Avaya Solution & Interoperability Test Lab

Application Notes for Configuring OpenText RightFax with Avaya Communication Server 1000 and Avaya Aura® Session Manager via SIP Trunk Interface - Issue 1.0

Abstract

These Application Notes describe the procedures for configuring the OpenText RightFax with Avaya Communication Server 1000 and Avaya Aura® Session Manager using a SIP trunk interface.

OpenText RightFax is a software based fax server that sends and receives fax calls over an IP network. In the tested configuration, OpenText RightFax interoperated with Avaya Aura® Session Manager to send/receive faxes using SIP trunk facilities.

Information in these Application Notes has been obtained through DevConnect compliance testing and additional technical discussions. Testing was conducted via the DevConnect Program at the Avaya Solution and Interoperability Test Lab.

Introduction

These Application Notes describe the procedures for configuring OpenText RightFax with Avaya Communication Server 1000 (Communication Server 1000) and Avaya Aura® Session Manager (Session Manager) using SIP trunks.

OpenText RightFax is a software based fax server that sends and receives fax calls over an IP network. OpenText RightFax utilizes the Brooktrout SR140 T.38 Fax over Internet Protocol (FoIP) virtual fax board software from Dialogic. In the tested configuration, OpenText RightFax interoperated with Avaya Aura® Session Manager to send/receive faxes using a SIP trunk interface.

General Test Approach and Test Results

This section describes the compliance test approach used to verify interoperability of OpenText RightFax with Session Manager.

DevConnect Compliance Testing is conducted jointly by Avaya and DevConnect members. The jointly-defined test plan focuses on exercising APIs and/or standards-based interfaces pertinent to the interoperability of the tested products and their functionalities. DevConnect Compliance Testing is not intended to substitute full product performance or feature testing performed by DevConnect members, nor is it to be construed as an endorsement by Avaya of the suitability or completeness of a DevConnect member's solution.

1.1. Interoperability Compliance Testing

The compliance test tested interoperability between RightFax and Session Manager by making intra-site fax calls between a RightFax server and an analog fax machine that was connected to a Communication Server 1000 via Session Manager using SIP trunks. For inter-site fax, calls were made between a RightFax server and an analog fax machine that was connected on a remote site. The remote site connection used ISDN trunks. Specifically, the following fax operations were tested in the setup for the compliance test:

- Fax from/to RightFax to/from fax machine at a local site
- Fax from/to RightFax to/from fax machine at a remote site

Faxes were sent with various page lengths and resolutions. Serviceability testing included verifying proper operation/recovery from failed cables, unavailable resources and restarts of RightFax server.

1.2. Test Results

OpenText RightFax successfully passed all compliance testing with the following observation,

- Not all services of RightFax start automatically after a reboot of the fax server. Some services need to be manually restarted. Also if the fax server reboots in the midst of a fax transmission, the status of the fax does not change after the reboot. Open Text indicates this is abnormal behavior, not attributable to telephony components of the product. Customers experiencing similar problems should contact OpenText Technical Support for further assistance.

Note: The SIP trunks on Communication Server 1000 for connecting to Session Manager at Site 1, as well as the ISDN-PRI trunks for connecting the two sites must be configured with adequate number of trunk members to support the number of simultaneous fax calls intended. On RightFax, an adequate number of fax channels must also be appropriately configured for the intended capacity.

1.3. Support

North American Technical support for RightFax can be obtained by contacting Open Text at

- Phone: (800) 540-7292
- Email: support@opentext.com

For other locations go to http://www.opentext.com/2/global/company/company-contact.html

Reference Configuration

The test configuration was designed to emulate a local site and a remote site. **Figure 1** illustrates the configuration used in these Application Notes.

In the sample configuration, Communication Server 1000, Avaya Aura® Session Manager, RightFax server and an analog fax machine belong to Site 1 (local site). The RightFax server communicates to the Communication Server 1000 via the Avaya Aura® Session Manager using SIP trunks. An analog fax port is configured on the Communication Server 1000 to which a fax machine is connected. The equipment involved in Site 2 is beyond the scope of this document and is shown here for reference only. Site 2 (remote) can consist of any PBX with an analog fax machine configured. During compliance testing in the lab, Site 2 consisted of an Avaya G650 Media Gateway and an analog fax machine. Site 1 and Site 2 communicate via ISDN-PRI trunks that are configured between the Communication Server 1000 and Avaya G650 Media Gateway.

Since Site 2 is an emulated PSTN setup, the configuration details of setting the ISDN-PRI trunks between Site 1 and Site 2 are beyond the scope of this document. However, note that clock slips on the ISDN-PRI link will lead to failure of fax transmission. Therefore ensure that the ISDN-PRI link is configured correctly on both the Communication Server 1000 and Avaya G650 Media Gateway so that their respective clocks are in synchronized state.

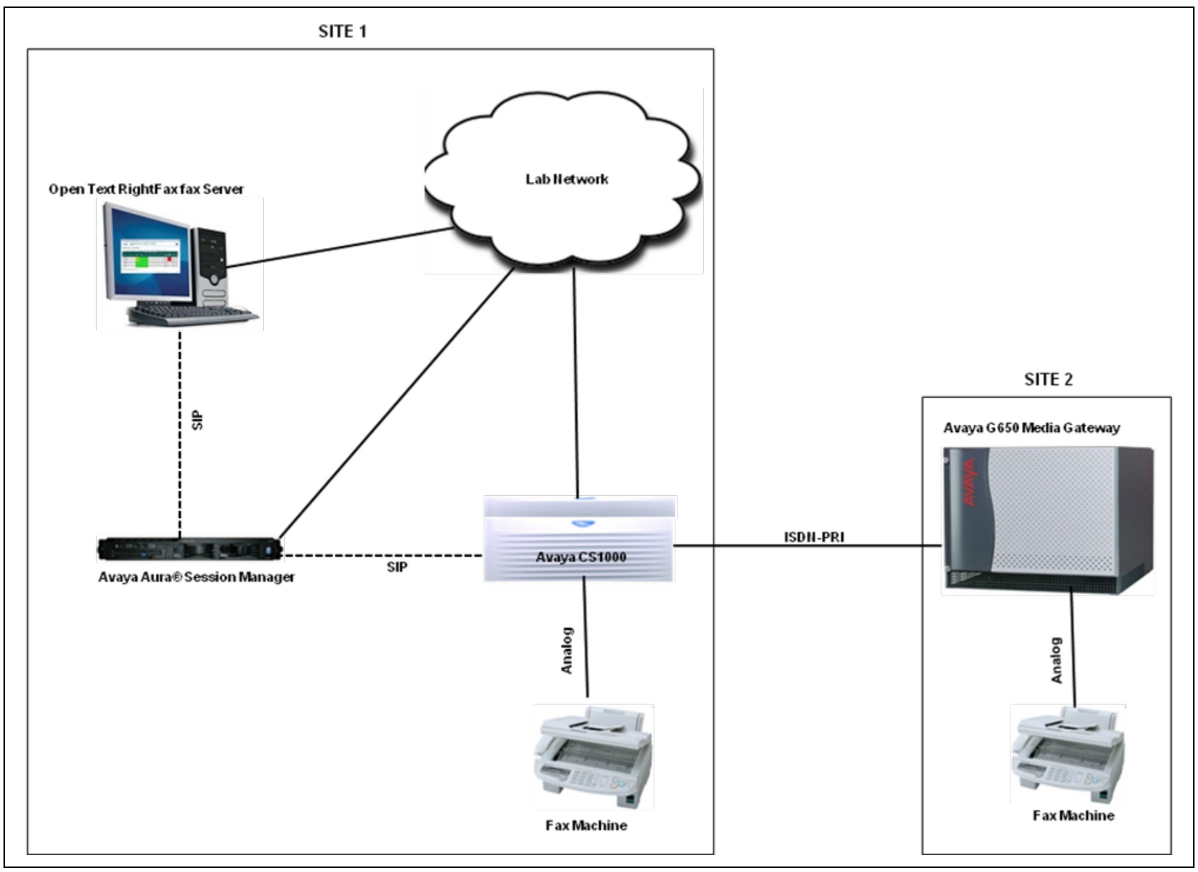


Figure 1: RightFax interoperating with Avaya Aura® Session Manager via SIP Trunk for Local Site and ISDN-PRI for Remote Site

Equipment and Software Validated

The following equipment and software/firmware were used for the sample configuration provided:

Equipment	Release/Version
Avaya Communication Server 1000	7.50
Avaya Aura® Session Manager	6.2
Avaya Aura® System Manager	6.2
OpenText RightFax on Windows 2008R2 Enterprise SP1	10.5.0.895 (RightFax 10.5 Release version) with Dialogic Brooktrout SR140 SDK 6.5.2
Analog Fax Machine	N/A

Configure Avaya Communication Server 1000

This section describes the Communication Server 1000 configuration necessary to interoperate with Session Manager and OpenText RightFax. It provides the procedures for configuring Avaya Communication Server 1000 system. The procedures include the following areas:

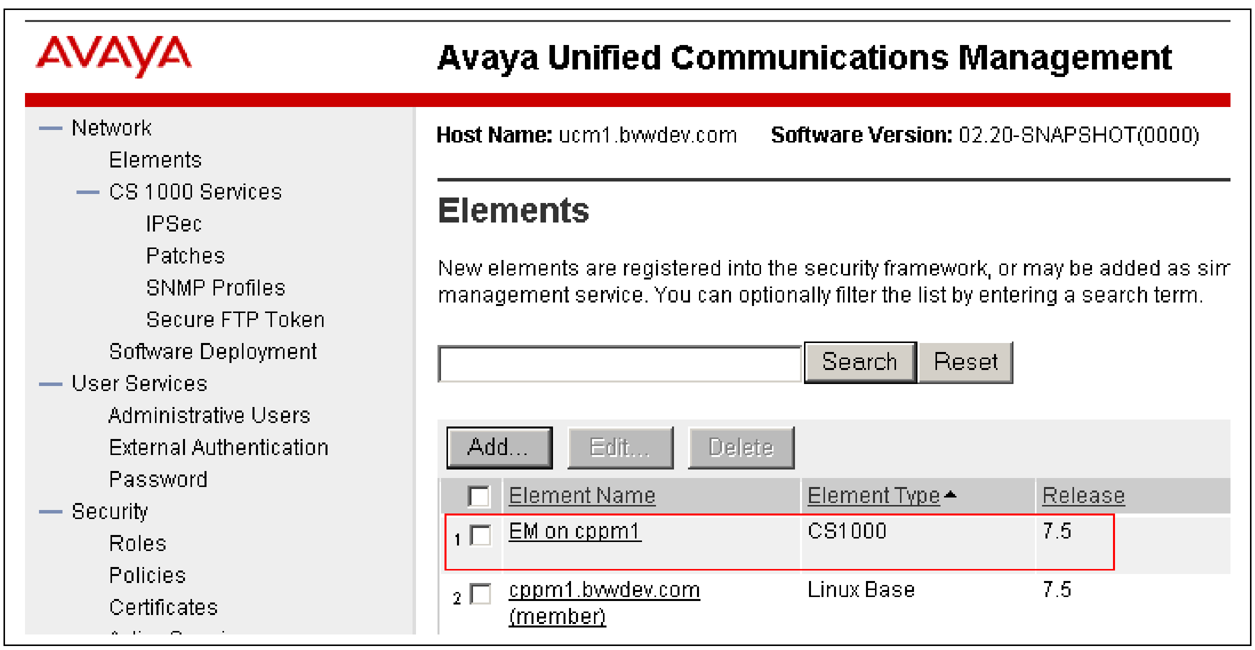
- Logging into the Element Manager via Unified Communications Manager.
- Configuring the SIP Signaling Gateway.
- Configuring a D-Channel.
- Configuring Route and Trunks.
- Configuring Digit Manipulation Block.
- Configuring Route List Block.
- Configuring Distant Steering Code.

For detail configuration details of the Communication Server 1000 refer to **Section 10**.

1.4. Logging into Element Manager via Unified Communication Manager

To login to the Unified Communications Manager (UCM) open an IE browser and type in the IP address of the UCM in the URL (not shown). Screen below shows the login screen of the UCM. Enter the **User ID** and **Password** credentials and click on **Log In** to continue.

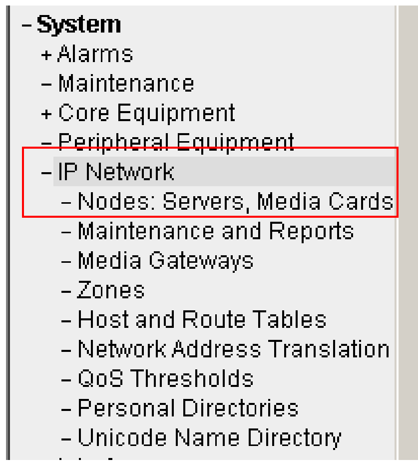
From the UCM main screen as shown in screen below, click on the Element **EM on cppm1**. This is the element which is configured to access the Element Manager (EM) for the Communication Server 1000 Call Server.



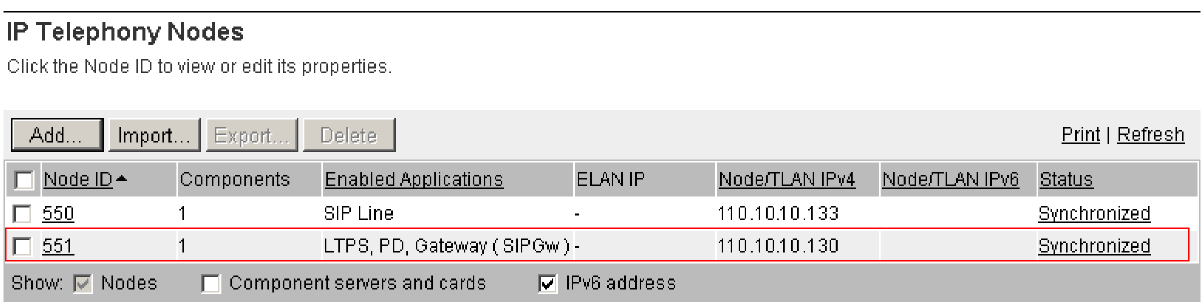
1.5. Configuring the SIP Signaling Gateway

This section describes the configuration required on the SIP Signaling Gateway present on the Communication Server 1000 so that Communication Server 1000 can communicate with the Avaya Aura® Session Manager via SIP Trunks. Assumption is made here that the IP Telephony node is already added.

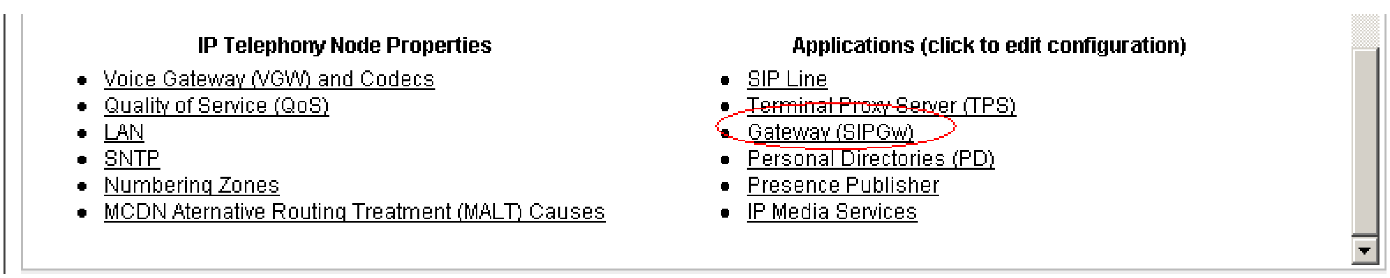
To access the Node in the EM left navigator screen, navigate to **IP Network → Nodes: Servers, Media Cards** as shown below.



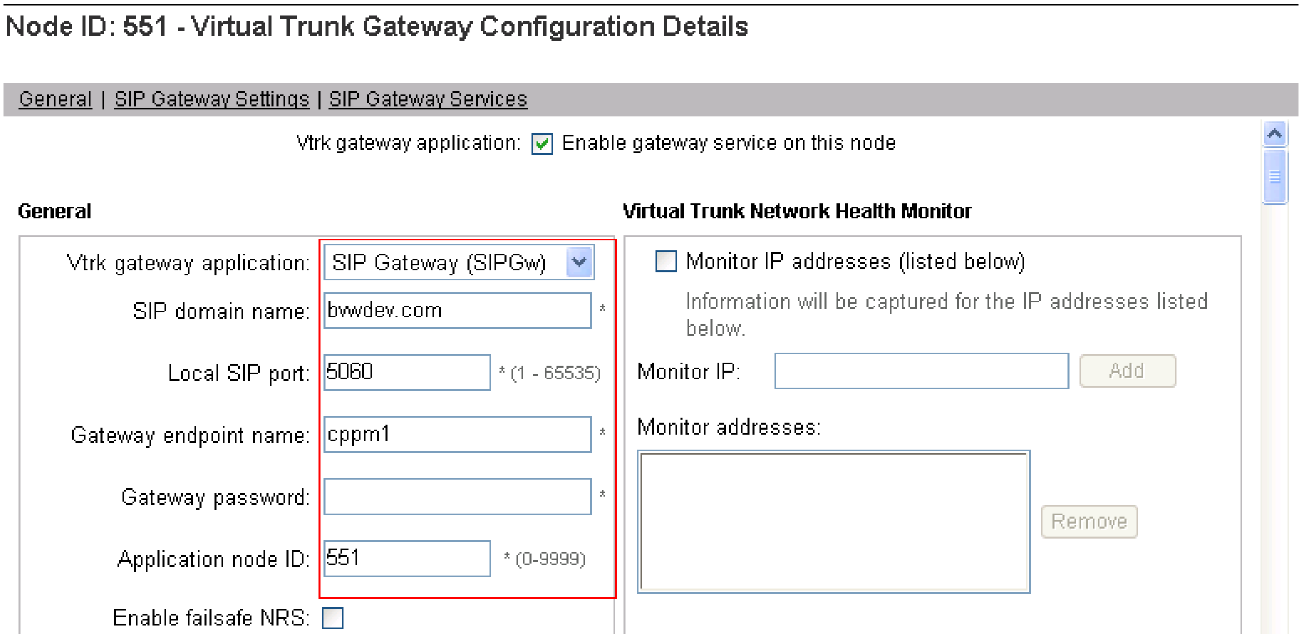
During compliance testing Node **551** was already created. Click on this Node as shown in screen below.



