

SIP Trunking using Optimum Business® SIP Trunk Adaptor and the TalkSwitch 848vx IP-PBX

Goal

The purpose of this configuration guide is to describe the steps needed to configure the TalkSwitch 848vx IP-PBX version 6.12.076 for proper operation with Optimum Business SIP Trunking.

Prerequisites

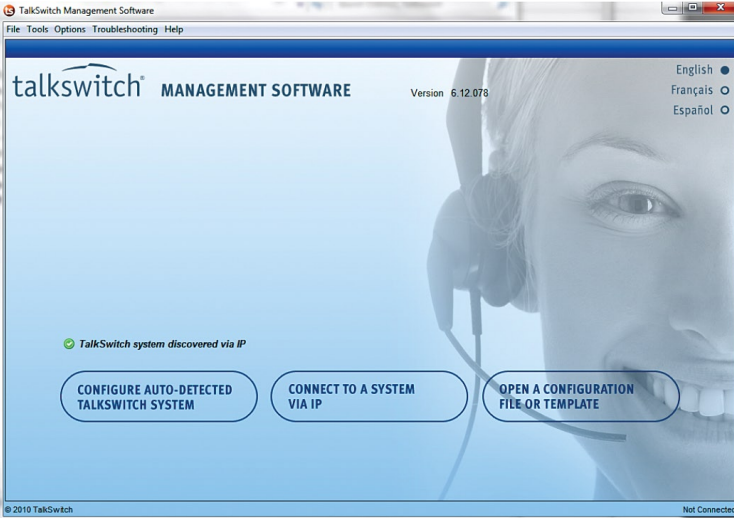
Please follow the instructions in the Optimum Business SIP Trunk Set-Up Guide. The Set-Up Guide was left by the Optimum Business technician at installation. If you do not have the Set-Up Guide, go to www.optimumbusiness.com/SIP to download a copy.

TalkSwitch PBX Configuration

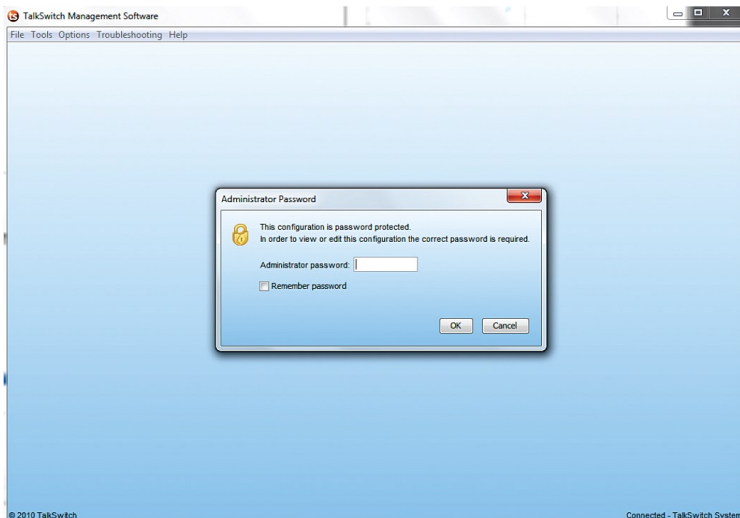
The steps on the next page describe the minimum configuration required to enable the TalkSwitch PBX to use Optimum Business SIP Trunking for inbound and outbound calling. Please refer to the TalkSwitch 848vs IP-PBX product documentation for more information on advanced PBX features.

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 TalkSwitch 848vs version 6.12.076.

