# ADTRAN®

NetVanta Unified Communications Technical Note

Installing and Configuring the Quintum Survivable SIP Gateway

Introduction

Quintum's Survivable SIP Gateway (SSG) serves as a signaling intermediary between local Session Initiation Protocol (SIP) phones and the NetVanta Unified Communications Server. SSG technology provides site survivability for branch offices in a single, integrated access solution. The SSG acts as an outbound proxy – all IP endpoints register to the SIP server via SSG and all SIP signaling passes through it. It is an intelligent local agent that gathers and maintains routing information for all endpoints passing registrations and call signaling through it to the UC server.

In the event that the UC server is down, the SSG gateway takes control of the local telephony functions and routing between the local and remote sites. The routing information is automatically obtained from the registration and signaling information passed through the SSG acting as an outbound proxy.

Quintum SSG Gateway   UC Server
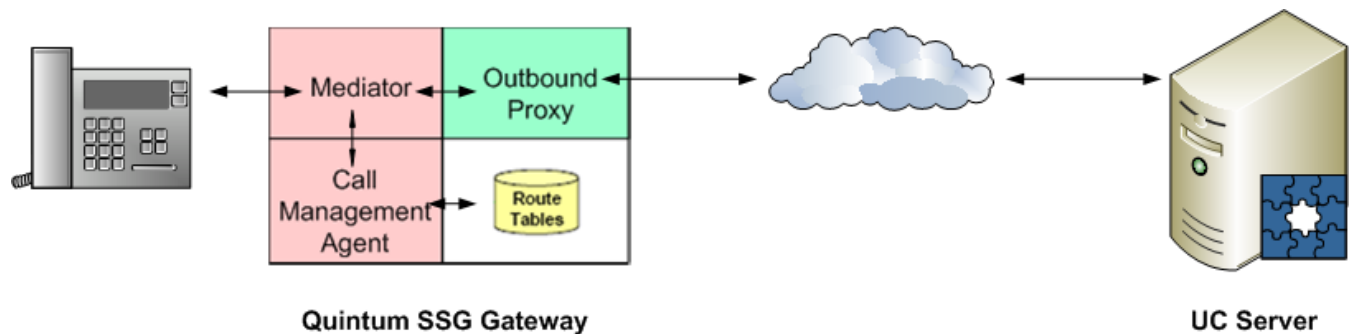
Configuring a New Gateway

Instructions for initial configuration are available in Installing *and Configuring Quintum Tenor DX Gateway* technical note *or Installing and Configuring the Quintum Tenor AS Gateway* technical note, available online at *http://kb.adtran.com*.

Upgrading your Current Quintum Gateway for SSG

To enable SSG on an existing gateway, you must obtain the SSG software and a license key from Quintum Technical Support.

Obtaining the Latest SSG Software

Ensure you have the latest SSG software loaded using the instructions below. To find Quintum's latest firmware versions, please visit: *http://www.quintum.com/support*.

1. Download the firmware from the Quintum web site and unzip the file (for example, using a program such as WinZip). Save the files to a new, empty directory on your hard drive.

2. From your PC select **Start > All Programs > Accessories > Command Prompt**. The *Command Prompt* window is displayed.

3. Use the CD command (**cd**) to change to the directory containing the unzipped firmware files on your local hard drive.

4. Type **ftp** followed by the IP address of the unit. Press **Enter**.

5. Log in with the user name and password. The default for both is **admin**.

6. Enter the following commands:

   - **bin <Enter>**

   - **hash <Enter>**

   - **prompt <Enter>**

   - **mput *.* <Enter>**

   - **get reset.sys <Enter>** (In order for the upgrade to take effect, you must reset the unit. You can reset now or wait until the next time you login).

7. To confirm the upgrade, initiate a telnet session with the unit and use the command **show –v**. The system software should reflect the upgraded firmware version.

Upgrading your Current License File for SSG

If you would like to upgrade your current unit (Tenor AS, Tenor AF, or Tenor DX) to include the Survivable SIP Gateway (SSG) functionality, you must install the applicable license file. A license file

contains configuration information that is used to enable features and options in the Tenor, such as SSG functionality.