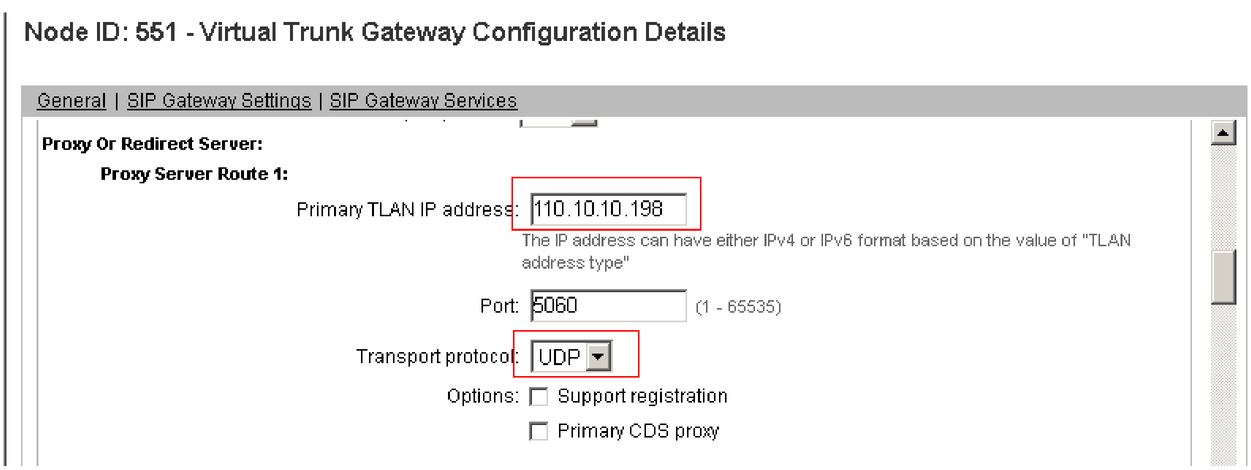
Open the SIP Signaling Gateway configuration by clicking on **Gateway (SIPGw)** as shown below.



In the **General** tab, select the values as shown in screen below. A **SIP domain name** of **bvwdev.com** was chosen since this is the domain name that will be configured on the Session Manager. Similarly **cppm1** was configured as **Gateway endpoint name**.



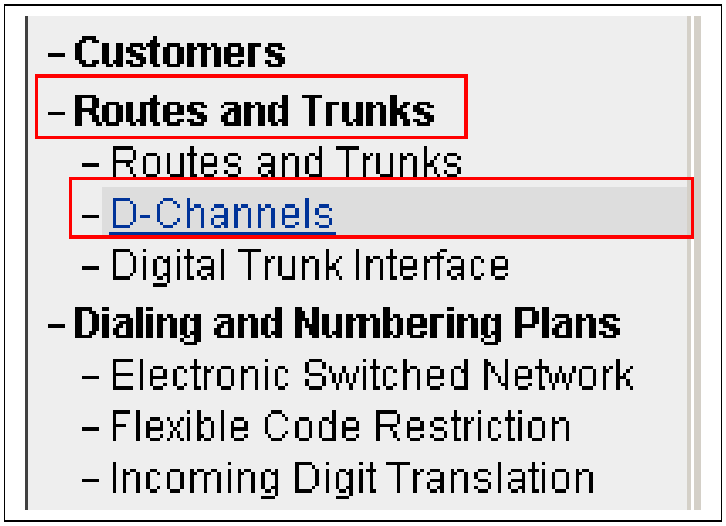
Under the **Proxy or Redirect Server** section enter the IP address of the Session Manager and select **UDP** as the Transport protocol as shown below. Leave the remaining values at default. During compliance testing **110.10.10.198** was the IP address of the Session Manager.



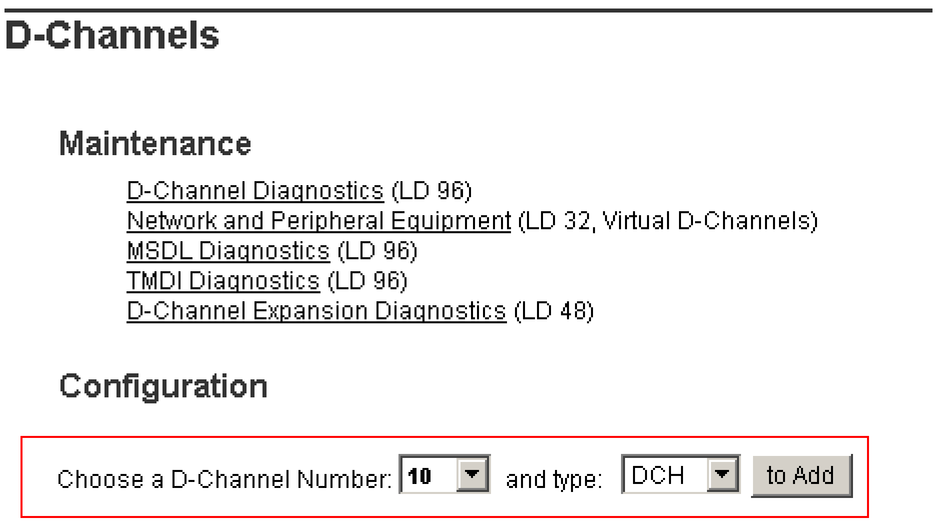
Save and transmit (not shown) these Node properties to complete the SIPGw configuration.

1.6. Configuring D-Channel

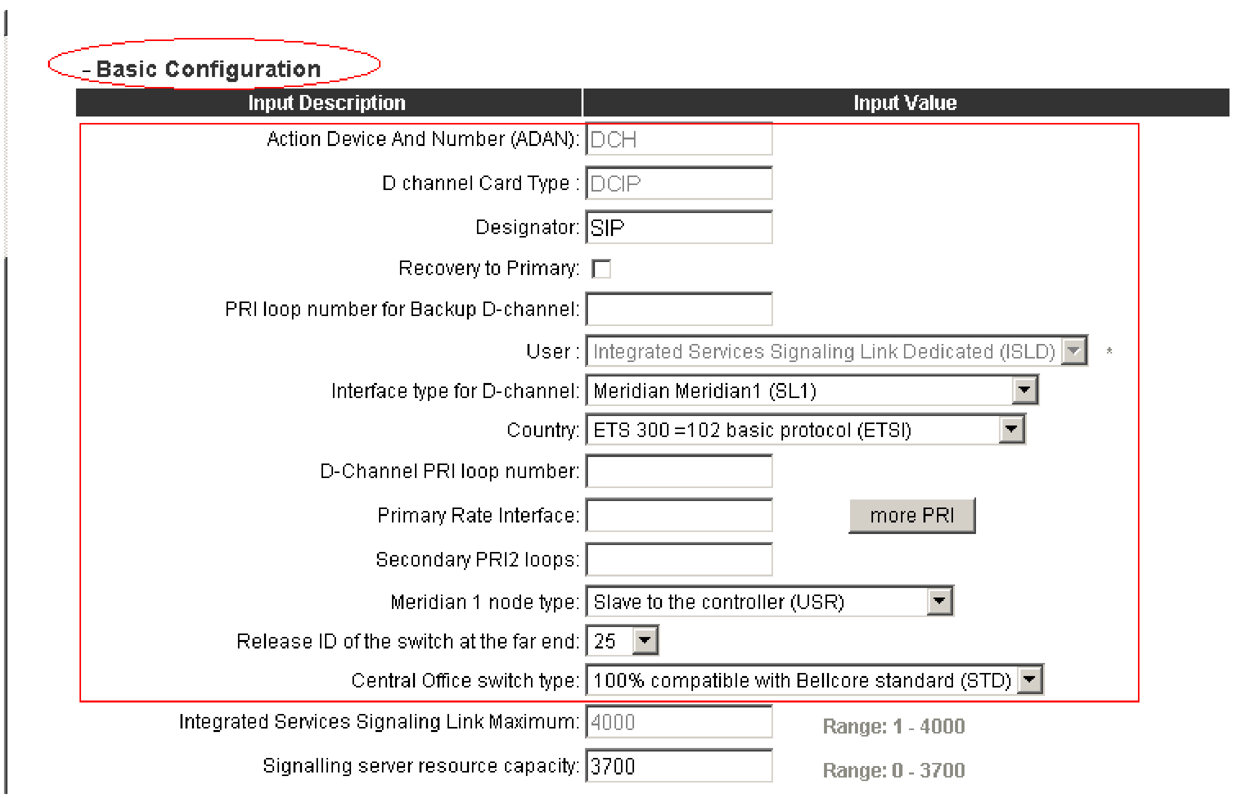
This section explains the configuration of a D-Channel for SIP Trunking. From the EM navigation screen, navigate to **Routes and Trunks → D-Channels** as shown below.



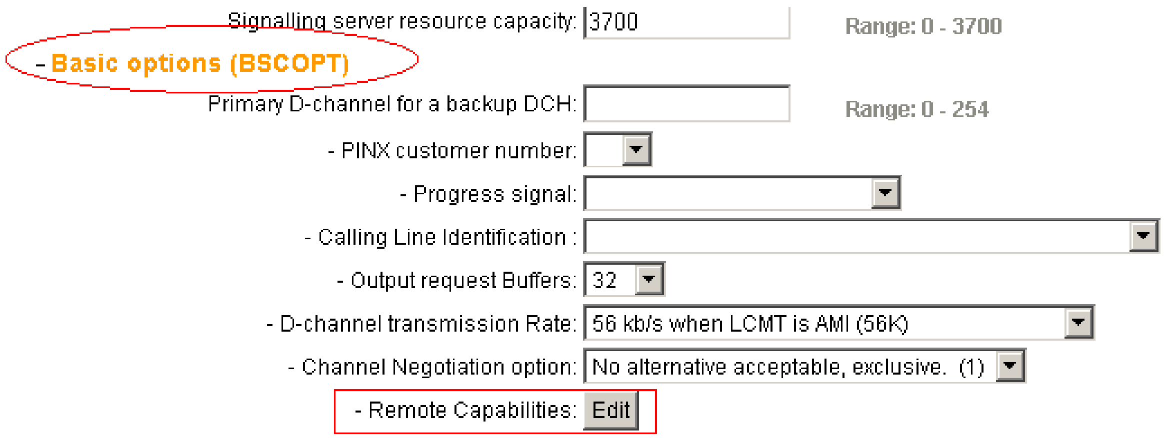
Choose a D-Channel number to add as shown below. During compliance testing D-Channel number **10** was selected. Click on **to Add** to continue.



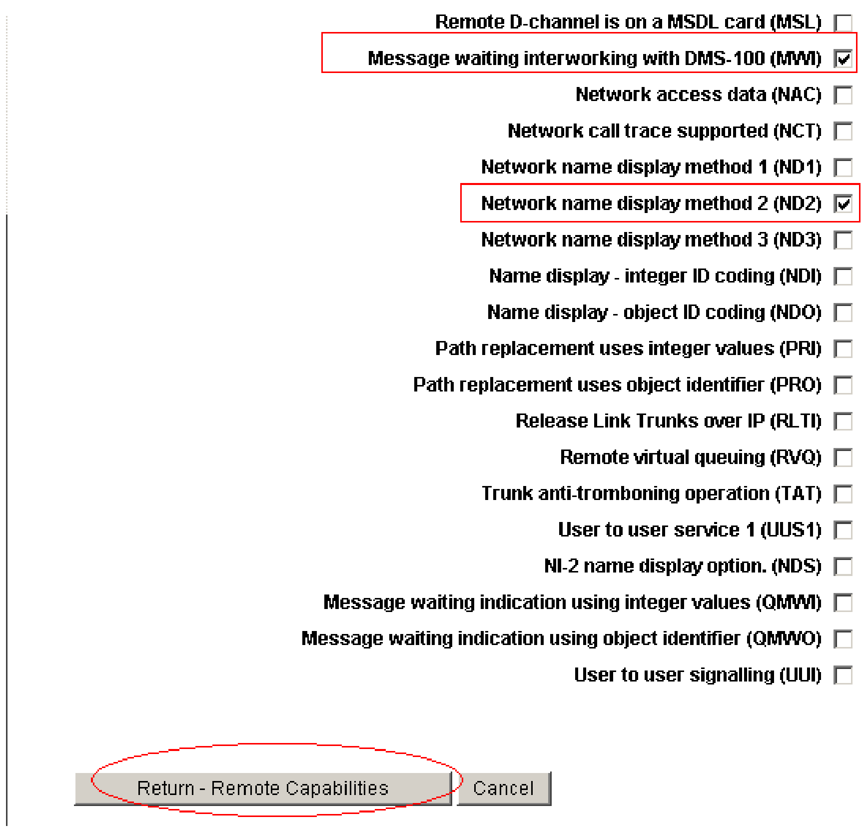
Configure the **Basic Configuration** values for the D-Channel as shown below.



To edit the **Remote Capabilities** of the D-Channel, click on **Edit** button as shown below.

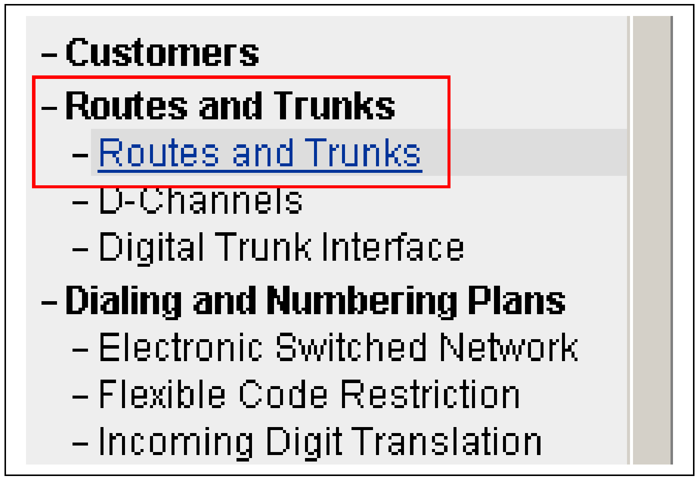


Select the boxes values for the Remote Capabilities as shown in screen below. Click on **Return - Remote Capabilities** button to return back to the main screen to complete the D-Channel configuration.

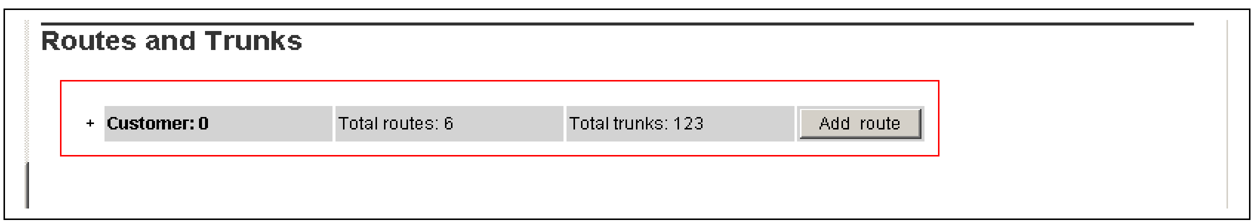


1.7. Configuring Route and Trunks

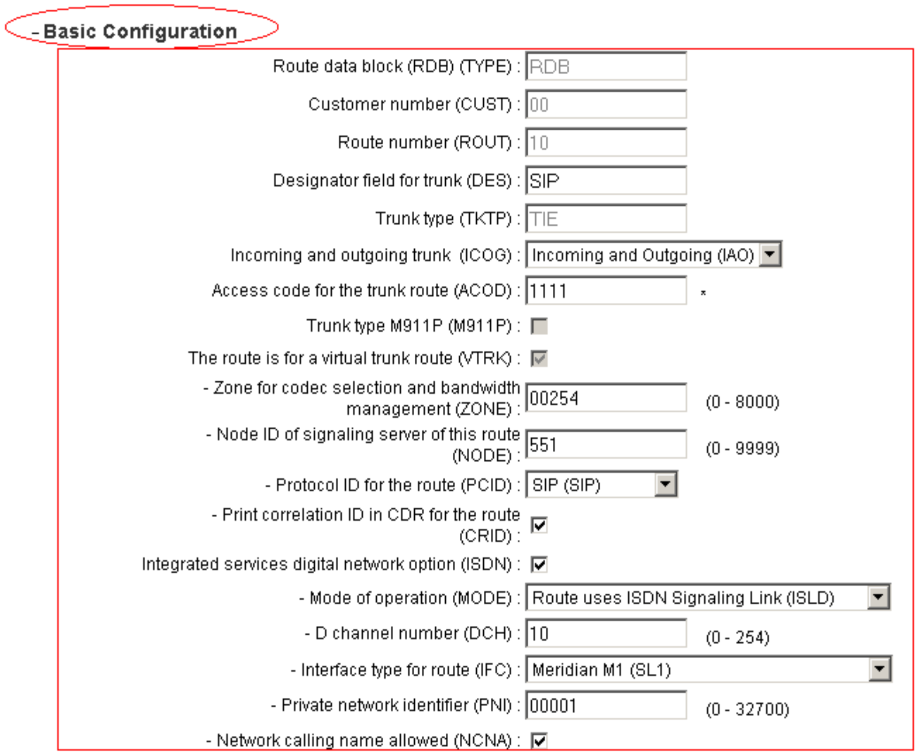
This section explains the configuration of the SIP route and trunks which will be used by Communication Server 1000 to communicate with the RightFax server. To add a new route, navigate to **Routes and Trunks → Routes and Trunks** from the EM left hand navigator window as shown in screen below.

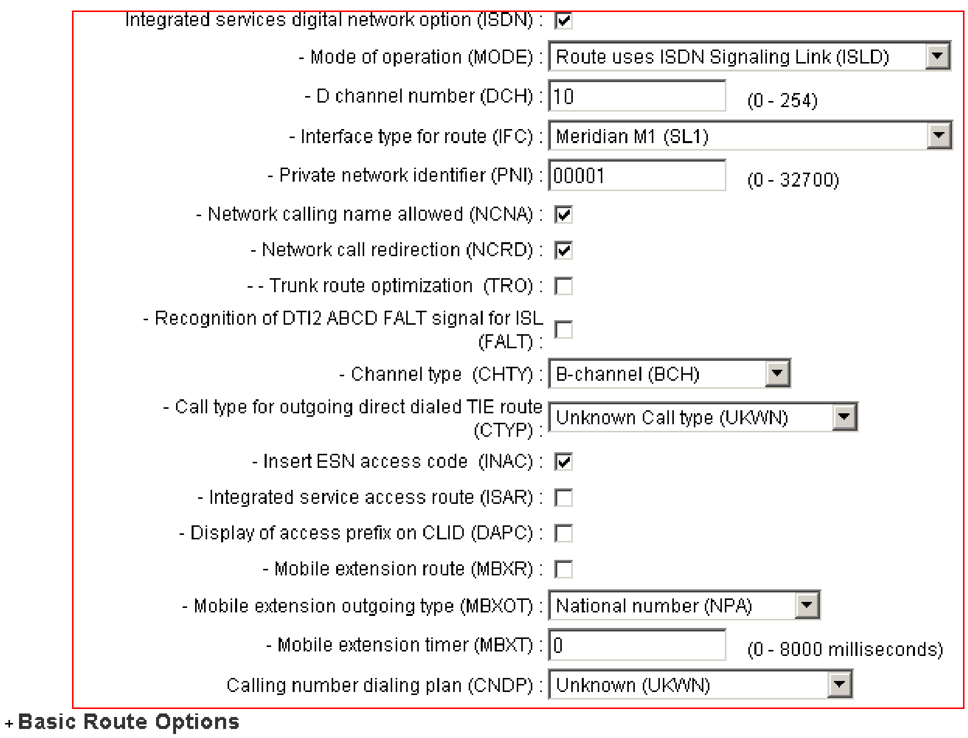


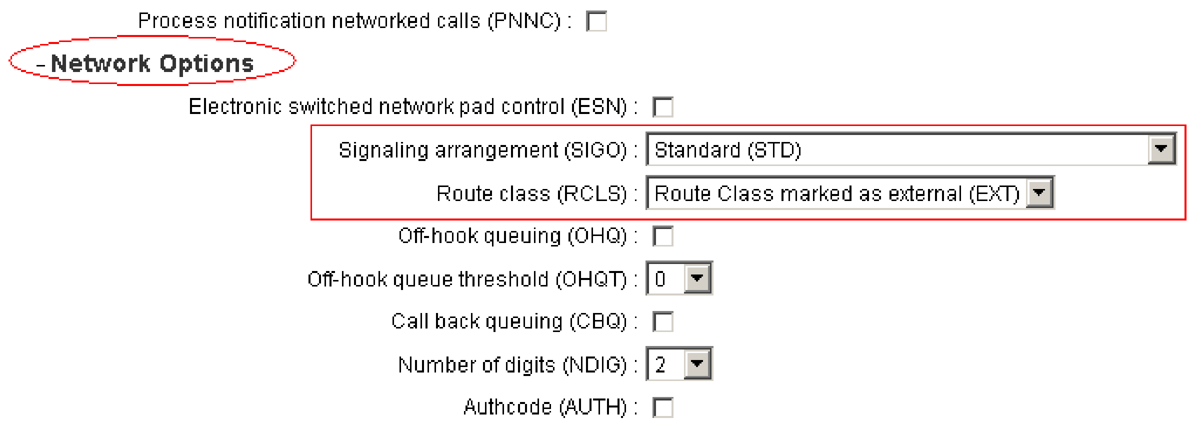
From the Routes and Trunks screen click on **Add route** button to start configuring a new route as shown in below.



