

## **SIP Trunking using Optimum Business® SIP Trunk Adaptor and the Fonality Trixbox Pro IP PBX Standard Edition V4.1.2-p13**

### **Goal**

The purpose of this configuration guide is to describe the steps needed to configure the Fonality Trixbox Pro IP PBX for proper operation with Optimum Business SIP Trunking.

### **Prerequisites**

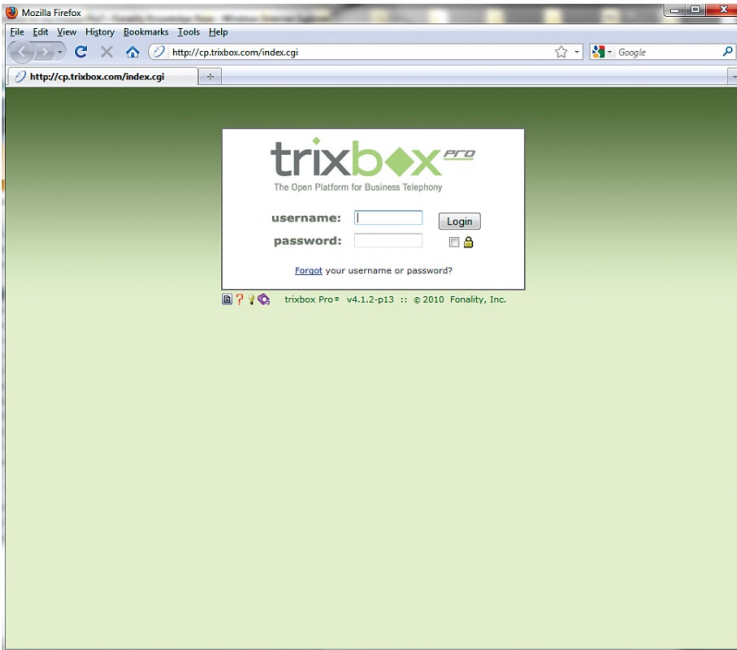
Please follow the instructions in the Optimum Business SIP Trunk Set-Up Guide. The Set-Up Guide was left by the Optimum Business technician at installation. If you do not have the Set-Up Guide, go to [www.optimumbusiness.com/SIP](http://www.optimumbusiness.com/SIP) to download a copy.

### **Trixbox Pro PBX Configuration**

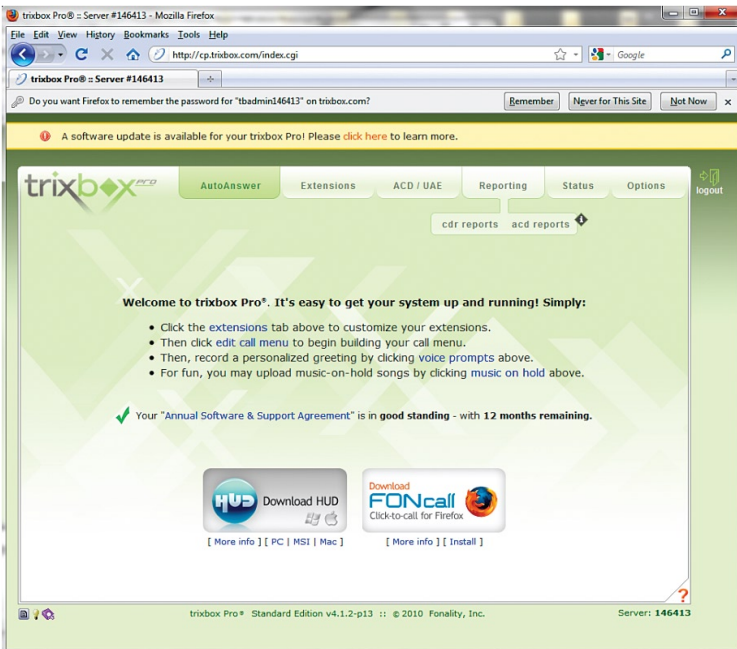
The steps on the next page describe the minimum configuration required to enable the PBX to use Optimum Business SIP Trunking for inbound and outbound calling. Please refer to the Trixbox Pro product documentation for more information on advanced PBX features.

