-12. Quick Config



17. Once there, go to "Basic Config" tab and set the following (Figure 4-13):

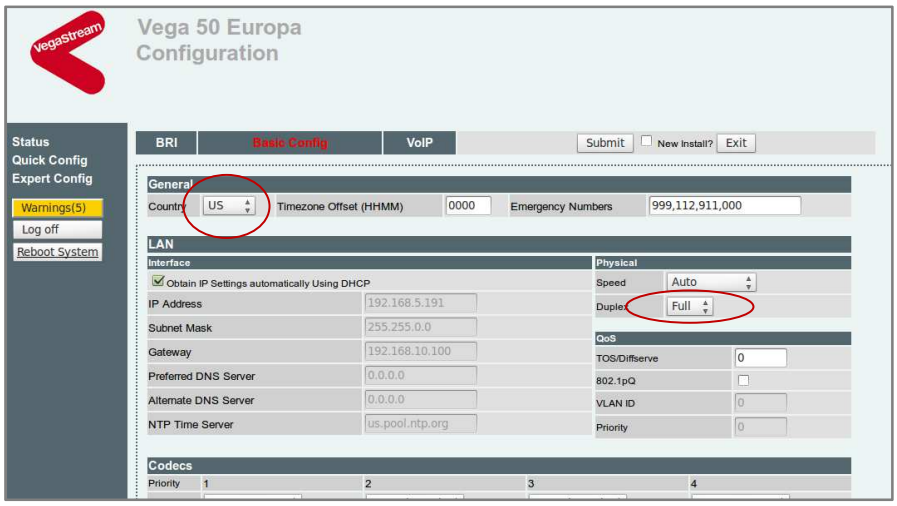
General

- **Country**: US

LAN – Physical

- **Duplex:** Full

Figure 4-13. Quick Config – Basic Config



18. Go to "VOIP" tab and set the following (Figure 4-14):

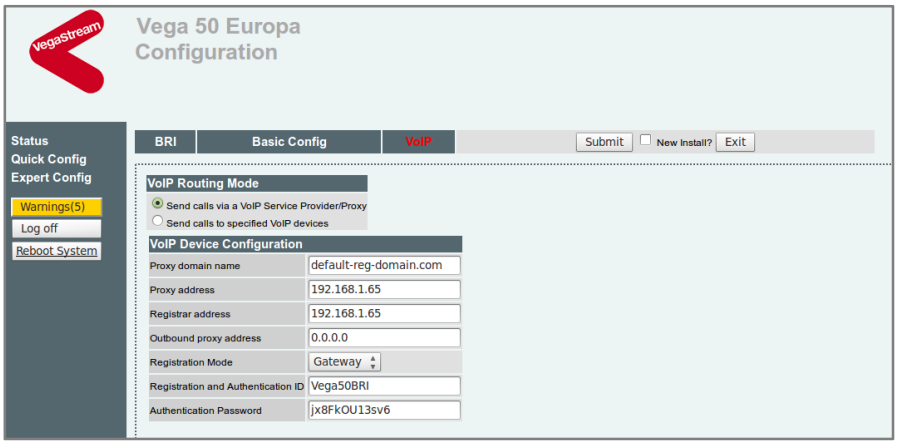
VoIP Routing Mode

- Send calls via a VoIP Service Provider/Proxy (Selected)

VoIP Device Configuration

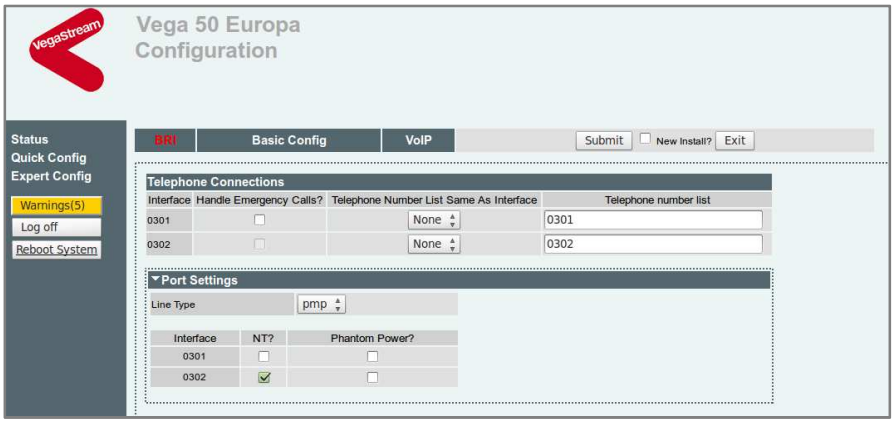
- **Proxy Address**: Elastix Server's IP Address (192.168.1.65 in this example)
- **Registrar Address:** Elastix Server's IP Address
- **Registration Mode:** Gateway
- **Registration and Authentication ID: (**Vega50BRI in this example)
- **Authentication Password:** (jx8FkOU13sv6 in this example)