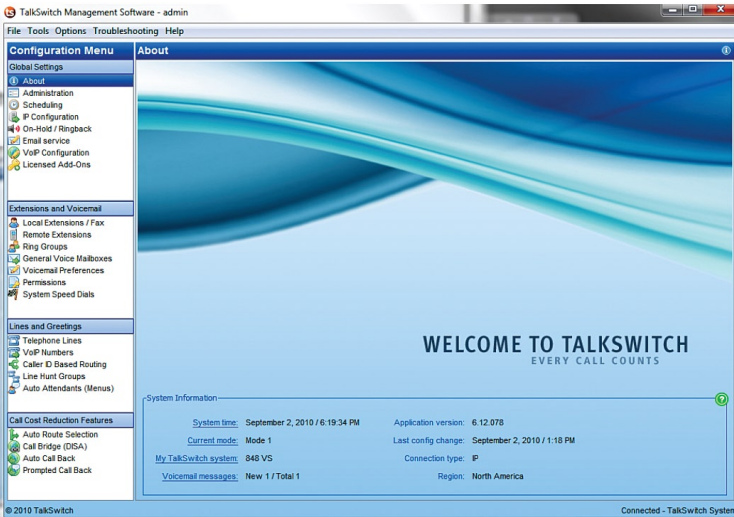
1. The PBX, the phones and the Optimum Business Sip Trunk Adaptor should be on the same LAN segment. The PBX and the phones are shipped with default set to obtaining an IP address via DHCP. First connect the Optimum Business Sip Trunk Adaptor's port 1 to the LAN and enable its DHCP server. This is step 2 in the Optimum Business SIP Trunk Set-up Guide left by the Optimum Business technician at install. If you do not have the Set-up guide please go to www.Optimumbusiess.com/SIP to download a copy. When the PBX is connected to the LAN, it will get an assigned IP Address from the Optimum Business Sip Trunk Adaptor.
2. Install the TalkSwitch Configuration GUI on a Windows PC, connect the PC to the LAN and invoke the TalkSwitch configuration GUI.



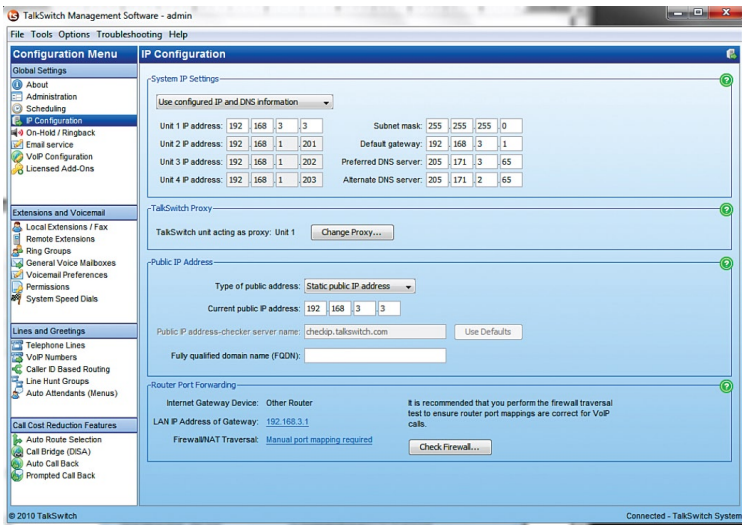
3. The configuration GUI has not connected to the PBX yet. Click the **“CONFIGURE AUTO-DETECTED TALKSWITCH SYSTEM”** button.



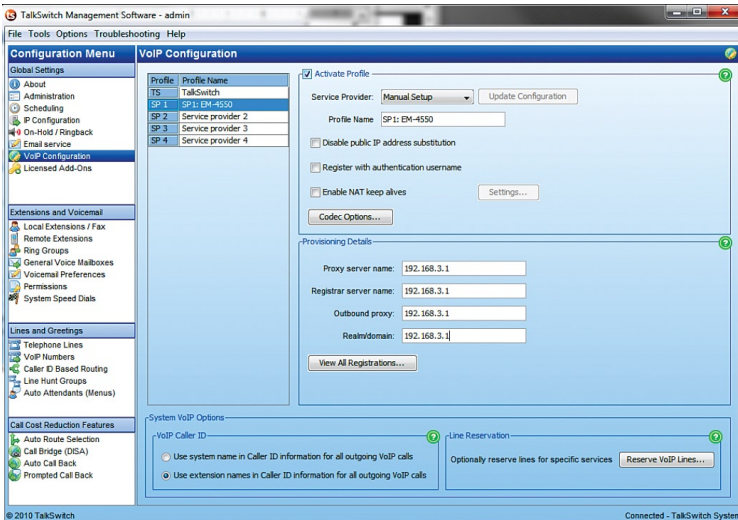
4. The configuration GUI will connect to the PBX and, if an administrator password had been set, enter the password in the “**Administrator password**” field. The initial screen of the configuration GUI should show the Configuration Menu with the “**About**” page.