This section outlines the process of manually upgrading a Quintum Tenor gateway with a new license file which enables the SSG functionality.

Prerequisites

Before attempting to install the new license file, ensure that you have the following components readily available:

- "license.dat" file (obtained from Quintum Technical Support)
- IP address of target Tenor VoIP device
- Admin Password for target Tenor VoIP device

Getting Started

You should receive an e-mail confirmation of the enabled license SSG feature. This e-mail also contains one or more attachments, the most important of which is the license.dat file. This file is the actual license generated for a particular Quintum Tenor VoIP device.

The license file must be installed on the appropriate Quintum Tenor VoIP device (for example, a Tenor AX) via FTP. The license.dat file should be placed in the /cfg/sys/ directory in the target device. You may use any FTP client in order to accomplish this; the examples shown in this document are for using MS DOS. After FTP'ing the license.dat file to the Tenor VoIP device, the device must be reset for the new license to become active.

NOTE: The license file will only work in the Quintum Tenor VoIP device with the serial number that matches the one provided when the license file was generated. The license file is not interchangeable among devices.

Applying the License

1. Obtain the license file from Quintum Technical Support.

2. Save the **license.dat** file to your hard drive, and note the file location. This license file is a small binary encoded file that contains the licensed SSG feature.

3. From your Windows PC select **Start > All Programs > Accessories > Command Prompt**. The *Command Prompt* window is displayed.

4. Use the **CD** command to change to the directory on your PC in which you saved the **license.dat** file.

5. Type **ftp** followed by the IP address of the unit. Press **Enter**.

6. Log in with the user name and password. The default for both is **admin**.

7. Use the **CD** command to change to the cfg/sys directory (this is the directory on the Tenor into which you will copy the **license.dat** file). Depending upon the product type and software revision, the directory structure you see in your Tenor VoIP device may be different.

8. Type **bin <Enter>**.

9. Type **put license.dat <Enter>**

10. Type **get reset.sys <Enter>** (In order for the upgrade to take effect, you must reset the unit. You can reset now or wait until the next time you log in).

Configuring SSG

To configure your gateway with SSG, you must use the Quintum Tenor Configuration Manager.

WARNING: When configuring the SSG, you **must** configure the SIP Server (Primary, Secondary, or both) even if you are not using the FXO/FXS interfaces.

1. Launch the **Tenor Configuration Manager** and connect to the Tenor in which the SSG feature is supported.

2. Select the **Advanced Explore** tab.

3. From the main panel select **VoIP Configuration > Survivability Parameters**. The *Survivability Parameters* window is displayed.

4. In the **Listening Port** field enter a port number. The default port is **5060**.

5. Ensure the **Use My Gateway** radio box is checked. If you choose to disable this option, the Default Route IP address field is displayed. (The Default Route IP Address is a static route destination for calls when Use My Gateway is disabled.)

6. Enter a **Default Route Port** (the default is 5061).

7. In the **Endpoint Expires Time** enter **4800**. This ensures that the gateway does not drop phone registrations prematurely.