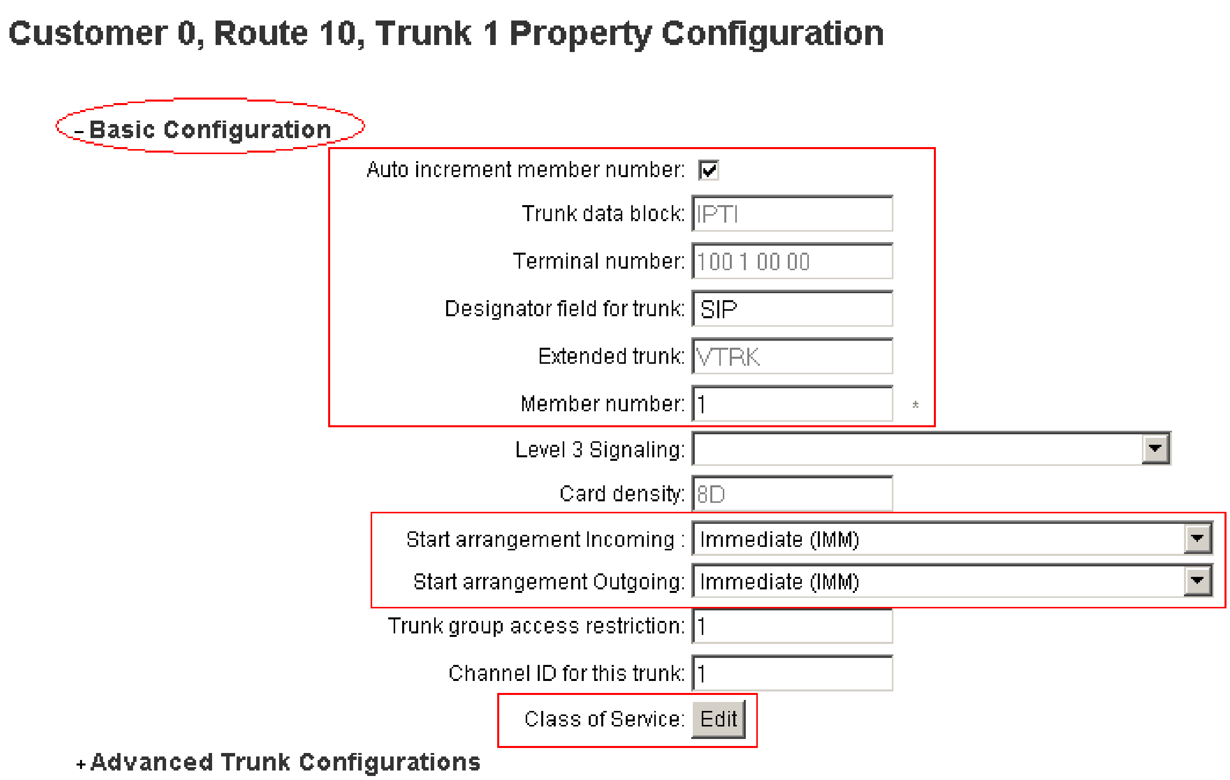
During compliance testing **Route number 10** was added. Select the values from the drop down menu and configure the values as shown in the next three screens below.



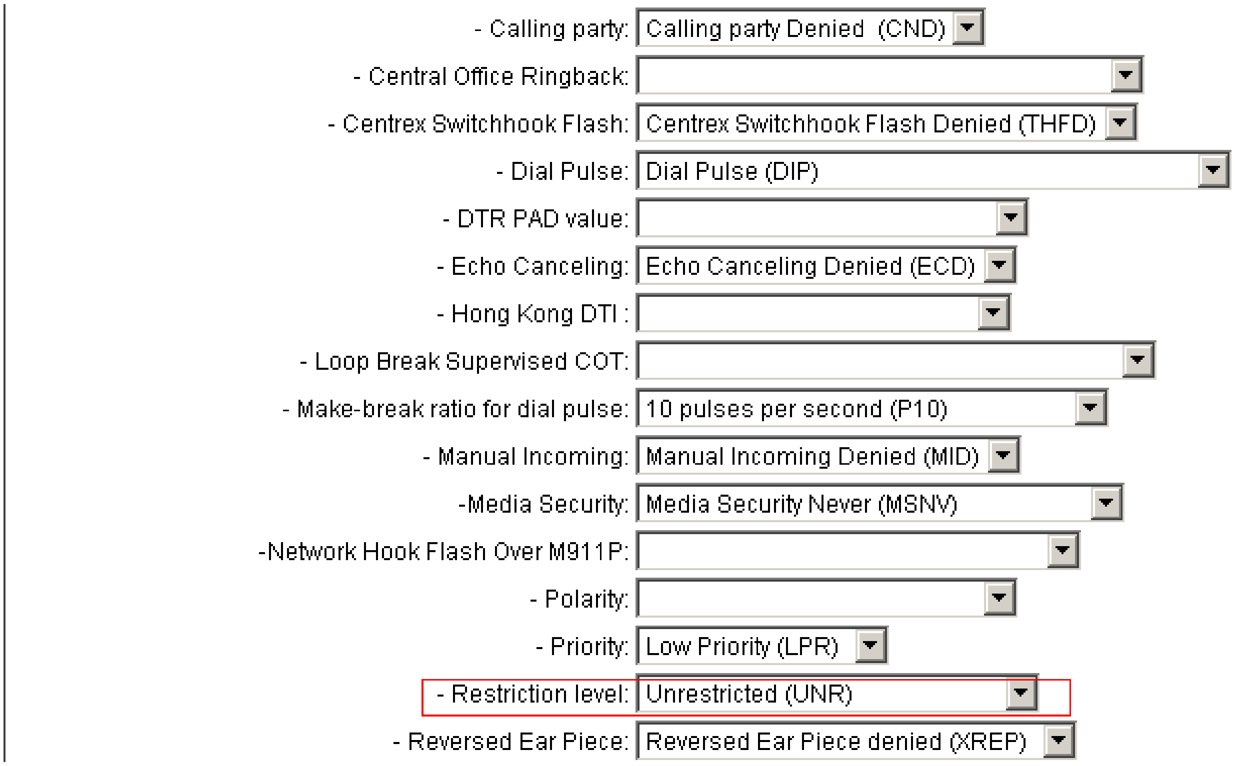




Configure the trunk values as shown in screen below. During compliance testing **Terminal number** used was **100 1 00 00** since it is a virtual trunk. Click on **Edit** button to configure the required **Class of Service** for the trunks.

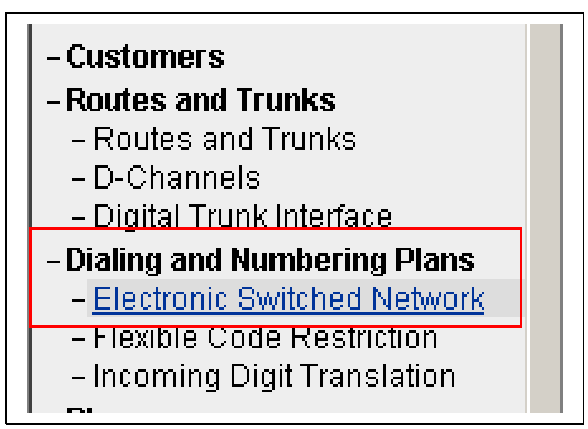


Screen below shows the **Class of Service** values selected for the compliance testing from the drop down menu. Ensure that the **Restriction level** drop down table is set to **Unrestricted (UNR)**. Rest of the values are left at default. Click on **Return Class of Service** button (not shown) to complete the trunks configuration.

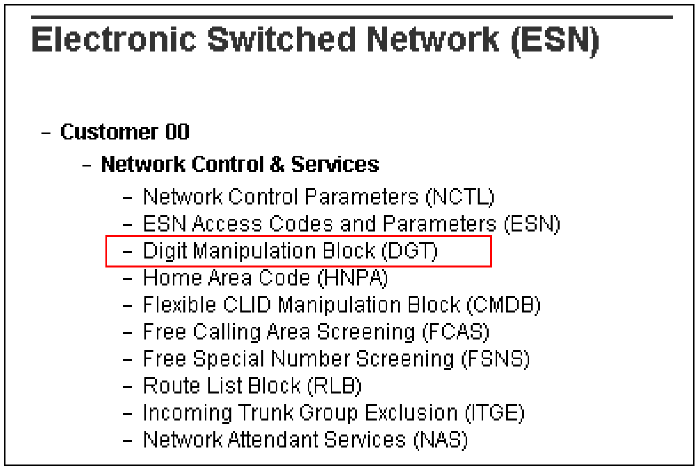


1.8. Configuring Digit Manipulation Block

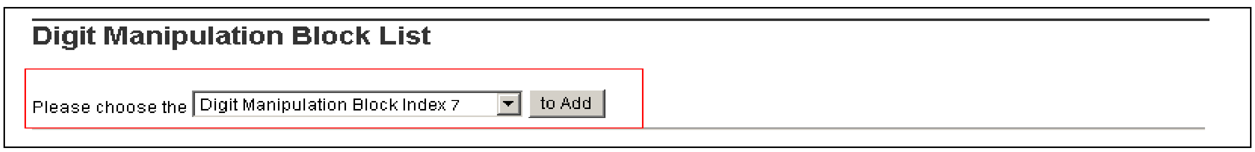
This section explains the digit manipulation block that is to be configured in the Communication Server 1000 dialing plan for its users to communicate with the RightFax server. From the EM navigator pane, navigate to **Dialing and Numbering Plans → Electronic Switched Network** as shown below.



Click on **Digit Manipulation Block (DGT)** option as shown below.

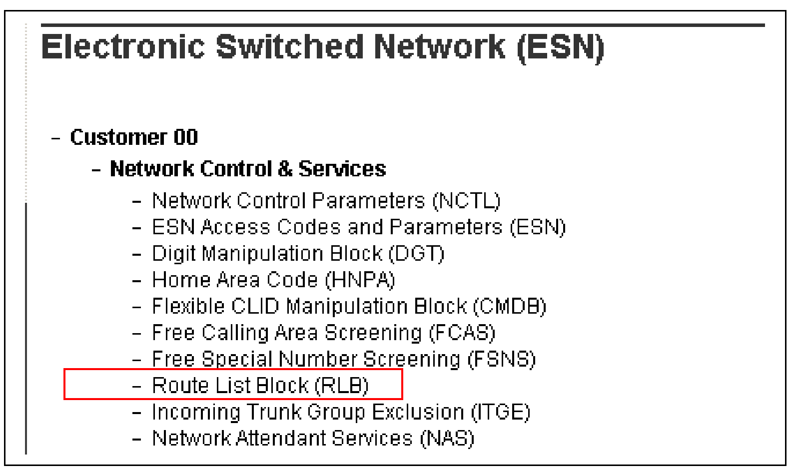


Screen below shows the Digit Manipulation Block Index users can add. However during compliance testing **Digit Manipulation Block Index** of **0** was used which is already added in the Communication Server 1000 system by default.

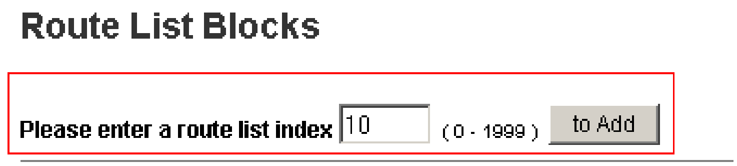


1.9. Configuring Route List Block

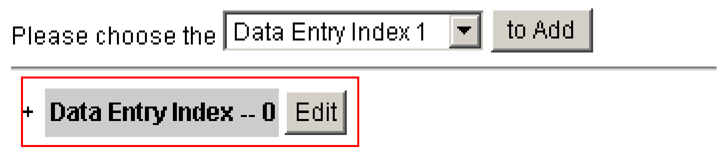
This section explains the route list block that is to be configured in the Communication Server 1000 dialing plan for its users to communicate with the RightFax server. From the EM navigator pane, navigate to **Dialing and Numbering Plans → Electronic Switched Network** as shown in the screen in the beginning of this section. Click on **Route List Block (RLB)** option as shown below.



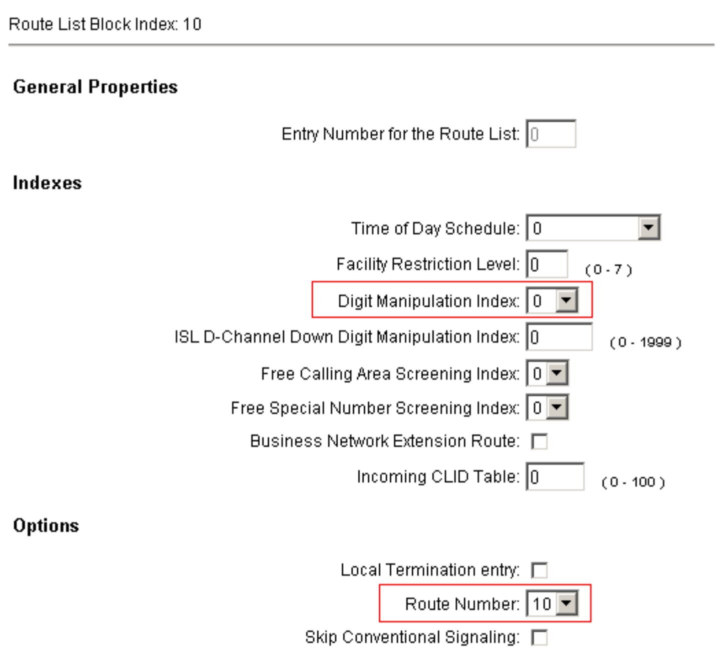
Start adding a **route list index** as shown below. During compliance testing list index **10** was added. Click on **to Add** to continue.



Click on **Edit** for **Data Entry Index 0** as shown below. This Data Entry Index value of 0 is already added in the Communication Server 1000 system by default.

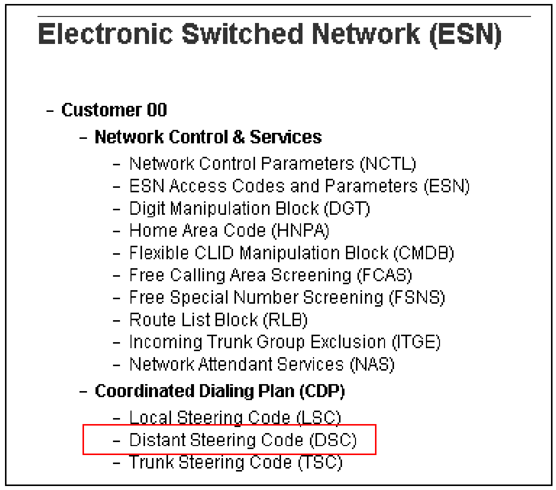


Screen below show the values configured for the index block used during compliance testing. **Route Number** of **10** and **Digit Manipulation Index** of **0** were selected as per the configuration explained in **Sections 5.4** and **5.5** respectively. Click **Submit** (not shown) to complete the configuration.



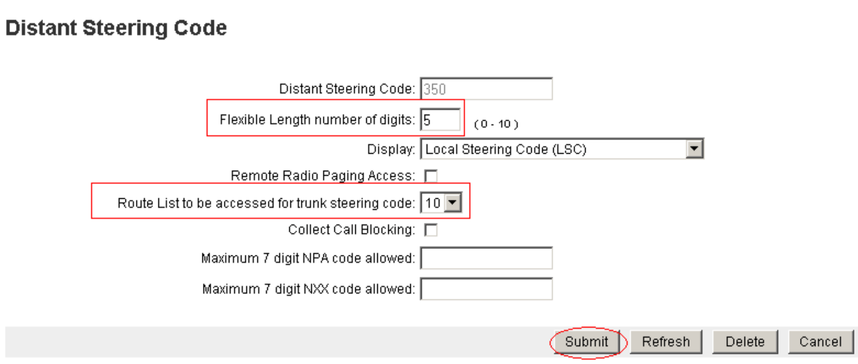
1.10. Configuring Distant Steering Code

This section explains the distant steering code that is to be configured in the Communication Server 1000 dialing plan for its users to communicate with the RightFax server. From the EM navigator pane, navigate to **Dialing and Numbering Plans → Electronic Switched Network** as shown in the screen in the beginning of this section. Click on **Distant Steering Code (DSC)** option as shown below.



From the drop down menu select **Add** and enter a distant steering code to add as shown in below. During compliance testing a code of **350** was added since the fax number assigned to the RightFax server was 35000. Click on **to Add** to continue.

Enter the values as shown in screen below. Note that **Route List to be accessed for trunk steering code** value selected is **10** based on the configuration explained in **Section 5.6** above. Click on **Submit** to complete the configuration.