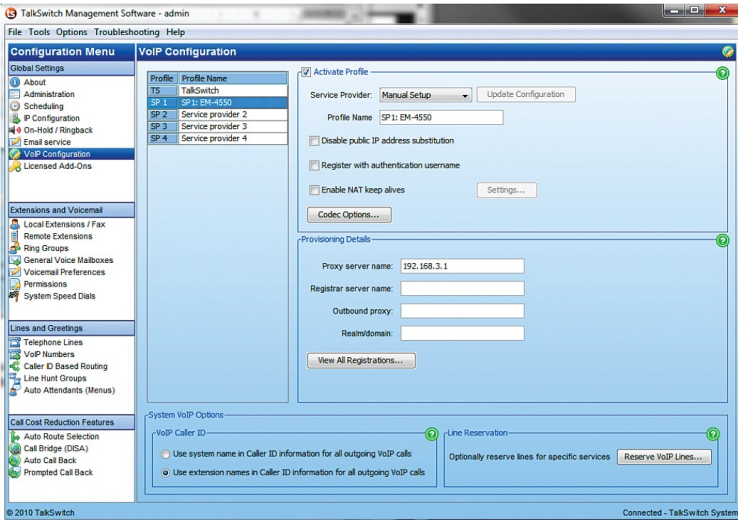
5. Select the “**IP Configuration**” page. The System IP Settings section should show the Unit 1 IP address (the TalkSwitch PBX), subnet mask, default gateway (Optimum Business Sip Trunk Adaptor) and DNS server address obtained from the DHCP server.
 - a. In the System IP Settings section, replace the setting of “Obtain IP and DNS information automatically” with the “**Use configured IP and DNS information**” setting.
 - b. In the Public IP Address section, select “Static public IP address” for the “**Type of public address**” field, and enter the Unit 1 IP address in the “**Current public IP address**” field.
 - c. Select **File>Save** to save the changes.



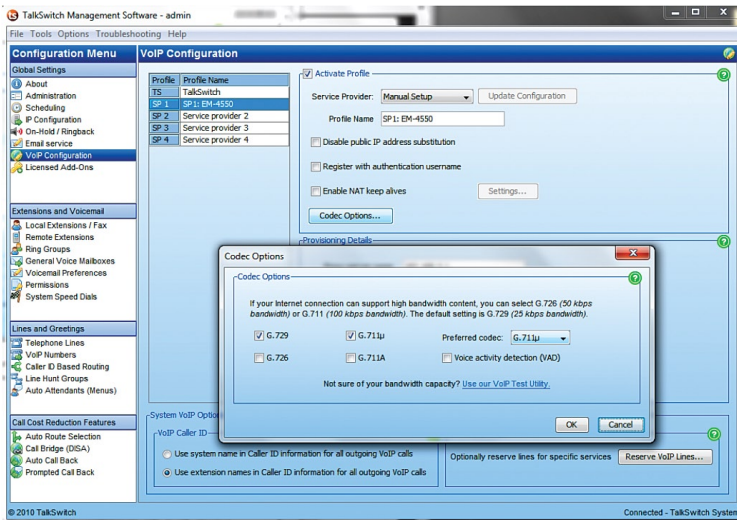
6. Setting up PBX to communicate with The Optimum Business Sip Trunk Adaptor with SIP registration - follow this section only when The Optimum Business Sip Trunk Adaptor is configured to expected SIP registration from the PBX.
 - a. Select the **"VoIP Configuration"** page and select the **"SP 1"** profile.
 - b. In the Active Profile section, check the **"Active Profile"** checkbox, select **"Manual Setup"** for the **"Service Provider"** field and enter a profile name in the **"Profile Name"** field.
 - c. In the Provisioning Details section, enter **"Proxy server name"** field, the **"Registrar server name"** field, the **"Outbound proxy"** field and the **"Realm/domain"** field with the IP address of the Optimum Business Sip Trunk Adaptor LAN interface. This is step 2 in the Optimum Sip Trunk Set-up Guide.
 - d. Select **File>Save** to save the changes.