8. Select **Confirm/OK**.
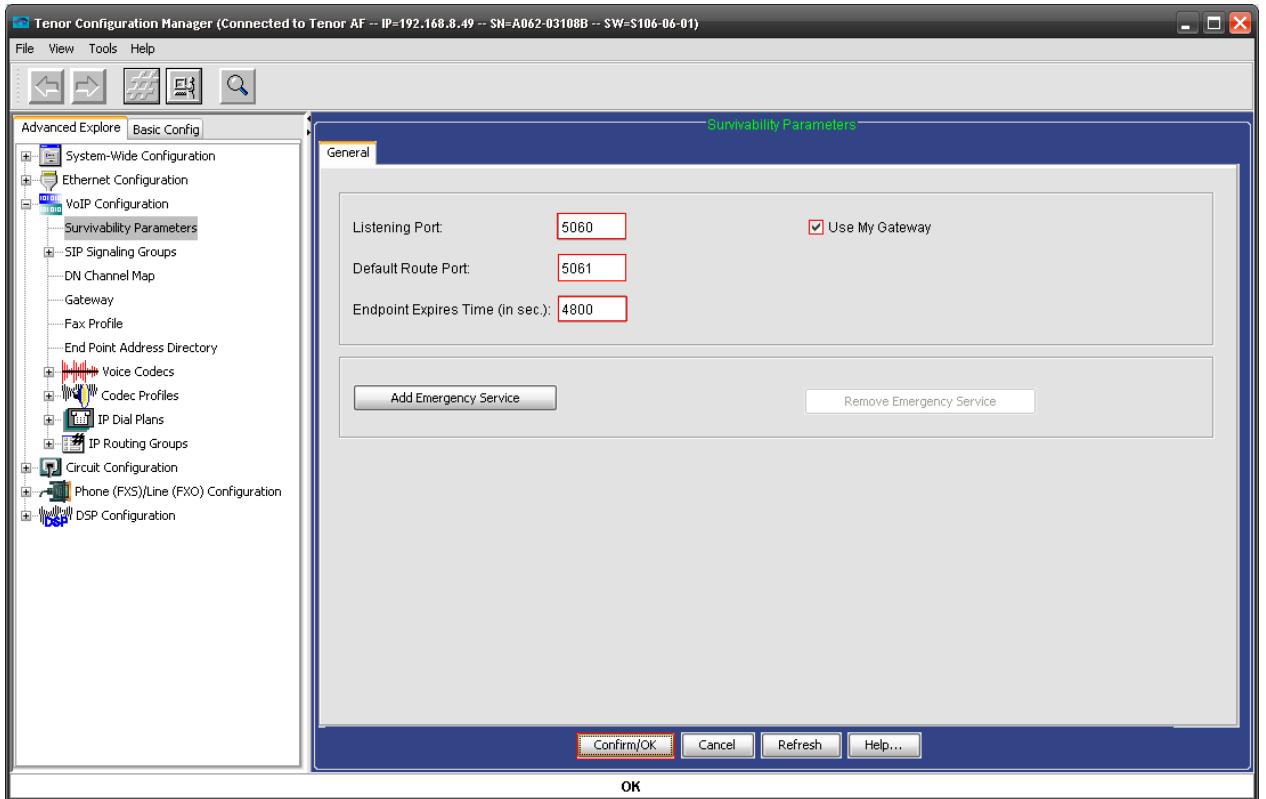
9. From the main panel, select **VoIP Configuration > SIP Signaling Group -1**. The *SIP Signaling Group* window is displayed.

10. In the **Primary SIP Server** box, enter the IP address for the Primary SIP Server (in the **Secondary SIP Server** box, enter the IP address for the Secondary SIP Server, if required). Configure the SIP Server Ports for both.