Configure Avaya Aura® Session Manager

This section provides the procedures for configuring routing using Avaya Aura ® System Manager. The procedures include the following areas:

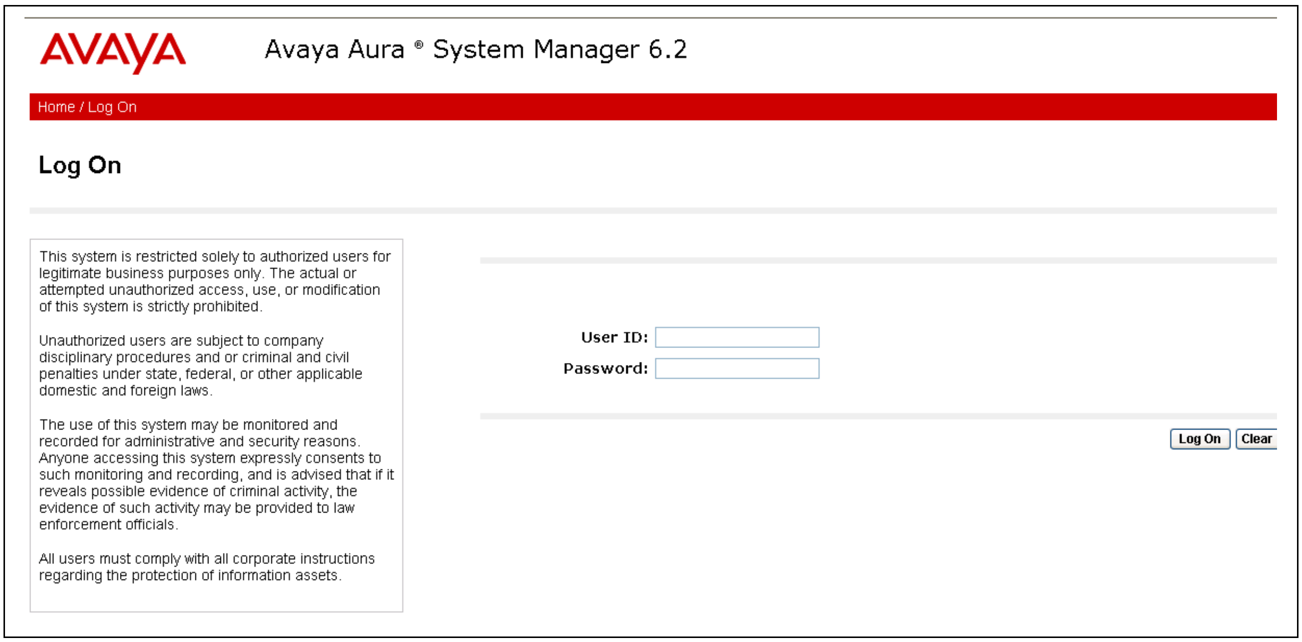
- Logging into the System Manager.
- Adding Domain.
- Adding Location.
- Adding SIP entities.
- Adding Entity Links.
- Adding Routing Policies.
- Adding Dial Patterns.

For detail configuration details of the Session Manager refer to **Section 10**

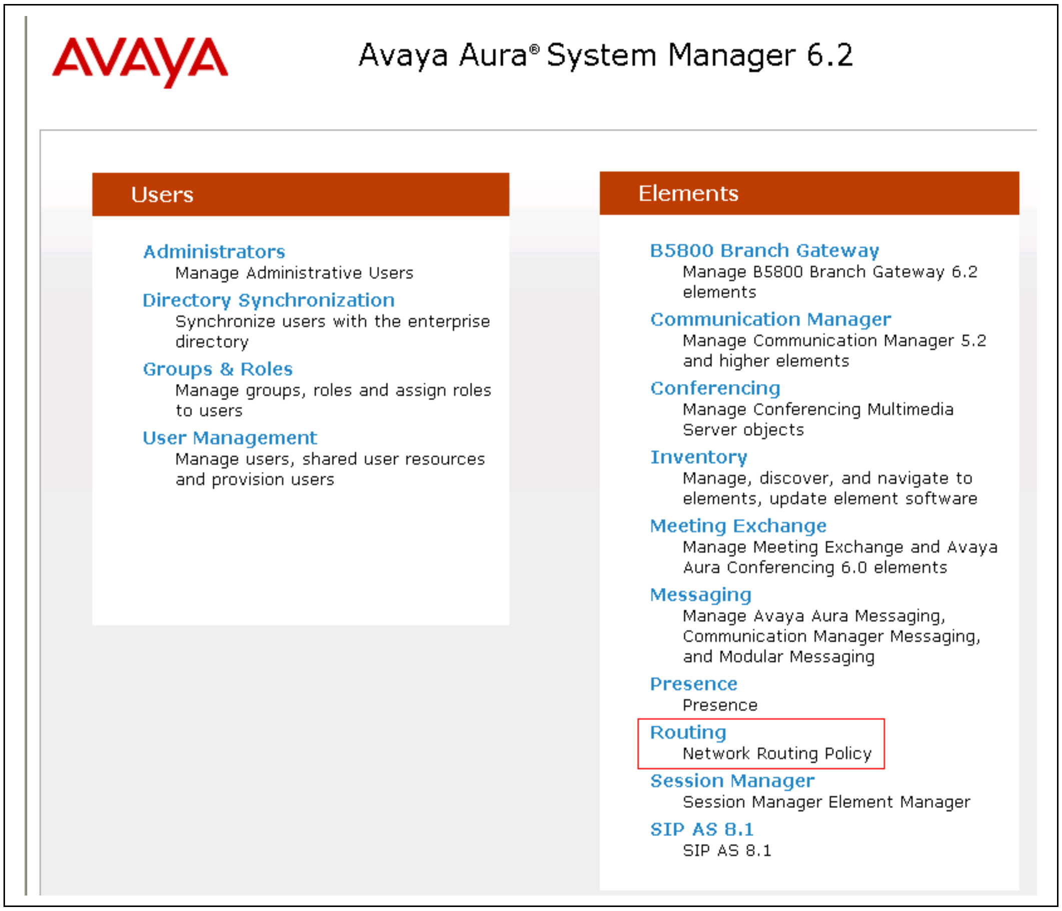
1.11. Logging into the Avaya Aura® System Manager

This section explains the steps to launch the login screen of the System Manager and accessing the Network Routing Policy.

To launch the System Manager Login screen, start an IE browser and type the IP address of the System Manager in the URL (not shown). Screen below shows the Log On Screen. Type the required **User ID** and **Password** credentials and click on **Log On** to continue.

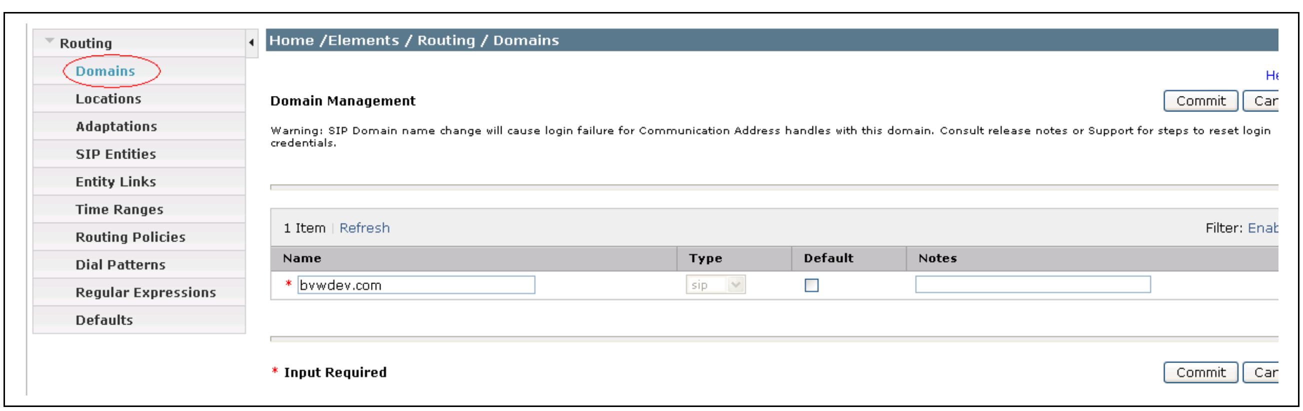


From the main screen of System Manager access the Network Routing Policy by selecting **Routing** as shown below.



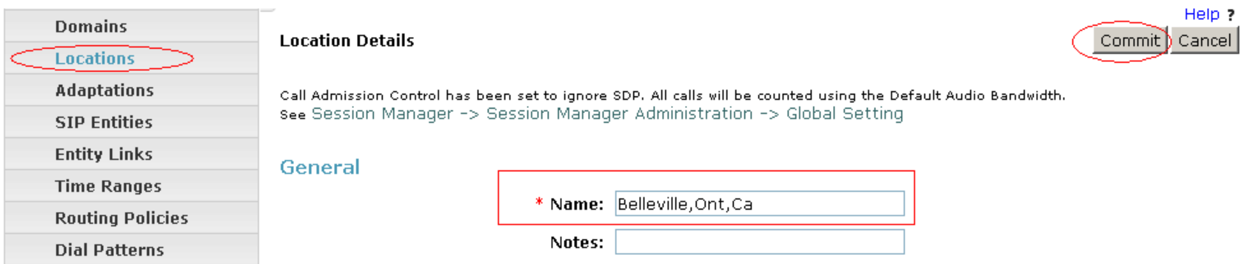
1.12. Adding Domain

To add a domain, select **Domains** from the left hand window of the Routing screen and click on **New** (not shown). Configure the **Name** as shown in screen below and click on **Commit** to complete adding a domain. During compliance testing a domain name of **bvwdev.com** was used. Additional domains can be added in a similar fashion.



1.13. Adding Location

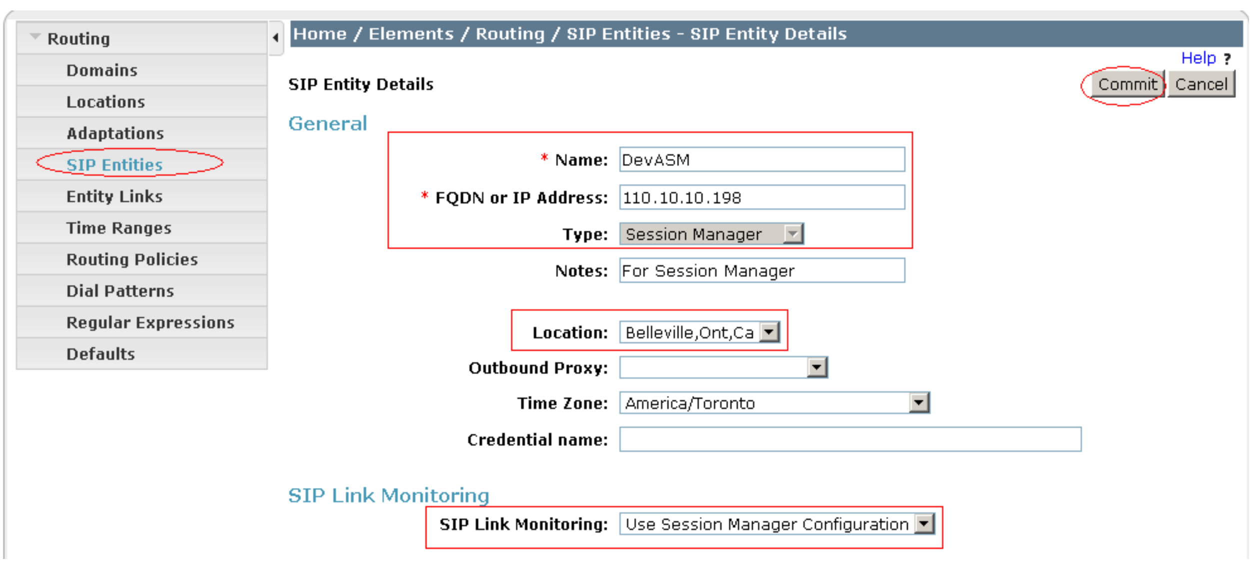
To add a location, select **Locations** from the left hand window of the Routing screen and click on **New** (not shown). Configure the **Name** as shown in screen below and click on **Commit** to add a Domain. During compliance testing a location name of **Belleville,Ont,Ca** was used. Click on **Commit** to complete adding a location. Additional locations can be added in a similar fashion.



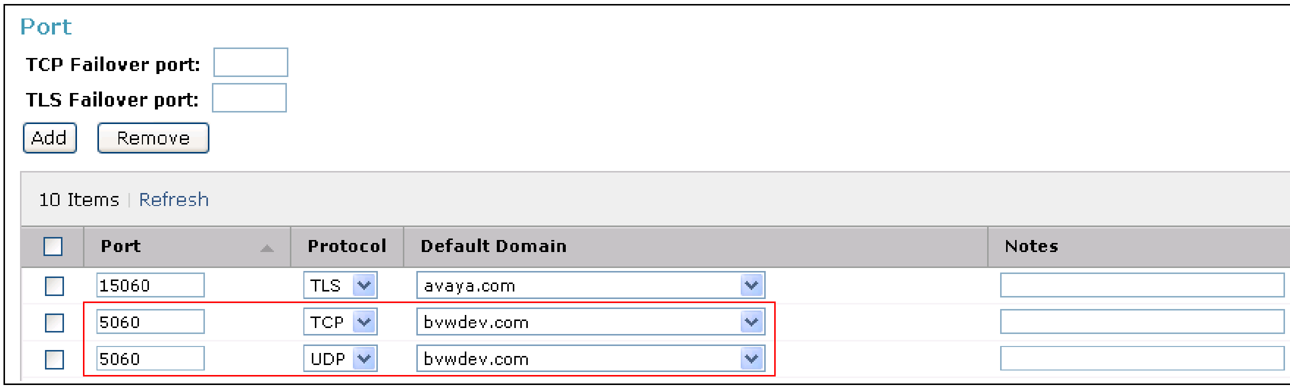
1.14. Adding SIP Entities

This section explains the adding of SIP entities for the Session Manager, RightFax server and the Communication Server 1000 system routing. To add SIP Entities, select **SIP Entities** from the left hand window of the Routing screen and click on **New** (not shown).

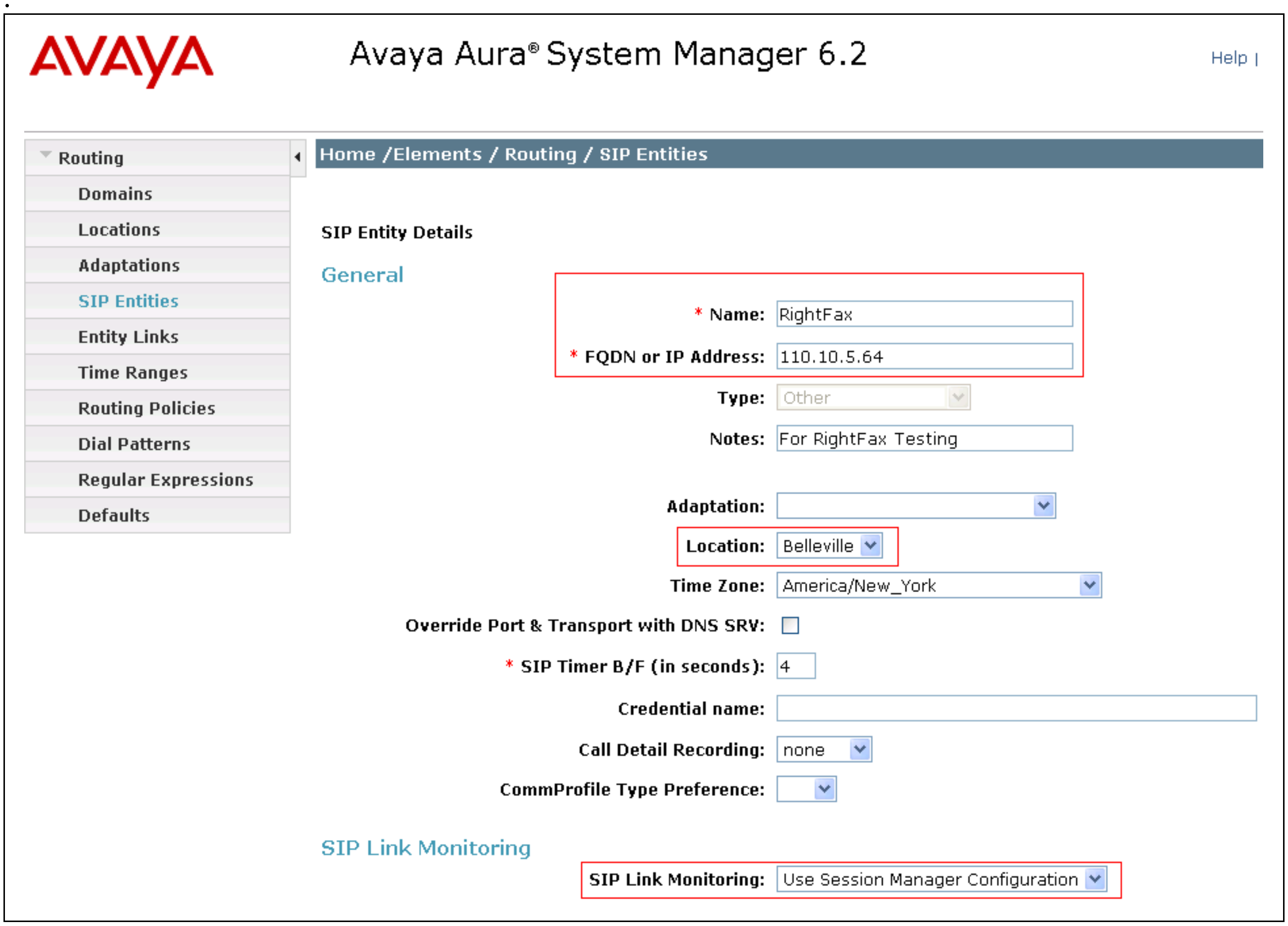
Next two screens show the SIP Entity Details for the Session Manager routing.
Enter a descriptive name for the **Name** field.
Populate the **FQDN or IP Address** field with **110.10.10.198** , which is the IP address of the Session Manager.
Select **Type** as **Session Manager**.
Select the location configured in **Section 6.3** in the **Location** field.
Select **Use Session Manager Configuration** option under the **SIP Link Monitoring** field.



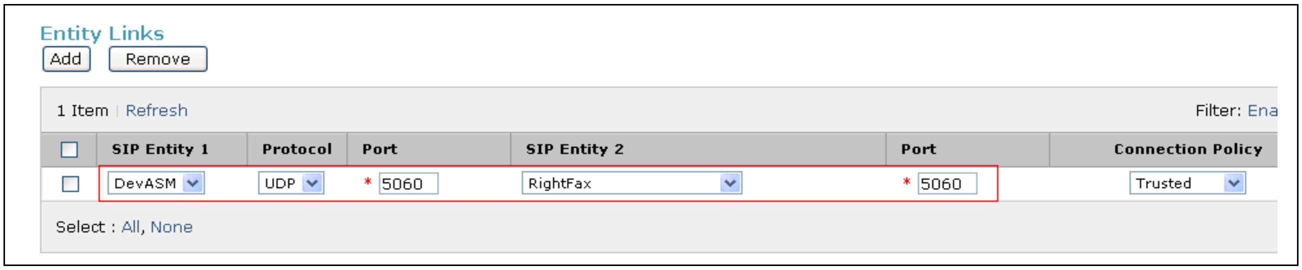
Under the Port section, add both TCP and UDP protocol along with the Port value and the Default Domain value.
Click on **Commit** to complete adding the SIP Entity.