The configuration described here assumes that the PBX is already configured and operational with station side phones using assigned extensions or DIDs. This configuration is based on Trixbox Pro Standard Edition v4.1.2-p13.

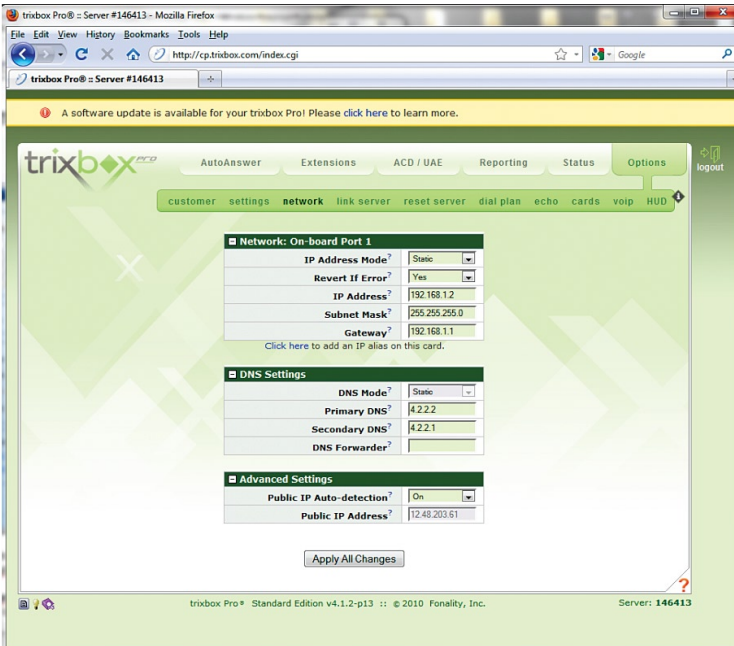
1. The PBX, the phones and the Optimum SIP Trunk Adaptor should be on the same LAN segment. The PBX should be configured with a static IP address (i.e.: 192.168.1.2/24) and its gateway set to the Optimum Business Sip Trunk Adaptor's port 1 LAN IP address (i.e.: 192.168.1.1/24). All the Polycom phones are shipped with default set to obtaining an IP address via DHCP. All the Polycom phones also support Auto Discovery that is strongly recommended for the PBX. You should enable the Optimum Business Sip Trunk Adaptor's DHCP server option when connected to the LAN, so the phones can get an assigned IP address and register with the PBX, once the PBX is configured for adding the phones.
2. To configure the PBX, launch the browser and access <http://cp.trixbox.com> from an Internet-ready PC.



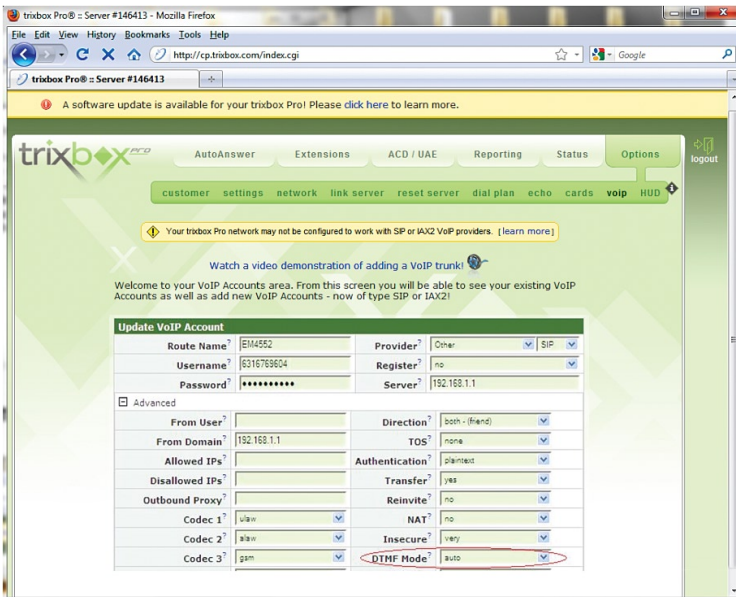
3. Enter the **username** and **password** for the PBX and hit the **“Login”** button.