11. Enter **300** in the **Register Expiry Time** box.

12. Ensure the **Primary Outbound Use Local Survivable Gateway** box is checked.

13. Select **Confirm/OK**.
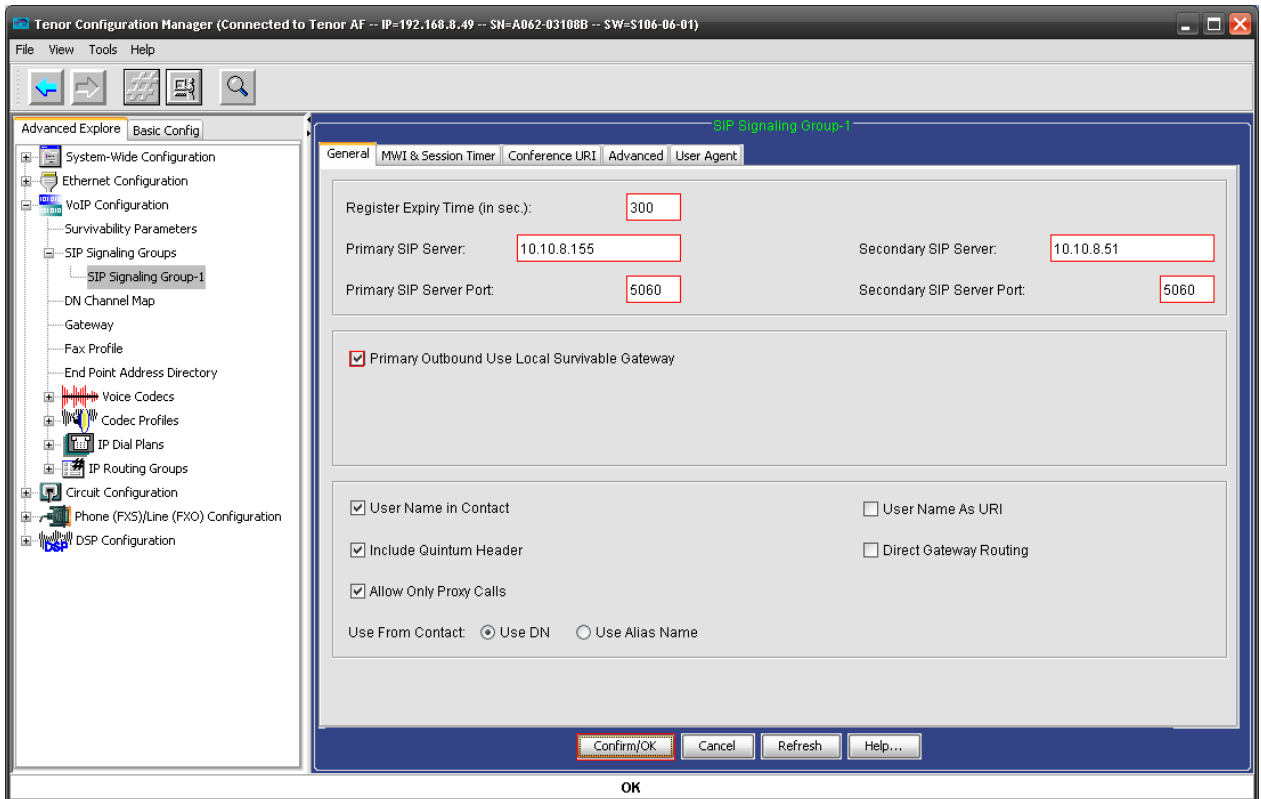
14. To enable the IVR, from the main panel select **Circuit Configuration > Trunk Circuit Routing Group-line**.

    Note: This step is optional, depending on the configuration. IVR is only required in a survivability scenario when the UC server is down and there is no secondary UC server for failover, in which case the IVR on the gateway will handle incoming calls. If there is a secondary server then incoming calls will be routed to that server, and then the gateway IVR does not need to be enabled.