7. Setting up the PBX to communicate with Optimum Business Sip Trunk Adaptor with static IP address.
 - a. Select the **“VoIP Configuration”** page and select the **“SP 1”** profile.
 - b. In the Active Profile section, check the **“Active Profile”** checkbox, select **“Manual Setup”** for the **“Service Provider”** field and enter a profile name in the **“Profile Name”** field.
 - c. In the Provisioning Details section, enter the Optimum Business Sip Trunk Adaptor’s LAN interface IP address of Port 1 in the **“Proxy server name”** field and leave the **“Registrar server name”** field, the **“Outbound proxy”** field and the **“Realm/domain”** field blank.
 - d. Select **File>Save** to save the changes.

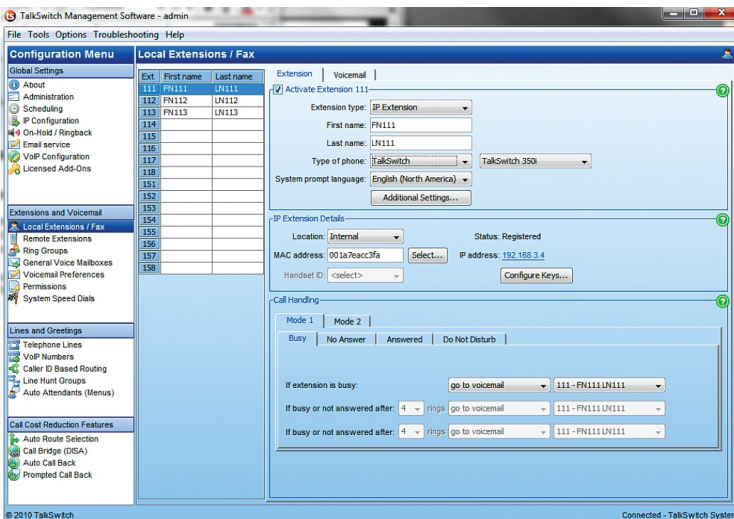


8. Setting up codec options (if necessary).
 - a. Select the **“VoIP Configuration”** page and select the **“SP 1”** profile.
 - b. In the Active Profile section, click the **“Codec options”** button, check the checkbox of the codec G911u, select the preferred codec of G711u in the **“Preferred codec”** field and click **“OK”**.
 - c. Select **File>Save** to save the changes.