Figure 4-14. Quick Config – VOIP



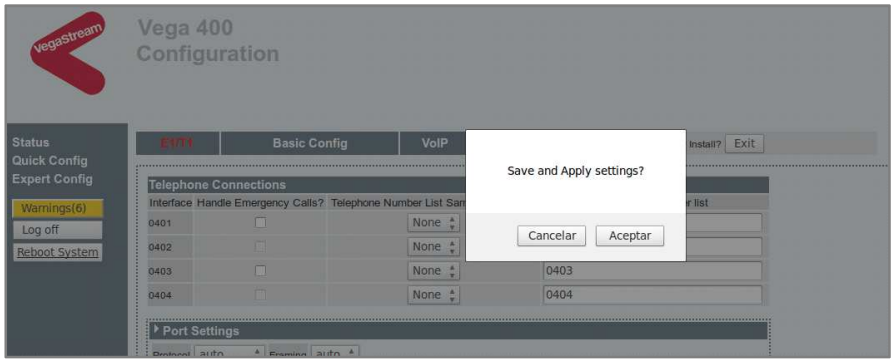
19. Go to "BRI" tab and click on Ports to see the options. Here you can select which ports will be set as TE or NT. Every single port has an ID, they are also shown here. (Figure 4-15).

Figure 4-15. Quick Config –BRI



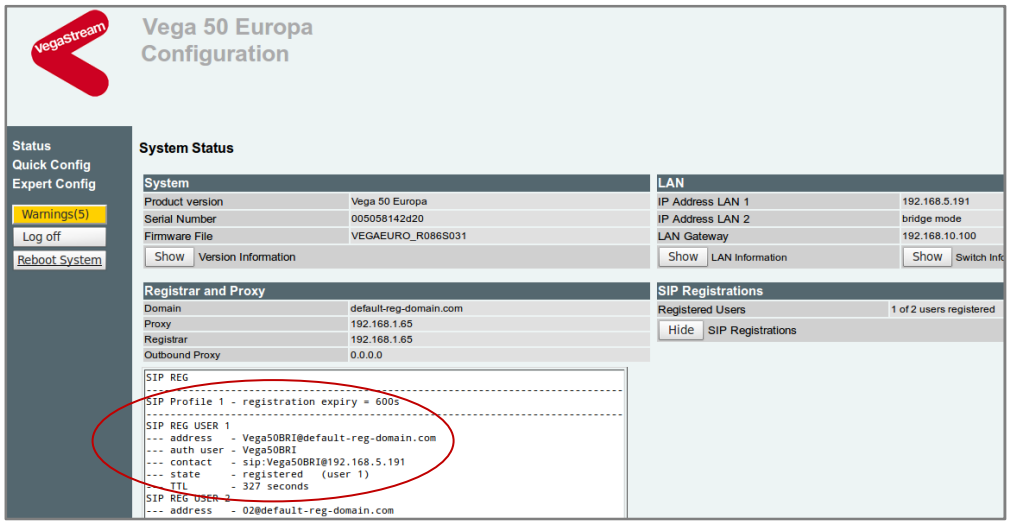
20. To apply the changes click on “Submit” button next to the tabs menu. (Figure 4-16):

Figure 4-16.Applying changes



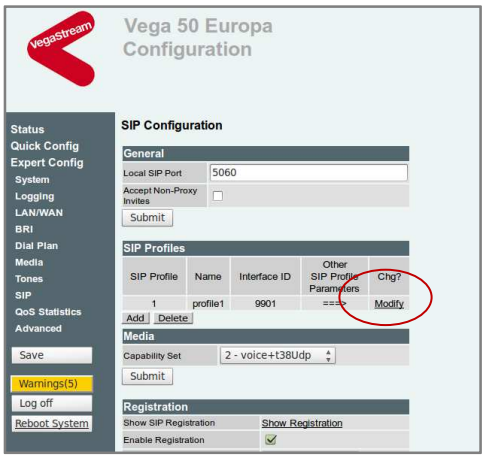
21. Click on “Accept”. Now, go to “Status” located on the left side of the page to check whether the registration was successful (Figure 4-17).