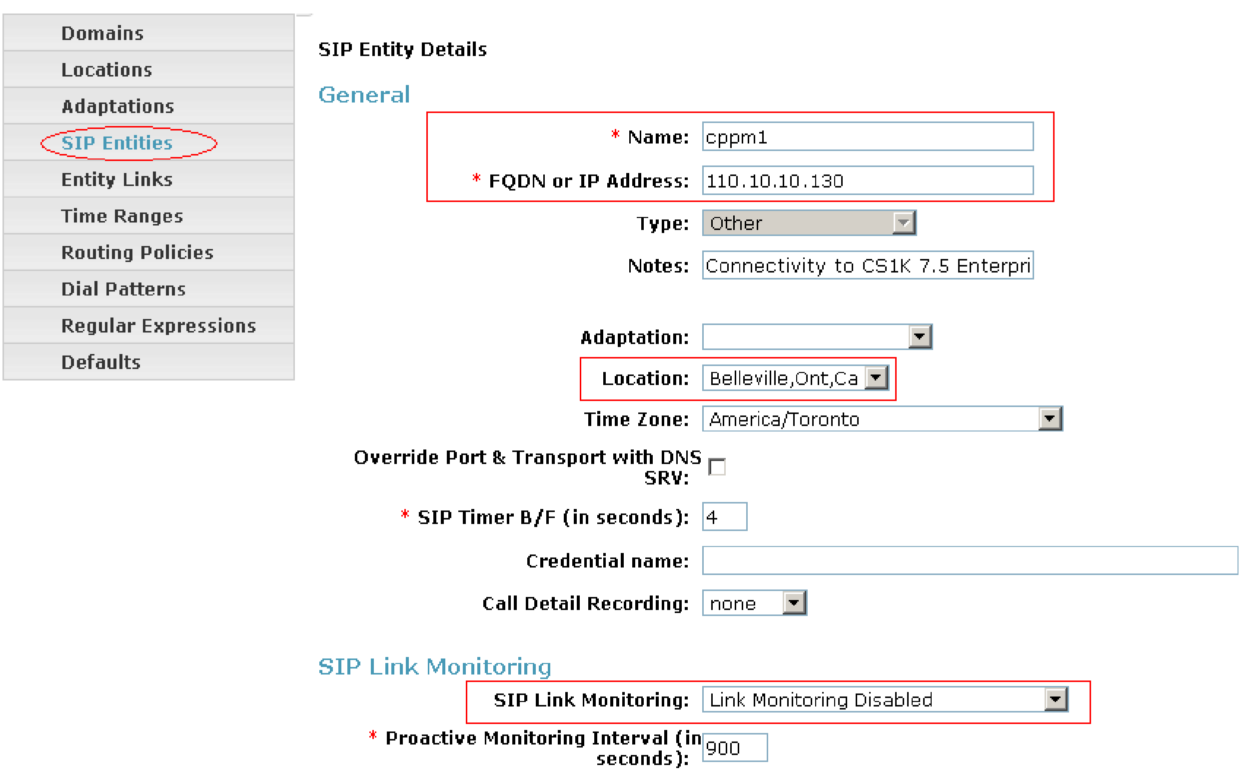
Next two screens show the SIP Entity Details for the RightFax server routing.
Enter a descriptive name for the **Name** field.
Populate the **FQDN or IP Address** field with **110.10.5.64**, which is the IP address of the RightFax server.
Select the location configured in **Section 6.3** in the **Location** field.
Select **Use Session Manager Configuration** option under the **SIP Link Monitoring** field.
.



Under the **Entity Links** section, add **DevASM** as **SIP Entity 1** and **RightFax** as **SIP Entity 2** with **UDP Protocol** and **5060** as **Port**.
Click on **Commit** (not shown) to complete adding the SIP Entity.



Next two screens show the SIP Entity Details for the Communication Server 1000 System routing.
Enter a descriptive name for the **Name** field.
Populate the **FQDN or IP Address** field with **110.10.10.130** , which is the IP address of the SIP Signaling Gateway of the Communication Server 1000 System.
Select the location configured in **Section 6.3** in the **Location** field.
Select **Link Monitoring Dsiabled** option under the **SIP Link Monitoring** field. This was the value used during compliance testing however **Use Session Manager Configuration** option can also be used here.



Under the **Entity Links** section, add **DevASM** as **SIP Entity 1** and **cppm1** as **SIP Entity 2** with **UDP** and **TCPProtocol** and **5060** as **Port**.
Click on **Commit** to complete adding the SIP Entity.

Entity Links

Add Remove

2 Items | Refresh Filter: Enable

	SIP Entity 1	Protocol	Port	SIP Entity 2	Port	Trusted
☐	DevASM	TCP	* 5060	cppm1	* 5060	☑
☐	DevASM	UDP	* 5060	cppm1	* 5060	☑

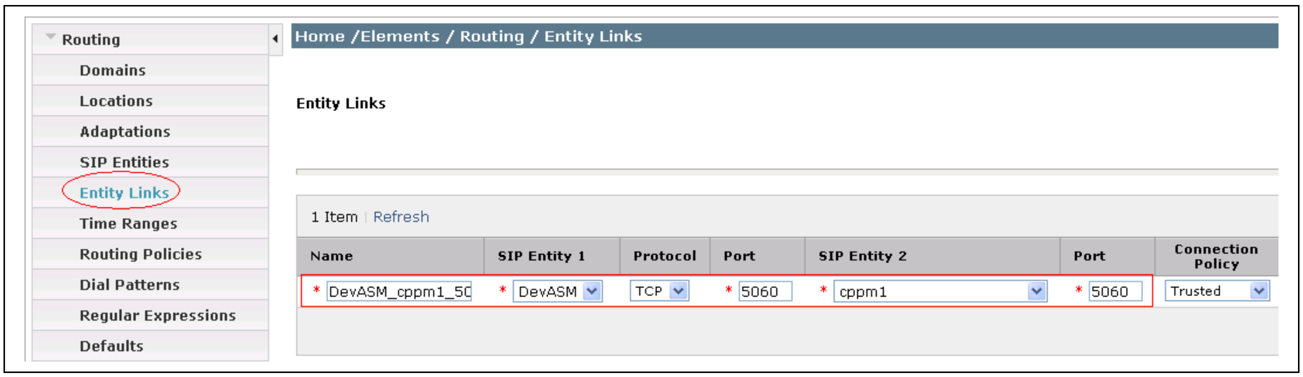
Select : All, None

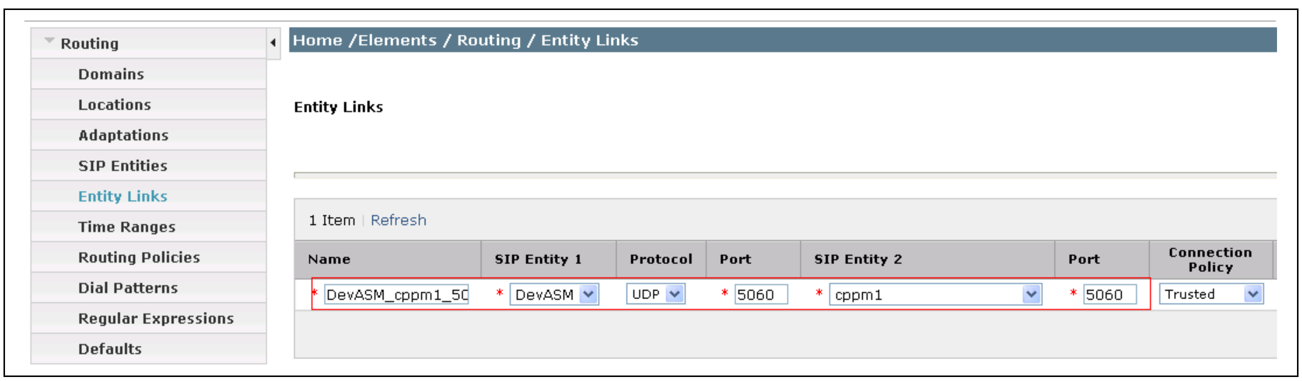
* **Input Required** Commit Cancel

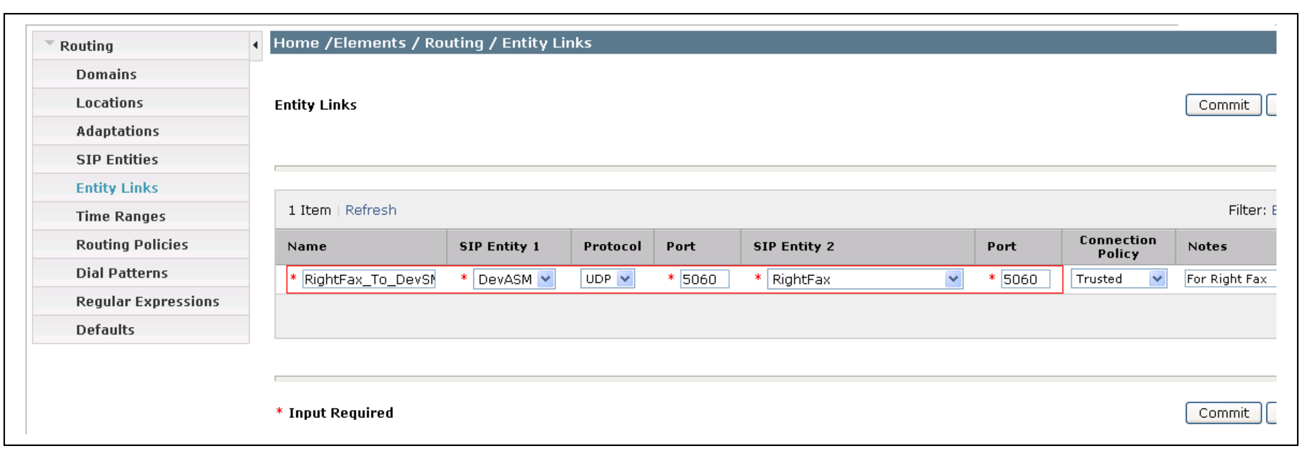
1.15. Adding Entity Links

This section explains the adding of Entity Links RightFax server and the Communication Server 1000 system routing. To add Entity Links, select **Entity Links** from the left hand window of the Routing screen and click on **New** (not shown).

Next three screens show the Entity Links for Communication Server 1000 and the RightFax server. For the Communication Server 1000 both TCP and UDP protocols were used.
Enter a descriptive name under the **Name** field. Select **DevASM** under **SIP Entity 1**. Select **cppm1** for Communication Server 1000 and **RightFax** for RightFax server under **SIP Entity 2**. Select the required **Protocol** and enter the **Port** value of **5060**. Click on **Commit** to complete adding an Entity Link.



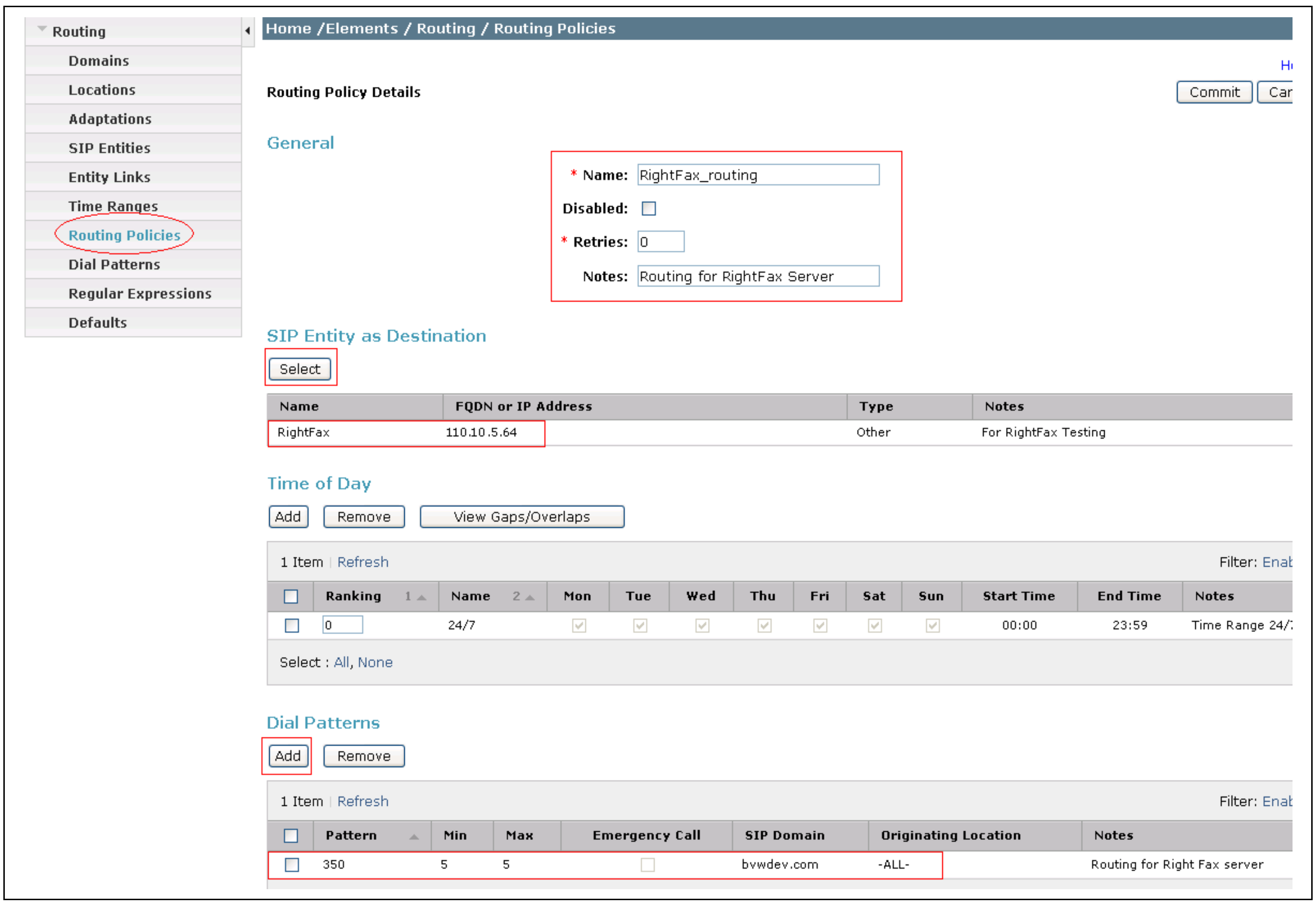




1.16. Adding Routing Policies

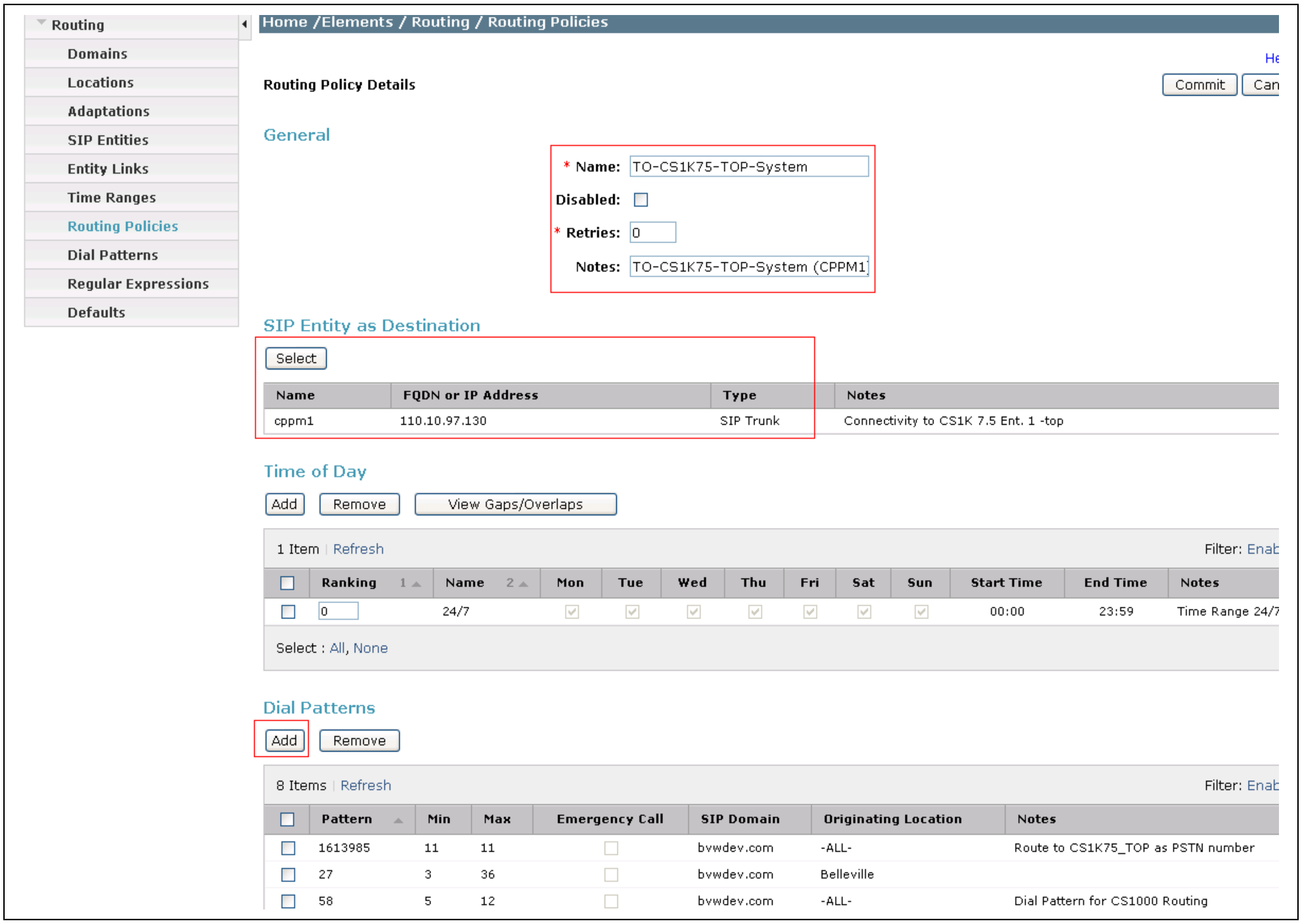
This section explains the Routing Policy configuration for RightFax server and Communication Server 1000 Systems. To add a routing policy, select **Routing Policies** from the left hand window of the Routing screen and click on **New** (not shown).

Screen below shows the Routing Policy Details for the RightFax server. Enter a descriptive name in the **Name** field and include some notes in the **Notes** field if required. Leave the rest of the values at default.
Click on the **Select** button and various SIP Entities configured are displayed (not shown). Select the **RightFax** server as the SIP Entity Destination. To add a dial pattern, click on **Add** and various dial patterns that are configured is displayed (not shown). Select the dial pattern that needs to be associated with RightFax server. A dial pattern can be added once it has been configured as explained in **Section 6.7** below. Click on **Commit** to complete adding a routing policy.