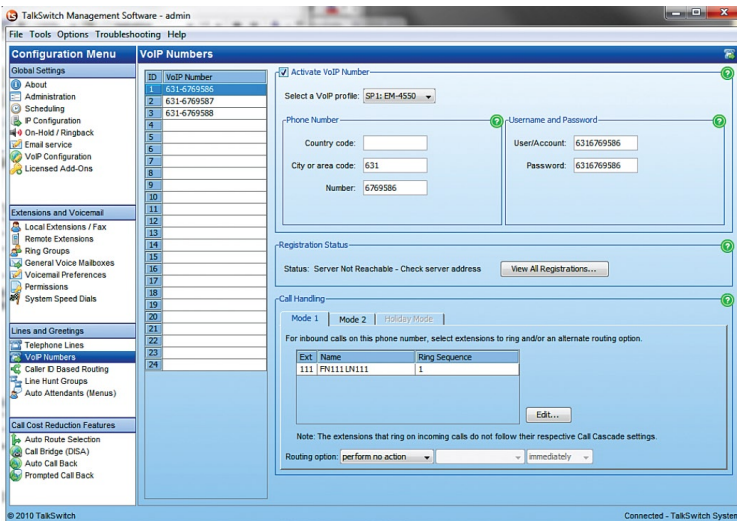


9. Setting up extension for each phone.

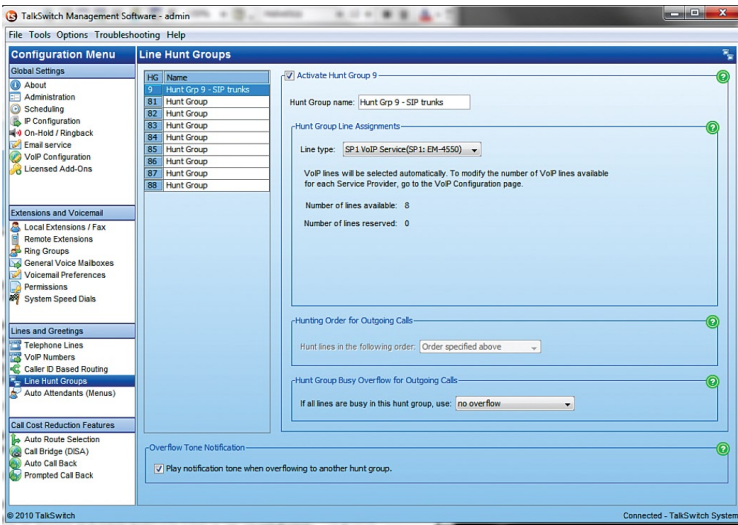
- a. Select the "Local Extensions/Fax" page and select the extension under the "Ext" column.
- b. In the Activate Extension number section, check the "Activate Extension number" checkbox, enter the user's first name and last name in the "First name" and "Last name" fields and select the phone type in the "Type of phone" field.
- c. In the IP Extension Details section, select "Internal" for the "Location" field and enter the phone's MAC address in the "MAC address" field. Note that the TalkSwitch IP phones by default will need assigned IP address from the DHCP server and the phones must configure the SIP server address to be the same as the TalkSwitch PBX's IP address.
- d. Select **File>Save** to save the changes.



10. Setting up the DIDs for the SIP trunk service and mapping incoming calls to the extensions.
 - a. Select the **“VoIP Numbers”** page and select the next available index under the **“ID”** column.
 - b. In the Activate VoIP Number section, check the **“Activate VoIP Number”** check box, select the configuration profile for the Optimum Sip Trunk Adaptor in the **“Select a VoIP profile”** field.
 - c. In the Phone Number section, enter the area code of the DID in the **“City or area code”** field and the remaining 7-digit number in the **“Number”** field.
 - d. In the Username and Password section, enter a username and password in the **“User/Account”** field and the **“Password”** field. Note that these 2 fields are used by the PBX to register with the Optimum Business SIP Trunk Adaptor. This is configured in step 3 of the Optimum Business SIP Trunk Set-up Guide. The User/Account and Password for at least one extension must match the username and password entered into the Optimum Business SIP Trunk Adaptor when in registration mode. These fields are not used by the PBX in non-registration (static) mode.
 - e. In the Call Handling section, select the extension you want to ring when this DID is called.
 - f. Select **File>Save** to save the changes.