15. From the **Type** dropdown box, choose **Type 8: Message Before 2nd Dial Tone**.
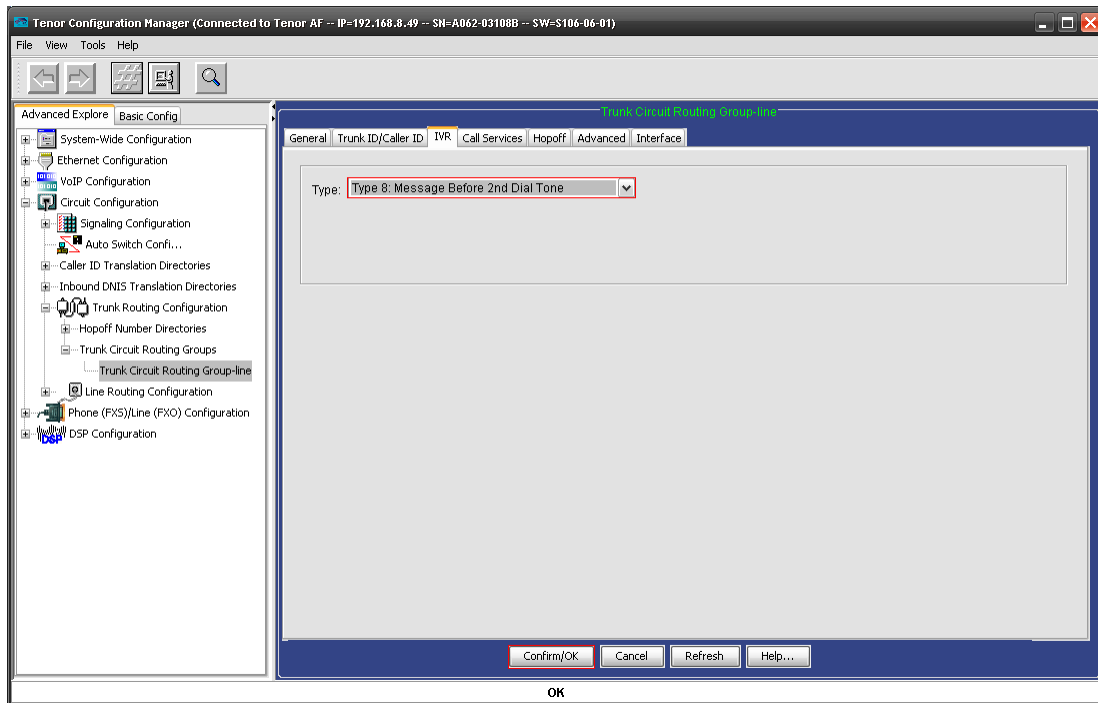
16. From the main menu bar, select **File > Submit Changes** to submit the changes to the Tenor SSG.

Recording an IVR Prompt

To use the Quintum Interactive Voice Response (IVR), you must record a prompt and upload via FTP to the gateway.

To record a custom prompt

1. Click **Windows Start**.

2. Navigate to **All Programs > Accessories > Entertainment**.

3. Click **Sound Recorder**.

4. Press the **record** button.

5. When finished, press the **stop** button.

6. Click **File > Save As**.

7. In the file name box, enter **dtprompt.wav**.

8. Beside Format click **Change**.

9. Under format choose **CCITT u-Law**.

10. Under Attributes choose **8.000 kHz, 8 Bit, Mono**.

11. Click **OK** in the sound selection dialog.

12. Click **Save**.

13. Using an FTP program, upload this file to **/ivr/English** on the gateway.

14. Reboot the gateway.

Configuring the Phones

To configure the phones to use the SSG gateway, the outbound proxy must be set in the configuration file or manually configured on the phone's web interface. Depending on the architecture of the survivability solution, you may need to modify either the per-phone config file or the all phone config file.

Aastra SIP Telephones

1. Navigate to **C:\Program Files\ADTRAN\NetVanta UC Server\Data\System\PhoneTypes\Aastra**.

2. In Notepad, open **template.cfg**.

3. Find **sip outbound proxy:** and enter the IP address of the gateway after the colon.

   For example: sip outbound proxy: 192.168.8.49

4. Save and close the file.

5. Restart the NetVanta UC Server Application Service.

   a. **Start > Control Panel > Administrative Tools > Services**.

   b. Scroll down and select **NetVanta UC Server Application Services**.

   c. Right-click the entry and select **Restart**.

6. Restart the phones either manually or from the UC client.

Cisco SIP Telephones

Cisco 7940, 7960 SIP Telephones

1. Navigate to **C:\Program Files\ADTRAN\NetVanta UC Server\Data\System\PhoneTypes\Cisco (7940, 7960)**.

2. In Notepad, open **SIPDefault.cnf**.

3. Find **outbound_proxy: ""** and enter the IP address of the gateway between the quotes.

   For example: outbound_proxy: "192.168.8.49"

4. Save and close the file.

5. Restart the NetVanta UC Server Application Service.

    a. **Start > Control Panel > Administrative Tools > Services**.

    b. Scroll down and select **NetVanta UC Server Application Services**.

    c. Right-click the entry and select **Restart**.