Screen below shows the Routing Policy Details for the Communication Server 1000 System. Enter a descriptive name in the **Name** field and include some notes in the **Notes** field if required. Leave the rest of the values at default.
Click on the **Select** button and various SIP Entities configured are displayed (not shown). Select the **cppm1** as the SIP Entity Destination. To add a dial pattern, click on **Add** and various dial patterns that are configured is displayed (not shown). Select the dial pattern that needs to be associated with Communication Server 1000.. A dial pattern can be added once it has been configured as explained in **Section 6.7** below. Click on **Commit** to complete adding a routing policy.

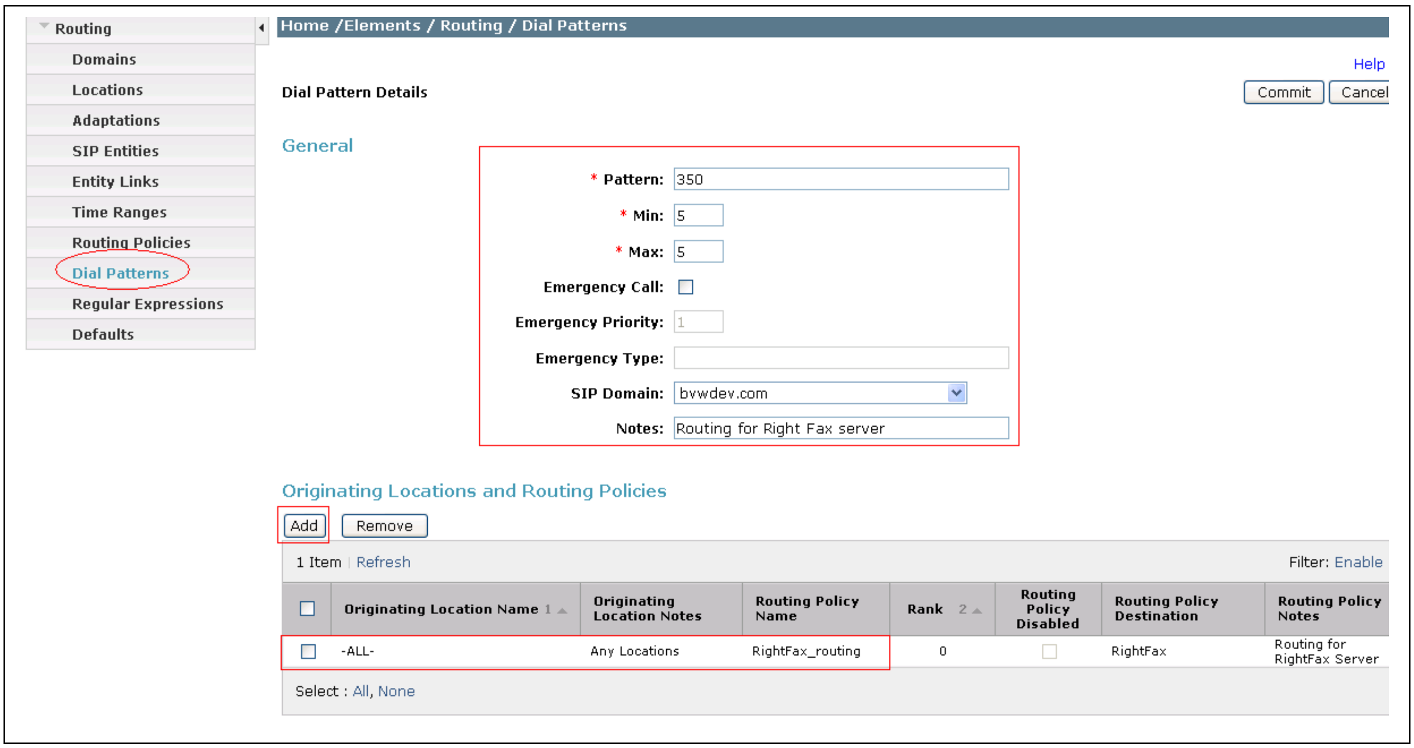
Additional routing policies can be configured as required in a similar fashion.



1.17. Adding Dial Patterns

This section explains the steps to add a dial pattern for the RightFax and Communication Server 1000 systems. To add a dial pattern, select **Dial Patterns** from the left hand window of the Routing screen and click on **New** (not shown).

Screen below shows the Dial Pattern Details for the RightFax server. During compliance testing extensions range on RightFax server started with 350xx and therefore **350** are used in the **Pattern** field. The minimum and maximum size of the extension is defined as **5**. Add the **RightFax_routing** policy as configured in **Section 6.6** above. Click on **Commit** to complete adding the dial pattern. Additional dial patterns can be configured as required in a similar fashion.



Configure OpenText RightFax

This section describes the configuration of OpenText RightFax and the embedded RightFax Original Equipment Manufacturer (OEM) or Brooktrout SR140 virtual fax board software from Dialogic (hereafter referred to as “SR140”). It assumes that the application and all required software components, including Brooktrout SR140 and the database software (Microsoft SQL Server 2012), have been installed and properly licensed. For instructions on installing RightFax, refer to **Section 10**.

Note that the configurations documented in this section pertain to interoperability between RightFax and the Avaya SIP infrastructure. The standard configurations pertaining to RightFax itself (e.g., administering fax channels) are not covered. For instructions on administering and operating RightFax, refer to **Section 10**.

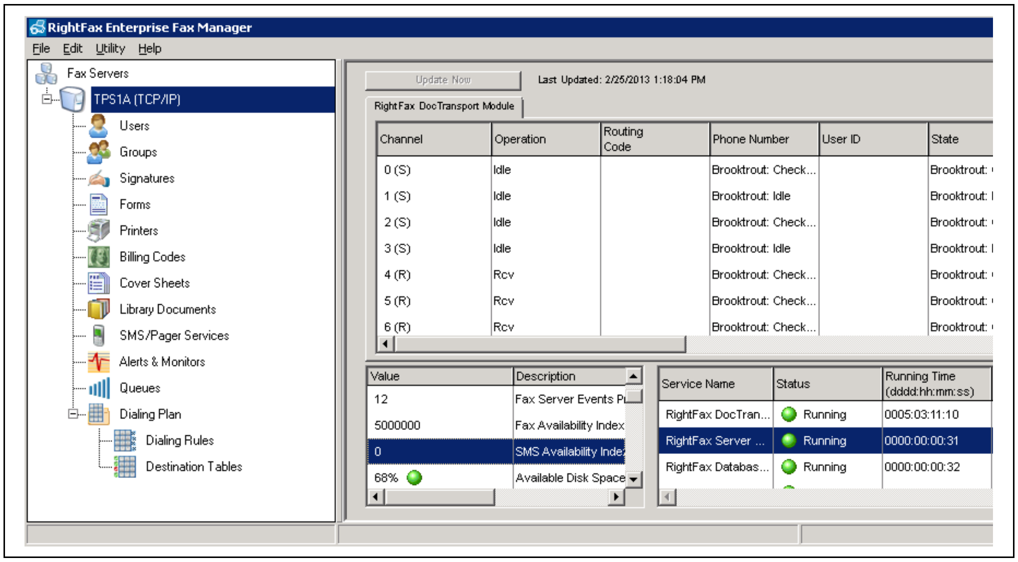
The configuration procedures covered in this section include the following:

- Launch RightFax Enterprise Fax Manager and Brooktrout Configuration Tool (Steps 1 – 6)
- Configure IP stack (Step 7)
- Configure BTCall parameters (Steps 8 – 9)
- Configure Call Control parameters (Step 10)
- Configure SIP IP parameters (Step 11)
- Configure T.38 parameters (Step 12)
- Configure RTP parameters (Steps 13 – 14)
- Administer RightFax dialing rules (Steps 15 – 16)
- Administer RightFax users (Steps 17 – 20)

The examples shown in this section refer to Site 1 from **Figure 1**.

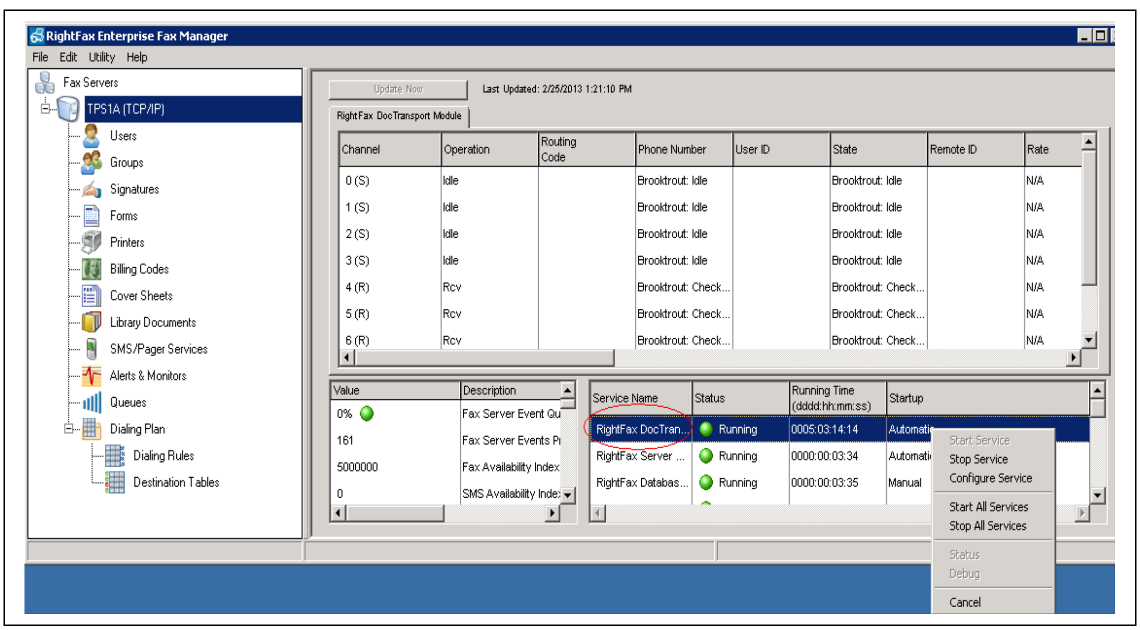
1. **Launch RightFax Enterprise Fax Manager**

The RightFax configuration is performed using the RightFax Enterprise Fax Manager. Launch the RightFax Enterprise Fax Manager from the Windows Start menu. At the main window, highlight the host name of the fax server (created during the installation process) from the navigation menu in the left pane:



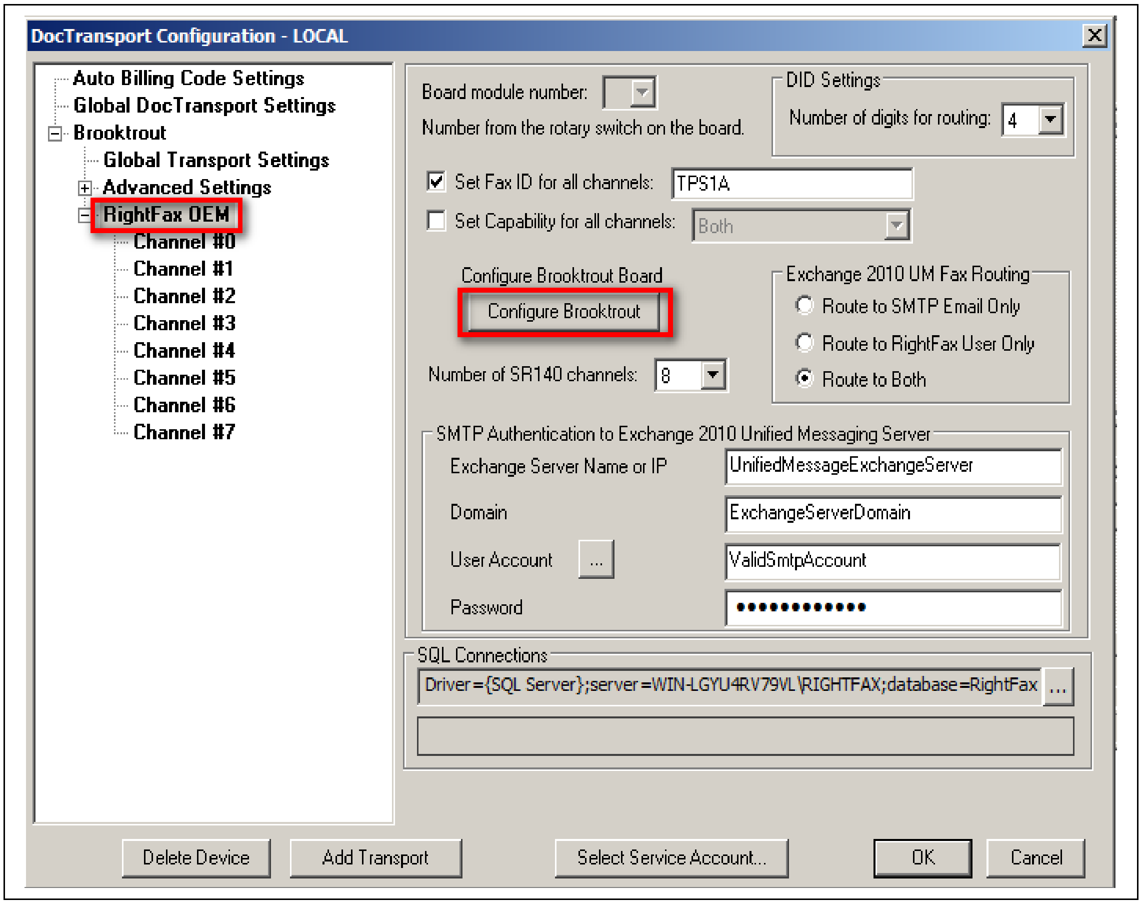
2. **RightFax DocTransport Module**

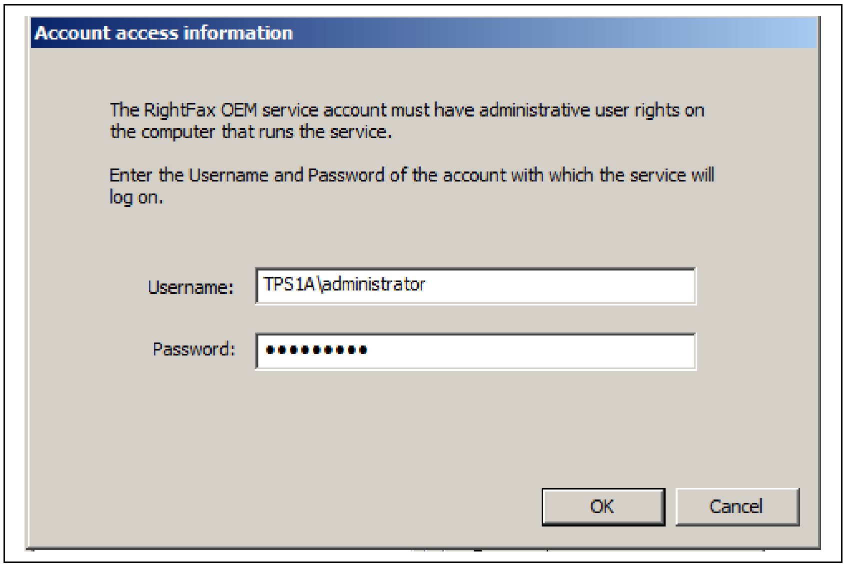
The Brooktrout SR140 was configured during installation. To view or modify the settings, the RightFax DocTransport Module must be stopped. Right-click this module in the lower right pane and select **Stop All Services**. After all the service modules indicate the stopped status, right-click the **RightFax DocTransport Module** name again to select **Configure Service**.



3. **RightFax DocTransport Module - Continued**

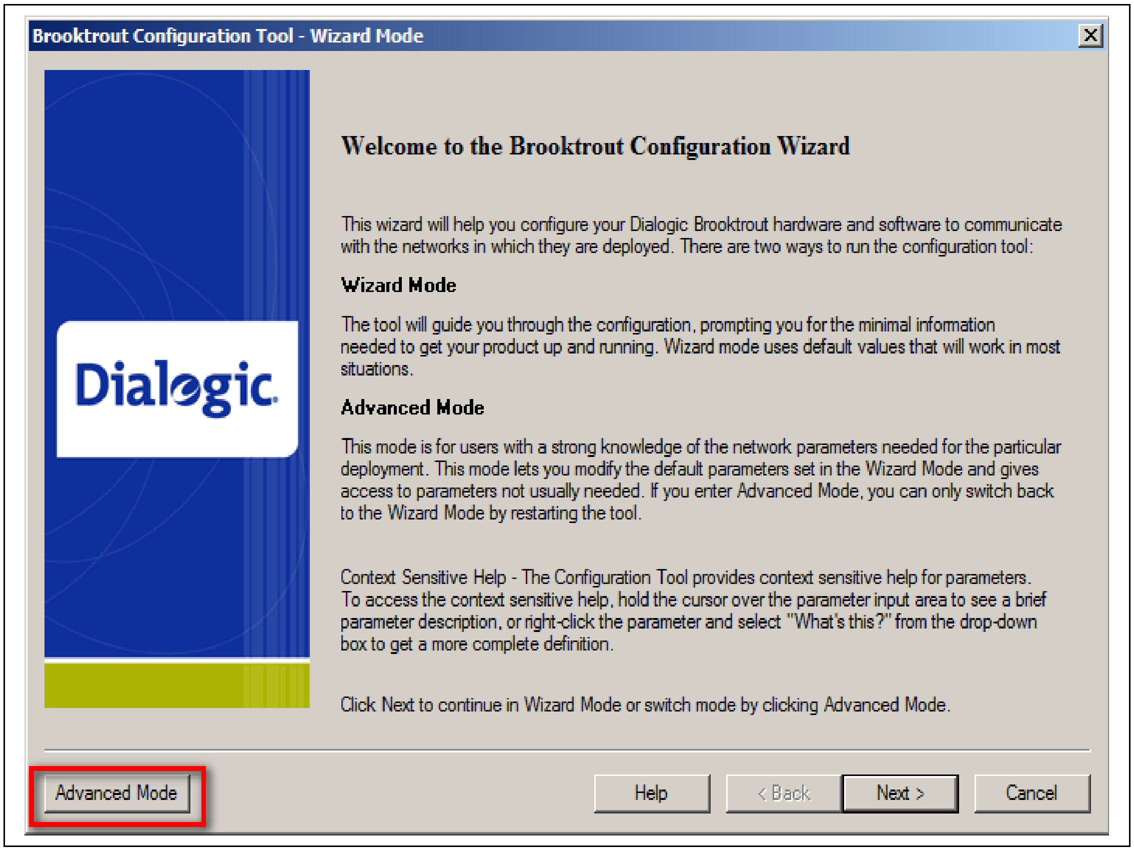
In the **DocTransport Configuration** window that appears, click **RightFax OEM** (left side of screen), then click on the Configure **Brooktrout** button.