Figure 4-17. Status



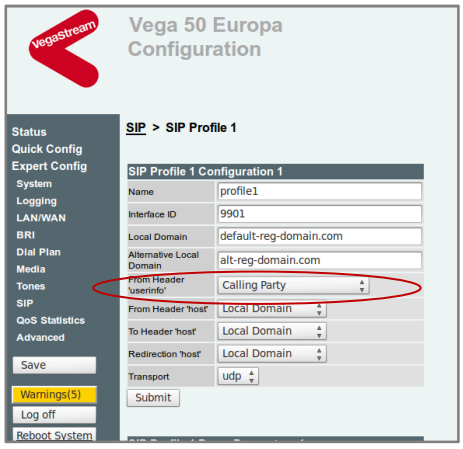
22. If the gateway is not registered check you have entered the right information. If it’s registered, go to “Expert Config” menu on the left side, and click on “SIP”. (Figure 4-18).

Figure 4-18. Expert Config - SIP



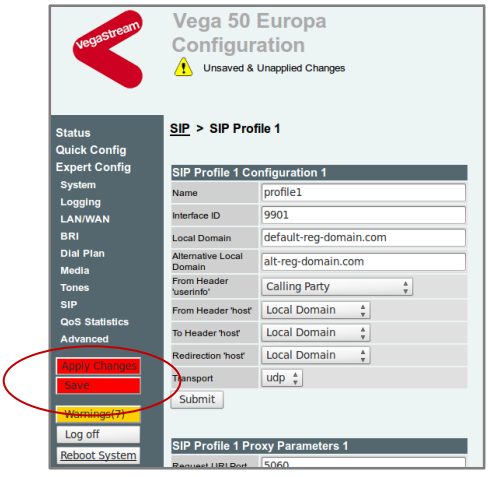
23. In the "SIP Profiles" section click on "Modify", and set ***From header user info*** parameter to ***Calling party*** option (Figure 4-19).

Figure 4-19. SIP



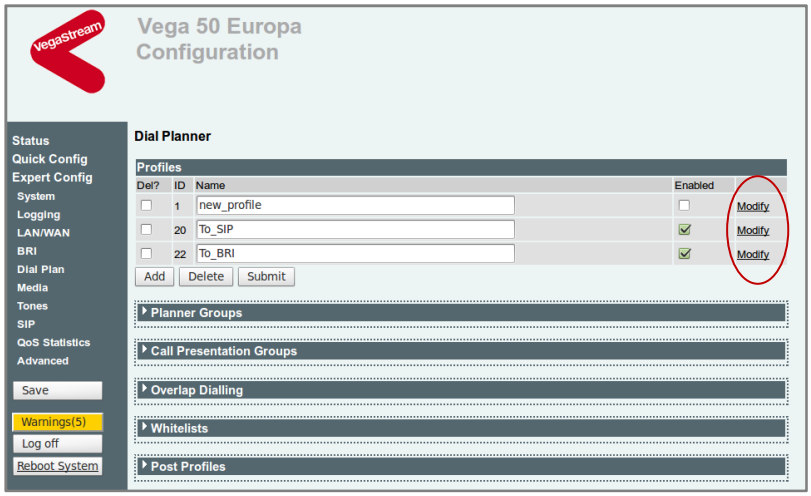
24. Click on "Submit" button. Apply changes and save by clicking on the red buttons (Figure 4-20).

Figure 4-20. SIP



25. Once you have save the changes, go to “Dial Plan” located on the “Expert Config” section (Figure 4.21)

Figure 4-21. Dial Plan



26. Click on “Modify” for “To_SIP” profile. Make the following changes (Figure 4-22):

Source: IF:0301,TEL:<.*>,TELC:<.*>
Destination: IF:9901,TEL:<1>,TELC:(<2>)

This means everything coming from the interface with ID 0301 (see figure 4-15) will be redirected to interface with ID 9901 (SIP Interface, see figure 4-19). TEL is the called number and TELC is the calling number. The characters “**.***” means that any number is accepted. In this example we are using only the Interface 1 in the Vega 50 BRI. You can add more routes as you need.