6. Restart the phones either manually or from the UC client.

Cisco 7912 SIP Telephones

1. Find the IP address of the phone:

    a. Press the **Menu** button.

    b. Choose **Settings > Network Configuration**.

    c. Scroll to **IP Address**

2. Enter this IP address in your web browser.

3. In the pane on the left under Change Configuration, click **SIP Parameters**.

4. In the OutBoundProxy field, enter the IP address of the gateway.

5. Click **Apply**.

6. Restart the phones either manually or from the UC client.

Linksys SIP Telephones

1. Navigate to **C:\Program Files\ADTRAN\NetVanta UC Server\Data\System\PhoneTypes\Linksys**.

2. In Notepad, open **spa-template.cfg**.

3. Find **<Use_Outbound_Proxy_1_ ua="na">No</Use_Outbound_Proxy_1_>.** Change **No** to **Yes**.

4. Find <**Outbound_Proxy_1_ ua="na"></Outbound_Proxy_1_>**. Between >< enter the IP address of the gateway.

    For example: <Outbound_Proxy_1_ ua="na">192.168.8.49</Outbound_Proxy_1_>.

5. Save and close the file.

6. Restart the NetVanta UC Server Application Service.

    a. **Start > Control Panel > Administrative Tools > Services**.

    b. Scroll down and select **NetVanta UC Server Application Services**.

    c. Right-click the entry and select **Restart**.

7. Restart the phones either manually or from the UC Client.

snom SIP Telephones

1. Navigate to **C:\Program Files\ADTRAN\NetVanta UC Server\Data\System\PhoneTypes\snom3x0**.

2. In Notepad, open **template.htm**.

3. Find **user_outboundX:** (for each line). After the colon, enter the IP address of the gateway and the port.

   For example: user_outbound1: 192.168.8.49:5060

4. Save and close the file.

5. Restart the NetVanta UC Server Application Service.

   a. **Start > Control Panel > Administrative Tools > Services**.

   b. Scroll down and select **NetVanta UC Server Application Services**.

   c. Right-click the entry and select **Restart**.

6. Restart the phones either manually or from the UC client.

Polycom SIP Telephones

1. Navigate to **C:\Program Files\ADTRAN\NetVanta UC Server\Data\System\PhoneTypes\Polycom**.

2. In Notepad, open **allphones.cfg** for all models except the 320/320. For the 320/330, open **allphones-320_330.cfg**.

3. Find **outboundProxy voIpProt.SIP.outboundProxy.address=""** and enter the IP address of the gateway between the quotes.

   For example: outboundProxy voIpProt.SIP.outboundProxy.address="192.168.8.49"

4. Save and close the file.

5. Restart the NetVanta UC Server Application Service.

   a. **Start > Control Panel > Administrative Tools > Services**.

   b. Scroll down and select **NetVanta UC Server Application Services**.

   c. Right-click the entry and select **Restart**.

6. Restart the phones either manually or from the UC client.

Grandstream SIP Telephones

1. Navigate to **C:\Program Files\ADTRAN\NetVanta UC Server\Data\System\PhoneTypes\Grandstream**.

2. In Notepad, open the template file for the model you are modifying.

   For Example: Open the cfg_template_bt for the BudgeTone series.

3. Find **P48 =** and enter the IP address of the gateway.

   For example: P48 = 192.168.8.49

4. Save and close the file.

5. Restart the NetVanta UC Server Application Service.

   a. **Start > Control Panel > Administrative Tools > Services**.

   b. Scroll down and select **NetVanta UC Server Application Services**.

   c. Right-click the entry and select **Restart**.

6. Restart the phones either manually or from the UC client.

CounterPath X-Lite and eyeBeam Softphones

1. Open the softphone.

2. Right-click anywhere on the softphone and choose **SIP Account Settings**.

3. Double-click the account. A new dialog will pop up.

4. Under **send outbound via** choose **proxy** and enter the address of the gateway.

5. Click OK and then click close.