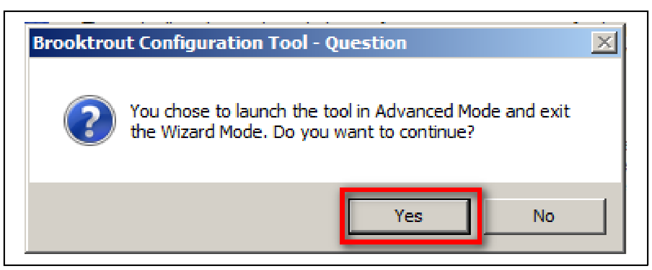
4.	**Account Access Information** Enter the credentials for the RightFax Service account used for the RightFax DocTransport Module. This account must have administrative user rights on the computer that runs the service. 

5. **Brooktrout Configuration Tool**

The **Brooktrout Configuration Tool – Wizard Mode** window gets displayed. Click the **Advanced Mode** button in this window.

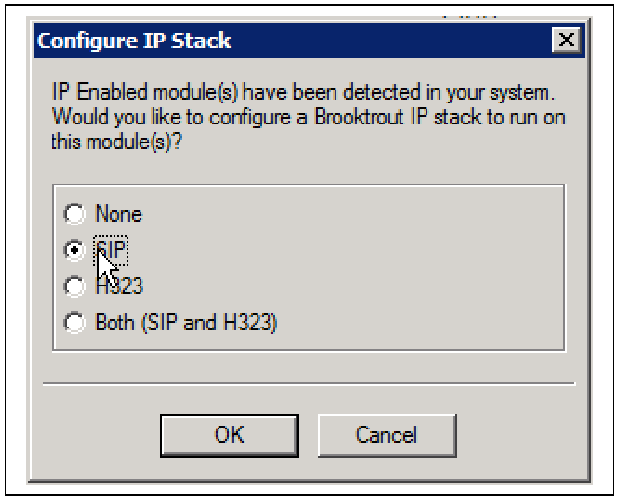


6. Click **Yes** when prompted to launch the Configuration Tool in Advanced mode.

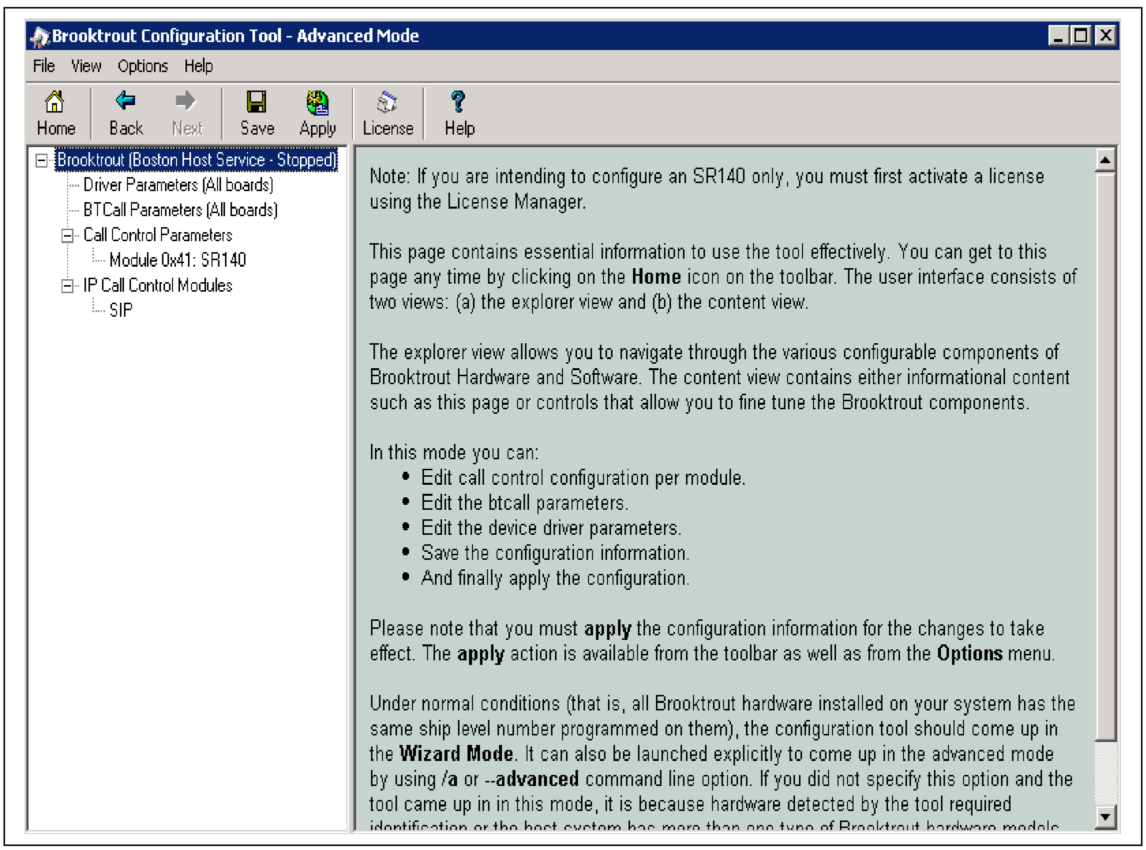


7. **Configure IP Stack**

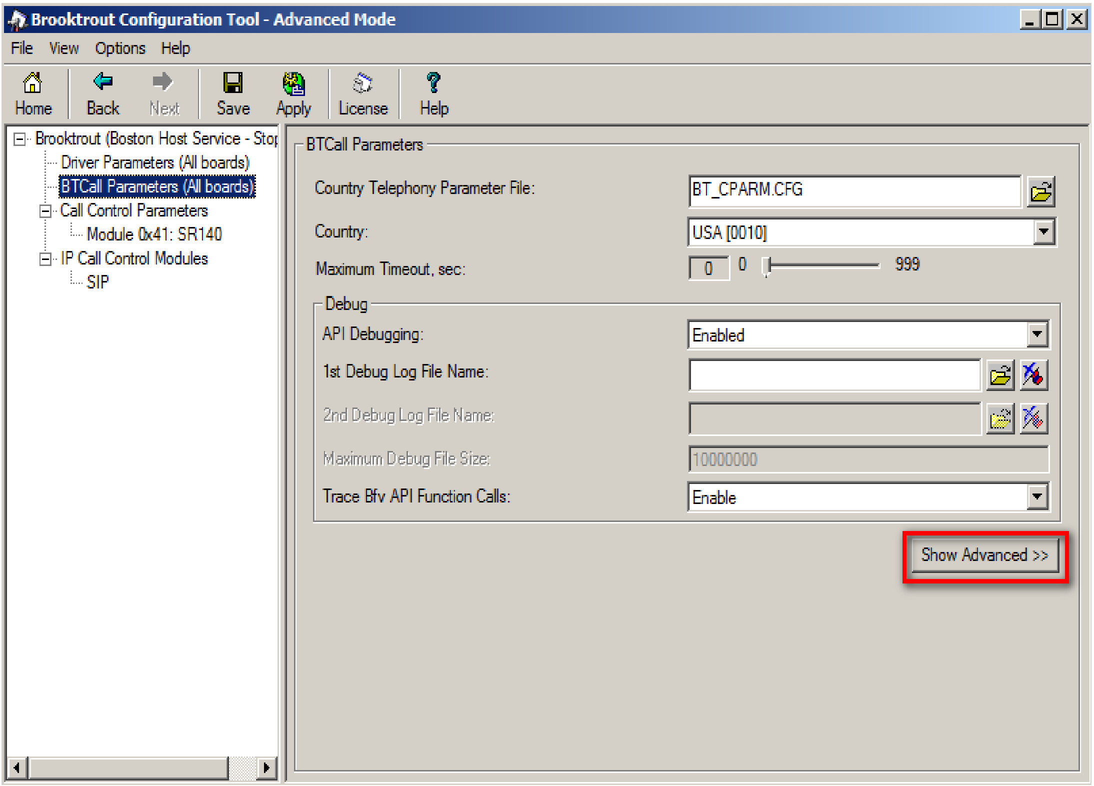
A Configure IP Stack window is displayed on first invocation of the Brooktrout configuration tool:



Choose **SIP** and click **OK**. The following Brooktrout Configuration Tool window is displayed.



Note that IP Stack can be viewed/reconfigured from the Brooktrout Configuration Tool menu **Options → Configure IP Stack**.

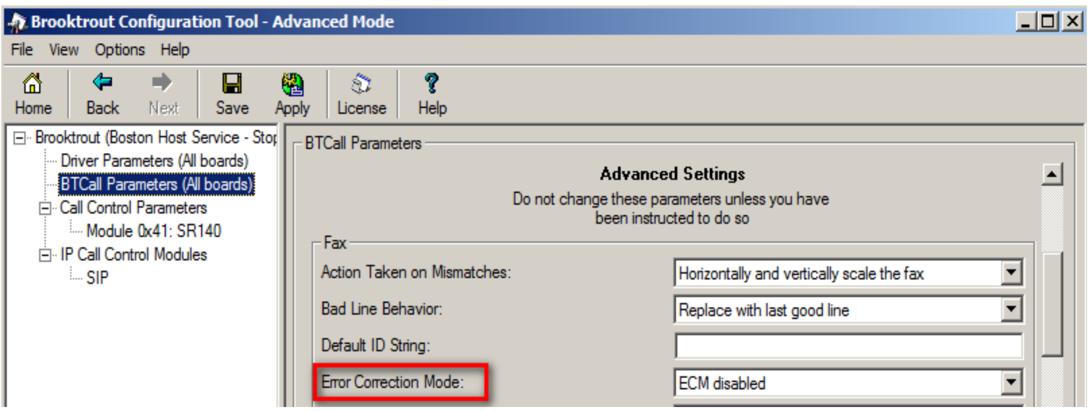
8.	**Configure BTCall Parameters** ***Note:*** *During the compliance testing, the following settings were configured differently than the default settings. In practice, these settings may not be required for full functionality.* Navigate to **Brooktrout → BTCall Parameters (All boards)** in the left navigation menu. Click the **Show Advanced** button. 

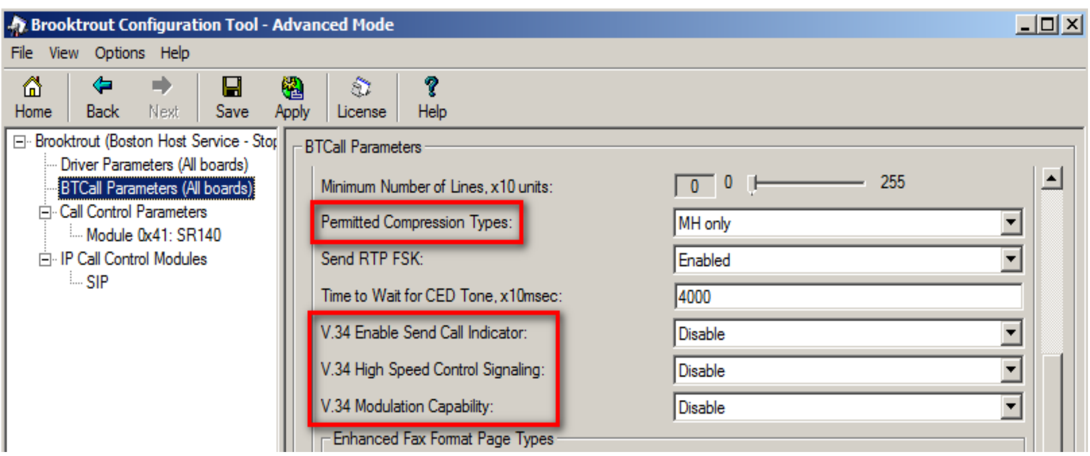
9. **Configure BTCall Parameters (continued)**

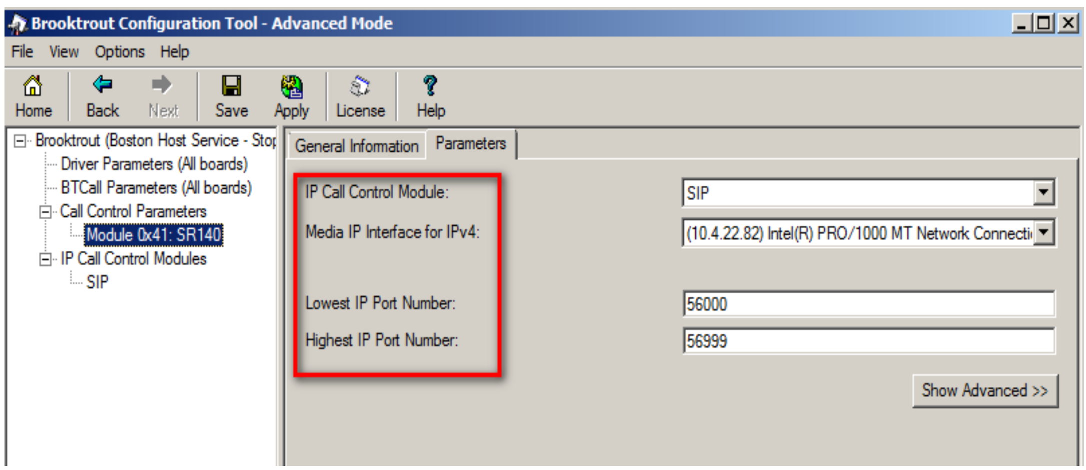
Under Advanced Settings, configure the fields as follows:

- **Error Correction Mode**: ECM Disabled
- **Permitted Compression Types**: MH only
- **V.34 Enable Send Call Indicator:** Disable
- **V.34 High Speed Control Signaling:** Disable
- **V.34 Modulation Capability:** Disable

Use default values for other fields.





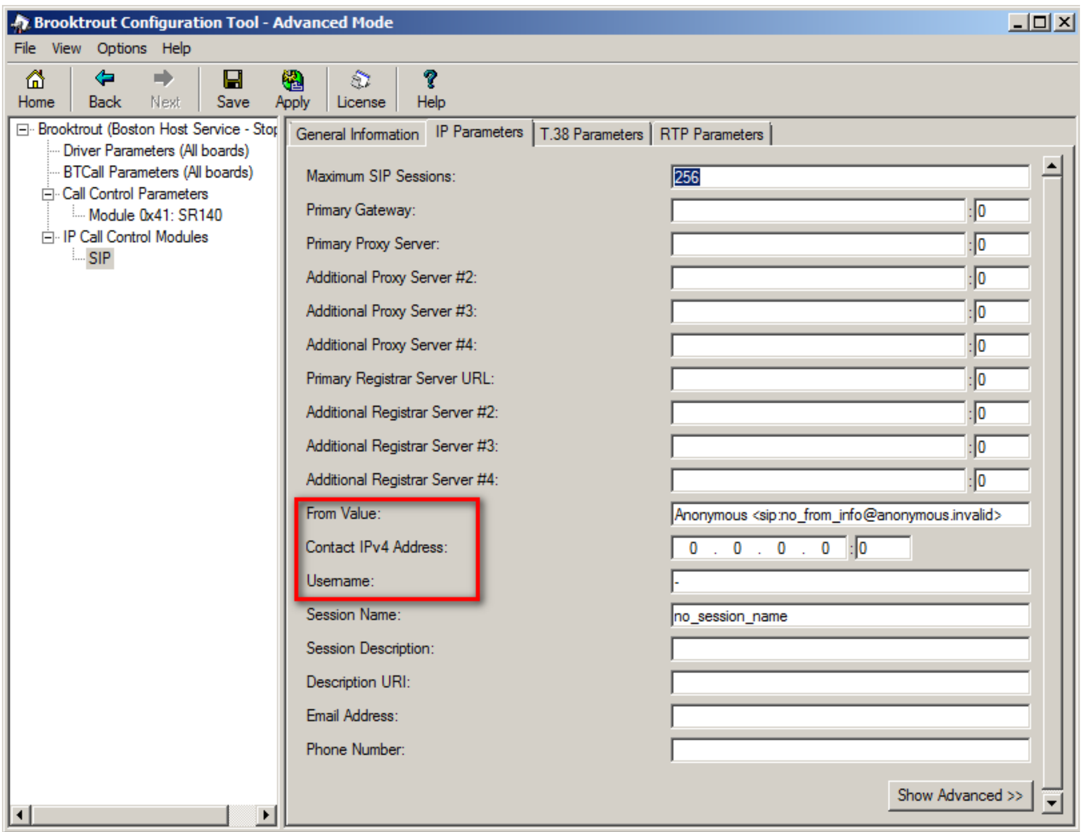
10.	**Configure Call Control Parameters** Navigate to **Brooktrout → Call Control Parameters → Module 0x41: SR140** in the left navigation menu. Ensure the following configuration parameters are correct for your environment: - **IP Call Control Module:** SIP - **Media IP Interface for IPv4:** If the server contains multiple network interface cards (NICs), ensure you have selected an interface that is able to communicate with the Session Manager. - **Lowest/Highest IP Port Numbers:** Ensure your RTP range matches the port range configured on the Avaya SIP infrastructure. *By default, the port range for SR140 is 56000 to 56999. A maximum range of 1000 ports may be specified. When you change the Lowest IP Port Number value, the Highest IP Port Number value will adjust automatically.* 

11. **Configure SIP IP Parameters**

Navigate to **Brooktrout → IP Call Control Modules → SIP** in the left navigation menu. Select the **IP Parameters** tab in the right pane. Configure the fields as follows:

- **From Value** – If required by the Avaya environment, set this to an appropriate ***UserInfo@DomainName.*** The *DomainName* should be set to the authoritative domain as configured in Session Manager. During compliance testing this value was left at default.
- **Contact Address** – If required by the Avaya environment, set enter the IP address assigned to RightFax and the port number ***5060***. During compliance testing this value was left at default.
- **Username** – Required. Default value is a dash ('-') character.

Use default values for all other fields.