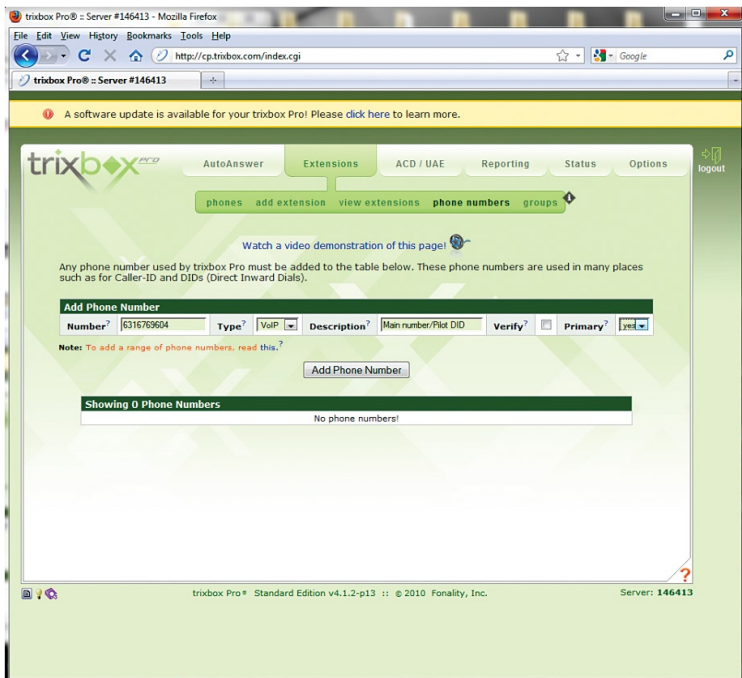
4. Select **“Options>network”** to verify or change the network configuration on the PBX. Hit the **“Apply All Changes”** button if you make any changes.



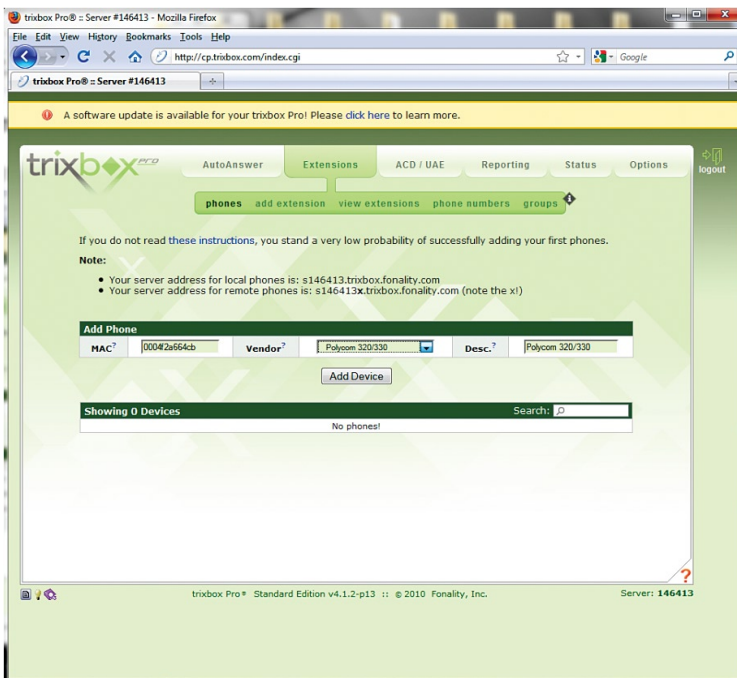
5. Select **“Options>voip”** to create a VoIP account for communicating with the Optimum Business SIP Trunk Service.
  - a. Enter a descriptive name in the **“Route Name”** field.
  - b. Select **“Other”** and **“SIP”** from the 2 drop-down menus for the **“Provider”** fields.
  - c. Select **“yes”** in the **“Register”** field if the Optimum Business SIP Trunk Adaptor is configured to receive SIP registration from the PBX; select **“no”** if Optimum Business SIP Trunk Adaptor is configured to communicate with the PBX via the PBX’s static IP address.
  - d. If PBX registration is required, enter the username in the **“Username”** field and password in the **“Password”** field. Note that the username and password must match what are configured on the Optimum Business SIP Trunk Adaptor. In this example, the pilot DID, 6316769604, is used for both the username and the password.
  - e. In the Advanced section, select **“no”** in the **“NAT”** field.
  - f. If PBX registration is required, make sure the SIP registration string (see example from screen shot below) entered in the **“Register String”** field is in the form of **“username:password@server/username”**.
  - g. Leave other fields as default and hit the **“Add VoIP Account”** button.