Figure 4-22. To_SIP Profile

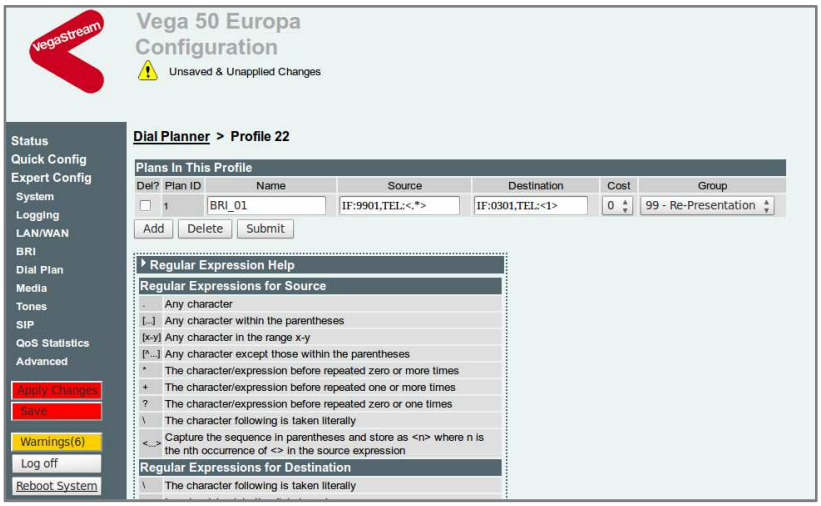
27. For more help using expressions you can take a look on the **Regular Expression Help** and **Token Help** section located below the plans. Once you have edited the plan, click on “Submit” button and then apply and save changes. Go back to “Dial Plan”, and

click on “Modify” button for “To_BRI” profile. Once there, delete the last 3 entries, keep the first one and make the following changes (Figure 4-23):

Source: IF:9901,TEL:<.*>
Destination: IF:0301,TEL:<1>

This means everything coming from the interface with ID 9901 (SIP Interface, see figure 4-19) will be redirected to interface with ID 0301 (see figure 4-15). TEL is the called number. The characters “**.***” means that any dialed number is accepted. In this example we are using only the Interface 1 in the Vega 50 BRI. You can add more routes as you need.

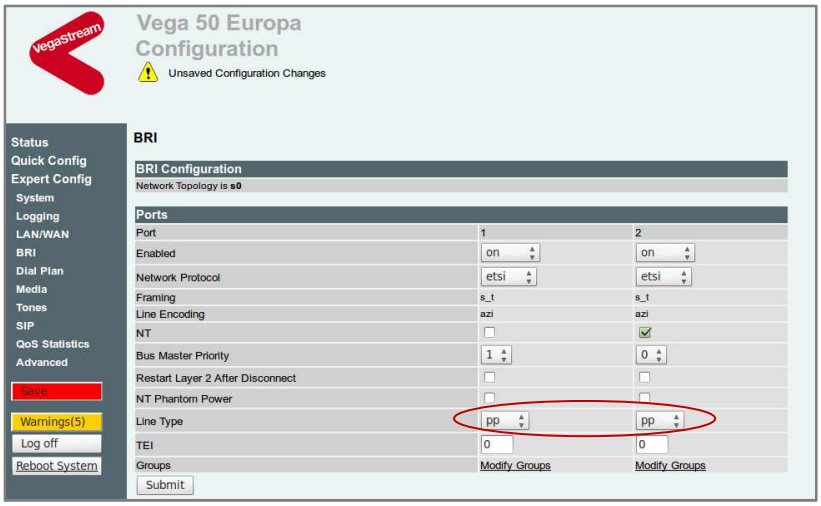
Figure 4-23. To_BRI Profile



28. Once you have edited the plan, click on “Submit” button and then apply and save changes.

29. We just need to set the line type for BRI ports. To set this, go to “Expert Config” and click on “BRI” option. There’s a parameter called **Line Type** that should be set as “**pp” (**Point-to-Point**)** (Figure 4.24).

Figure 4-24. BRI



30. Configure the other IP (SIP) Phone with the correct parameters.

31. At this point, Sangoma Vega 50 BRI Gateway is ready for using. This step completes the procedure.