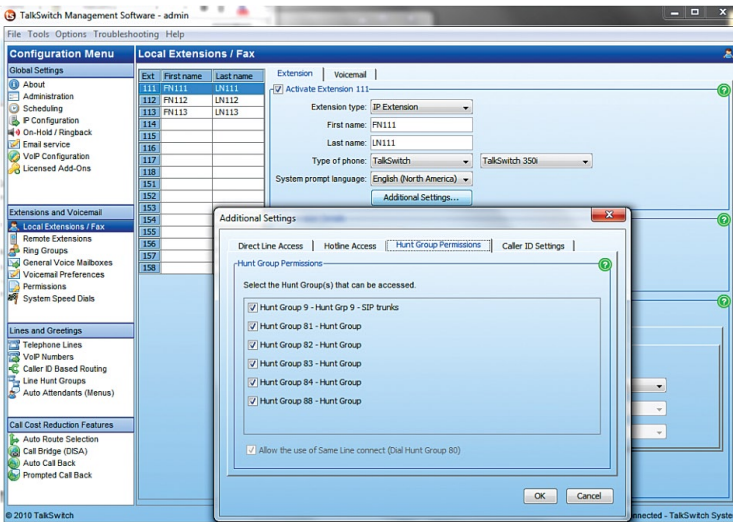


11. Setting up PBX to dial “9” first for making outbound calls to the SIP trunk.
 - A. Select the **“Line Hunt Groups”** page.
 - a. Select Hunt Group 9 under the **“HG”** column, check the **“Activate Hunt Group 9”** checkbox, and enter a Hunt Group name in the **“Hunt Group name”** field.
 - b. In the Hunt Group Line Assignments section, select the VoIP configuration profile for the Optimum Sip Trunk Adaptor in the **“Line type”**.
 - c. Select **File>Save** to save the changes.



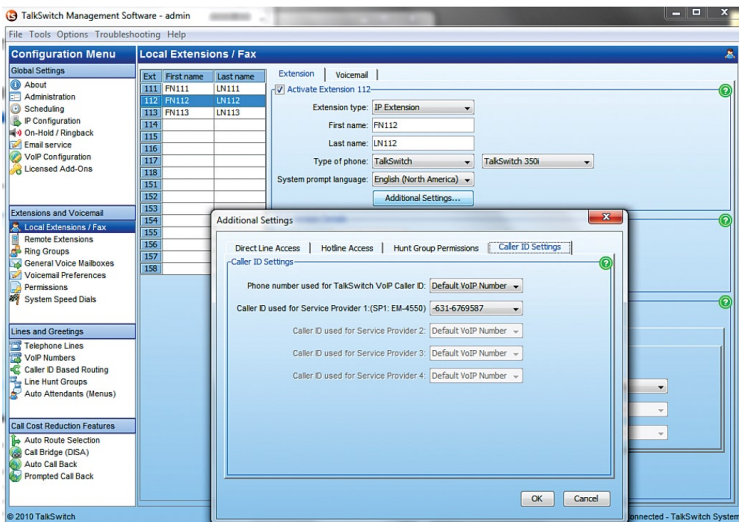
B. Setting up Hunt Group permission for each extension.

- Select the "Local Extensions/Fax" page and select the extension under the "Ext" column.
- In the Activate Extension number section, click the "Additional Settings" button, select "Hunt Group Permissions" and check the "Hunt Group 9" checkbox. This will allow the extension to dial "9" to make outbound calls via the Optimum Business SIP trunk.
- Select **File>Save** to save the changes.



C. Setting up Caller ID for the outbound calls.

- a. Select the **"Local Extensions/Fax"** page and select the extension under the **"Extension"** tab.
- b. In the Activate Extension number section, click the **"Additional Settings"** button, select **"Caller ID Settings"** and select the DID to be used as the caller ID. Note: In registration mode, you **must** set the "Caller ID used for Service Provider" to match the Pilot DID for **every** extension. In non-registration (static) mode, the "Caller ID used for Service Provider" many match any of the DID's on the Optimum Business SIP Trunk.
- c. Select **File>Save** to save the changes.



Note: When making configuration changes to the PBX, some may take effect as soon as you select **File>Save**, some may require a reset. When in doubt, save all the changes and restart the PBX.

Note: The built-in Auto Attendant automatically supports in-band and RFC 2833 DTMF by default. No configuration changes are required.