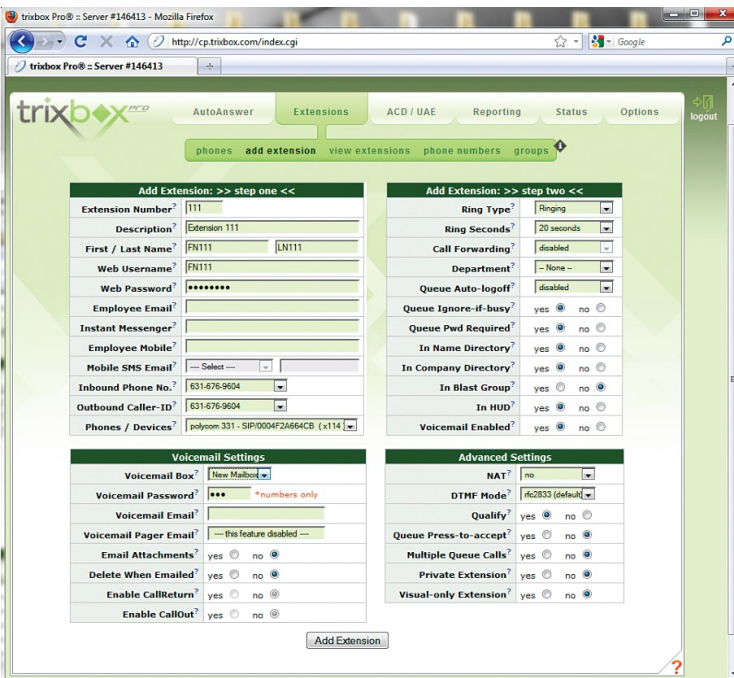
6. Select “**Extensions>phone numbers**” to add the DIDs/phone numbers assigned for the SIP trunk services.
  - a. Enter the phone number in the “**Number**” field.
  - b. Select “VoIP” in the “**Type**” field.
  - c. Enter a description in the “**Description**” field.
  - d. If the DID is a pilot DID (main number), select “yes” for the “**Primary**” field.
  - e. Hit the “**Add Phone Number**” button.



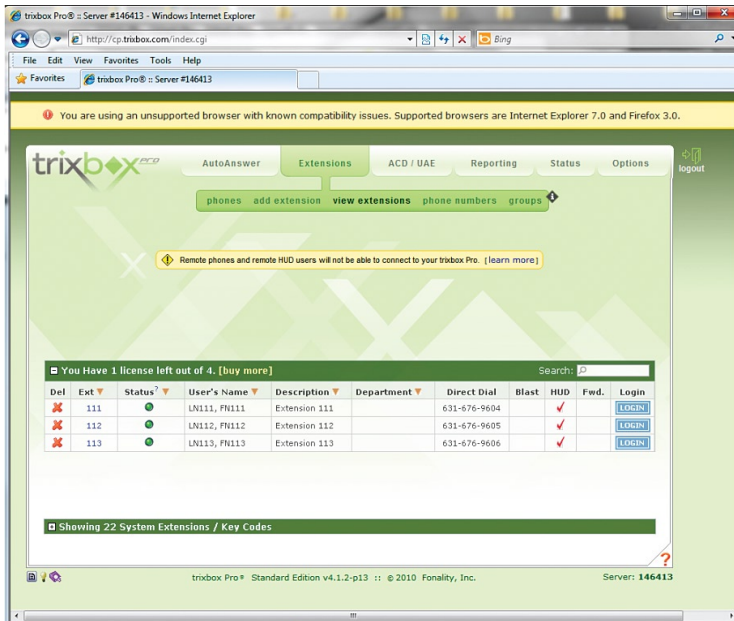
7. Select “**Extensions>phones**” to create/add device for phones.
  - a. Enter the MAC address of the phone in the “**MAC**” field.
  - b. Select the phone vendor in the “**Vendor**” field.
  - c. Enter a description in the “**Desc.**” field.
  - d. Hit the “**Add Device**” button. If you have trouble getting the phone to register with the PBX, click the “**these instructions**” link for more information.



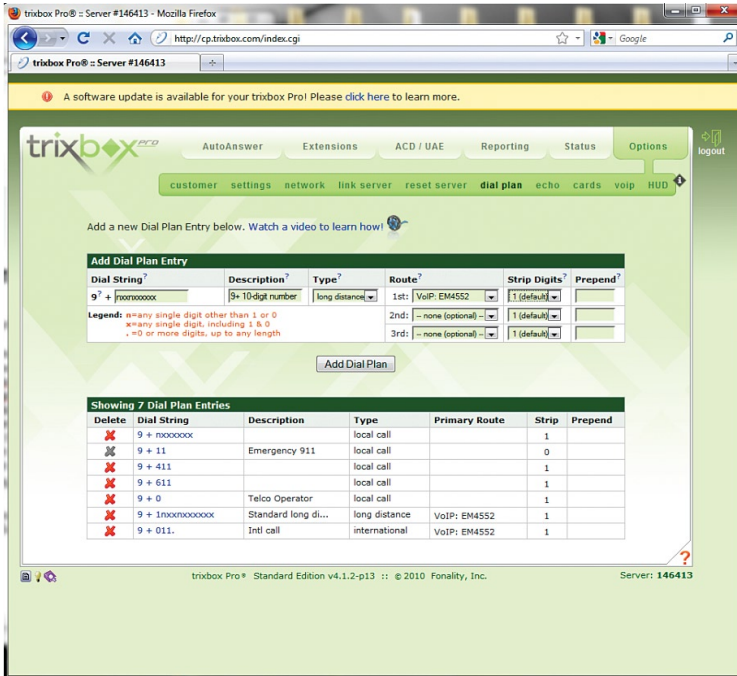
8. Select **“Extensions>add extension”** to create/add extension and associate the extension with the phone and the assigned DID.
  - a. Enter an extension number in the **“Extension Number”** field.
  - b. Enter a description in the **“Description”** field.
  - c. Enter the first name and last name of the phone user in the **“First / Last Name”** field.
  - d. Enter a username in the **“Web Username”** field.
  - e. Enter a password in the **“Web Password”** field.
  - f. In the **“Inbound Phone No.”** field, select the DID for routing incoming calls to this extension. Note that in this example, we use the pilot DID to associate with the first extension number.
  - g. In the **“Outbound Caller-ID”** field, select the DID/username as the caller ID. Note that for PBX registration mode, the Optimum Business SIP Trunk Adaptor will always relay the outbound call with the pilot DID as the caller ID. Also, the caller ID that is used by the PBX for any outbound call must be the same username that is successfully registered with the Optimum Business SIP Trunk Adaptor. For static IP mode, the outbound caller ID can be the same as the DID phone number.
  - h. In the **“Phones / Devices”** field, select the phone/device for this extension. Note that the detected phone/device will show up in the available list even when it can not successfully register with the PBX.
  - i. Enter a password in the **“Voicemail Password”** field.
  - j. Select “no” in the **“NAT”** field.
  - k. Leave all other fields as default and hit the **“Add Extension”** button.



9. Select **"Extensions>view extensions"** to verify that all phones are properly registered with the PBX. A green icon should be shown next to each extension. Mouse-over the "status" header to see what other status you may get. Note that you may need to set the **"NAT"** field for the extension to "yes" in order to get the green icon to appear.



10. Select **“Options>dial plan”** to add dial plan for making outbound calls with **“9+ 10-digit number”**.
  - a. Enter **“nxxxnxxxxx”** in the **“Dial String”** field.
  - b. Enter a description in the **“Description”** field.
  - c. Select **“long distance”** in the **“Type”** field.
  - d. Select the Route name for the Optimum Business SIP Trunk Adaptor in the **“Route”** field.
  - e. Leave other fields as default and hit the **“Add Dial Plan”** button.



11. To configure the Trixbox PBX with a specific DTMF mode, follow the steps below. Go to the **"Options"** tab, then select the **"voip"** link. In the drop-down box labeled **"DTMF Mode"**, there are four options: RFC2833, Auto, Info, and Inband. Select **"Auto"**. This will allow both Inband and RFC2833 protocols.