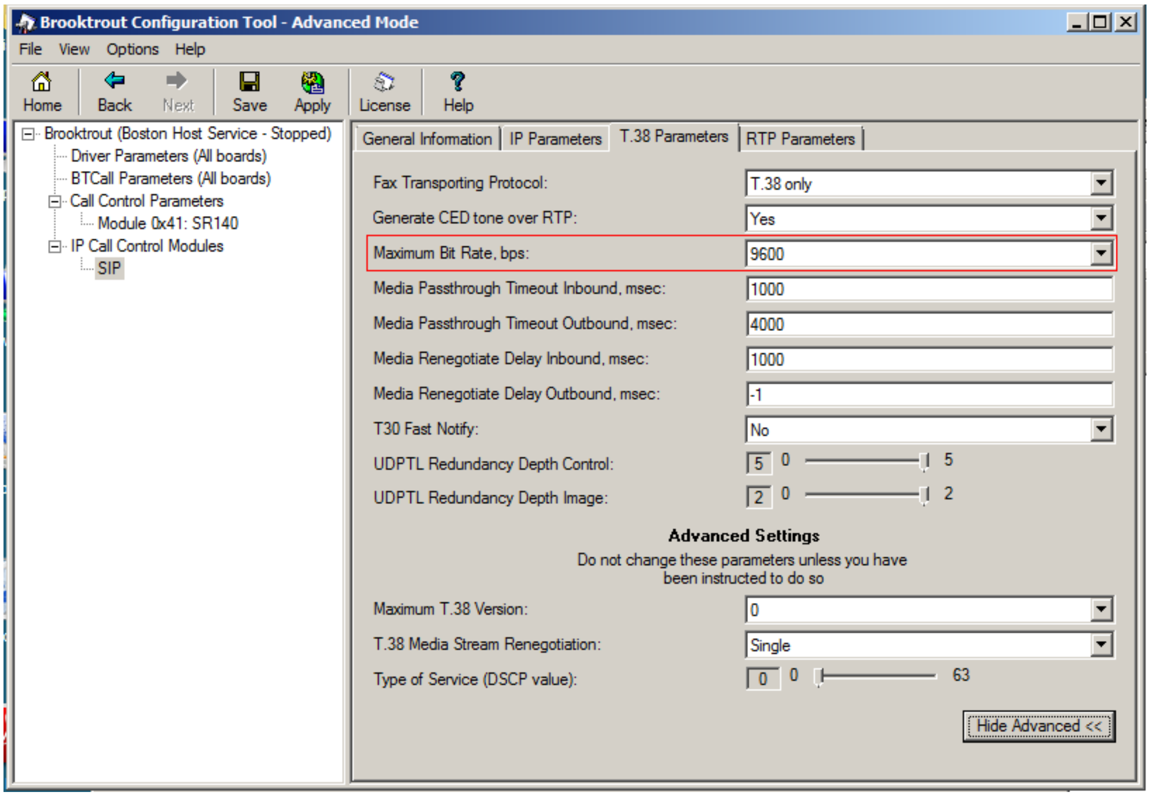


12. **Configure T.38 Parameters**

Select the **T.38 Parameters** tab. Configure the fields as shown below in the screenshot.

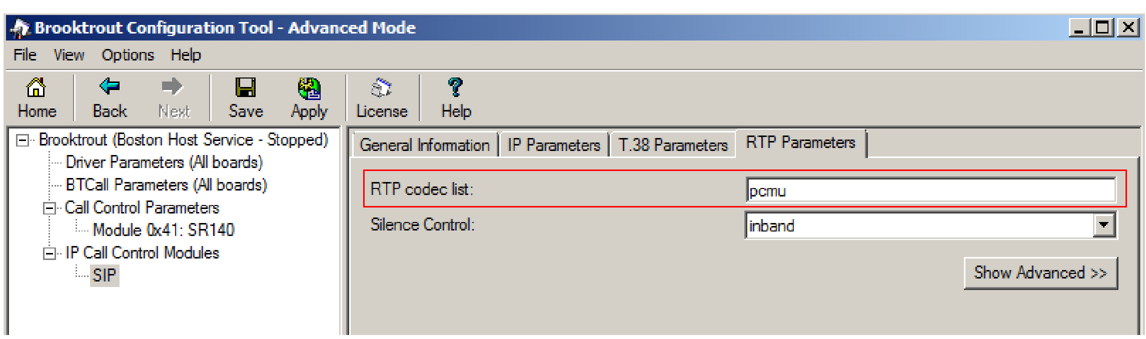
Note: *During the compliance testing, the following settings were configured differently than the default settings. In practice, these settings may not be required for full functionality.*

- *"Maximum Bit Rate, bps" is set to maximum, 9600 (default is 14400).*

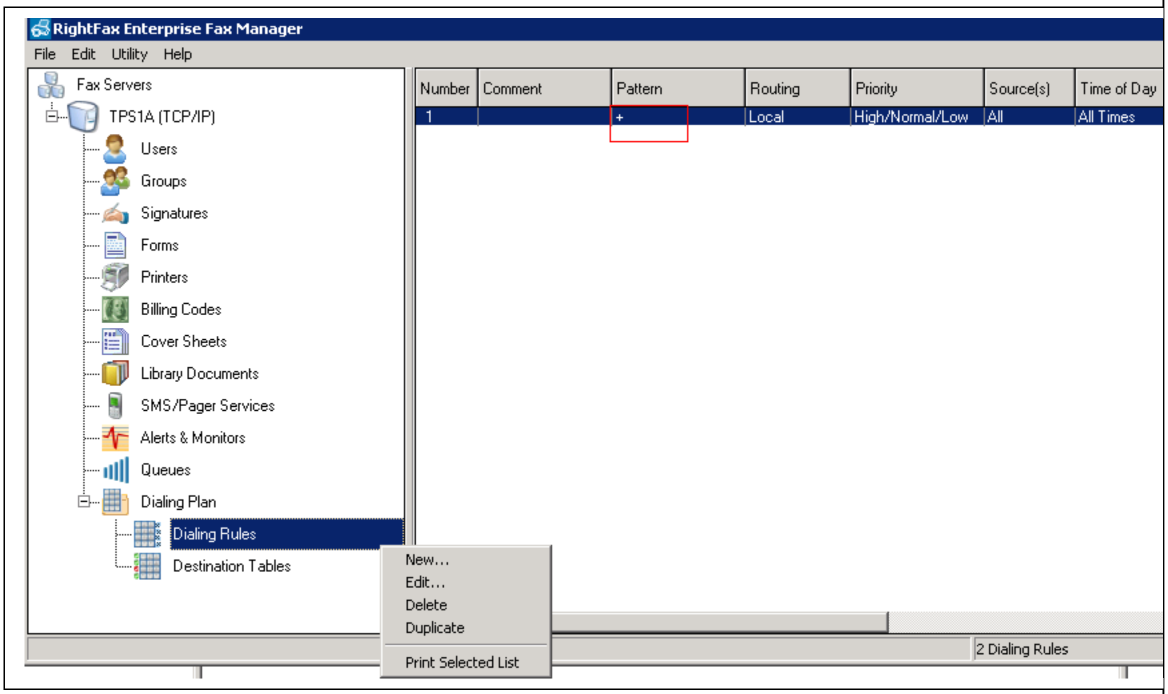


13. **Configure RTP Parameters**

Select the **RTP Parameters** tab. Set the **RTP codec list** value to use only a single codec, either ***pcmu*** or ***pcma*** to match the codec used in your region.

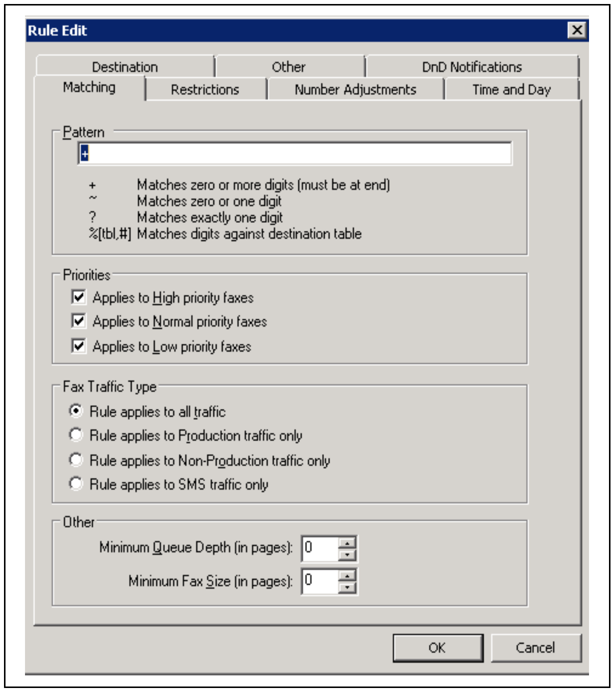


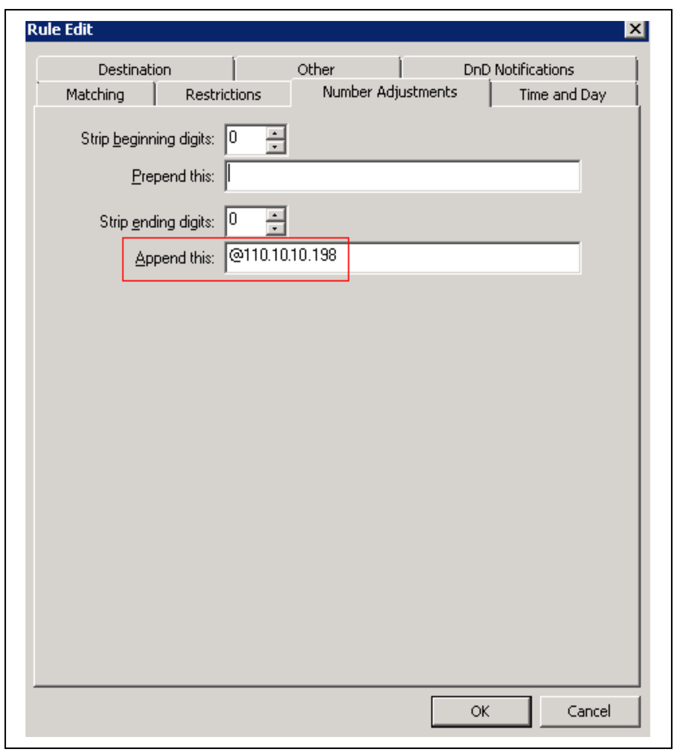
14.	**Complete Brooktrout SR140 Configuration** After verifying all the above parameters are properly set, click **Save** in the button menu (not shown). Exit the Brooktrout Configuration Tool. In the **DocTransport Configuration** screen, click the **OK** button (See screen shot in Step 3 above). Restart all RightFax service modules by right clicking the **RightFax DocTransport Module** name in the lower right pane of the RightFax Enterprise Fax Manager window and select **Start All Services** (See screen shot in Step 2 above).

15.	**Configure Dialing Rules** Dialing Rules are used by RightFax to route calls. In the compliance test, a dialing rule was created to route outbound fax calls to the Session Manager. In the left navigation menu under the host name of the fax server, navigate to **Dialing Plan**, right-click **Dialing Rules** and select **New** to create a new rule. The example below shows the single rule created for the compliance test at site 1. The + in the **Pattern** field indicates that this rule applies to all dialed numbers. To view the details, double click on the rule in the right pane. 

16. **Configure Dialing Rules - Continued**

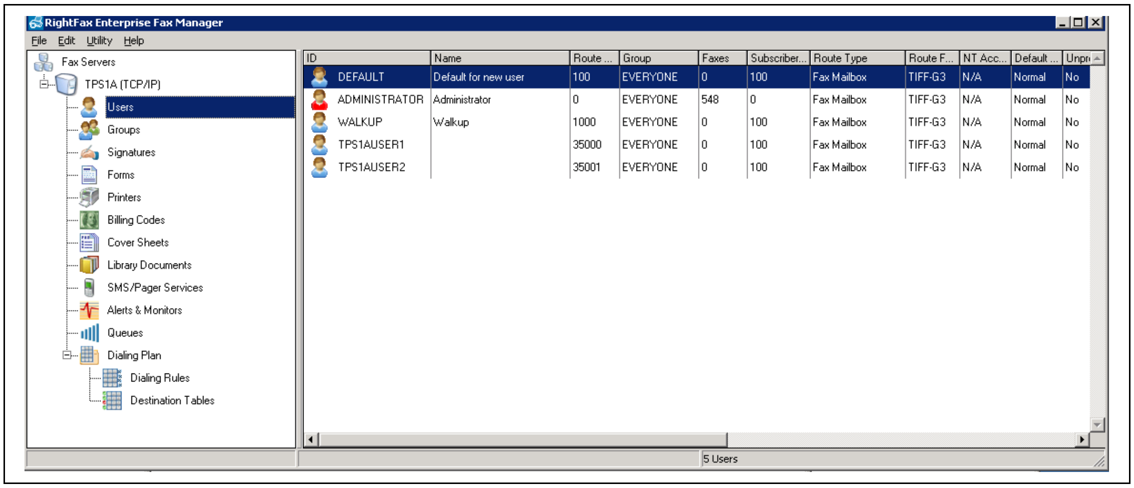
The **Rule Edit** window will appear as shown below. The **Number Adjustments** tab shows the digit string manipulation that is done to each dialed number. In the example below, each outbound fax phone number is appended with ***@110.10.10.198*** as indicated in the **Append this** field. This IP address is for the Session Manager server at Site 1.





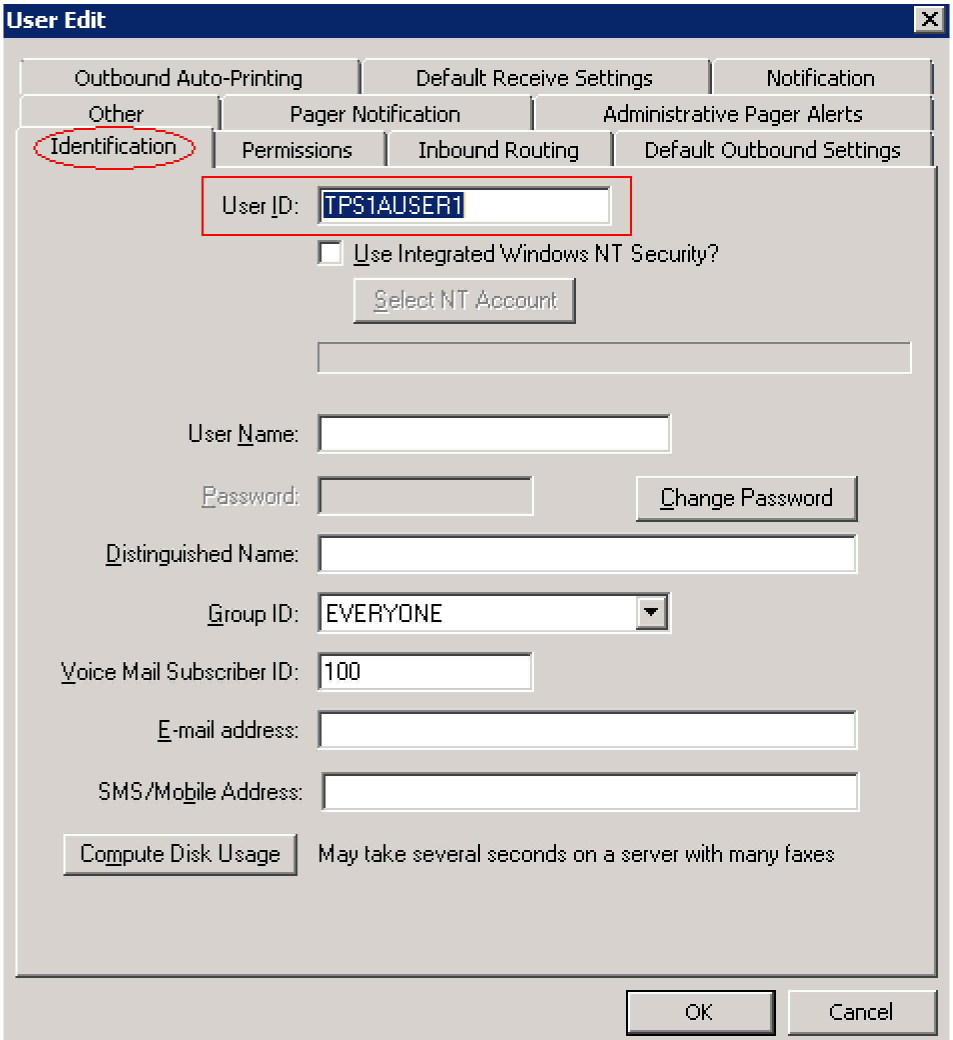
17. **Configure Users**

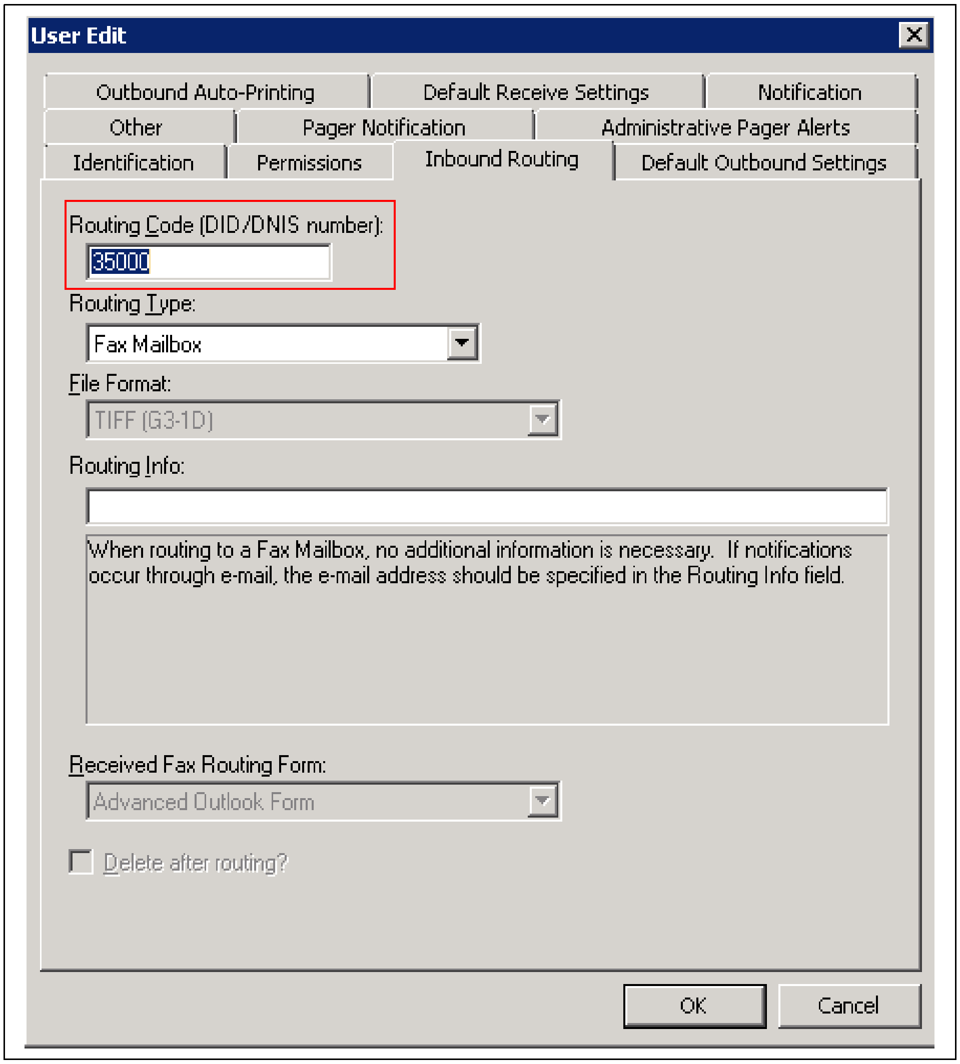
A user is created on the RightFax server for each incoming fax number. The user represents the fax recipient. To view the list of users, navigate to **Users** in the left navigation menu under the host name of the fax server. The example below shows a list of five users. To view the details of a user, double-click on the user entry in the right pane.

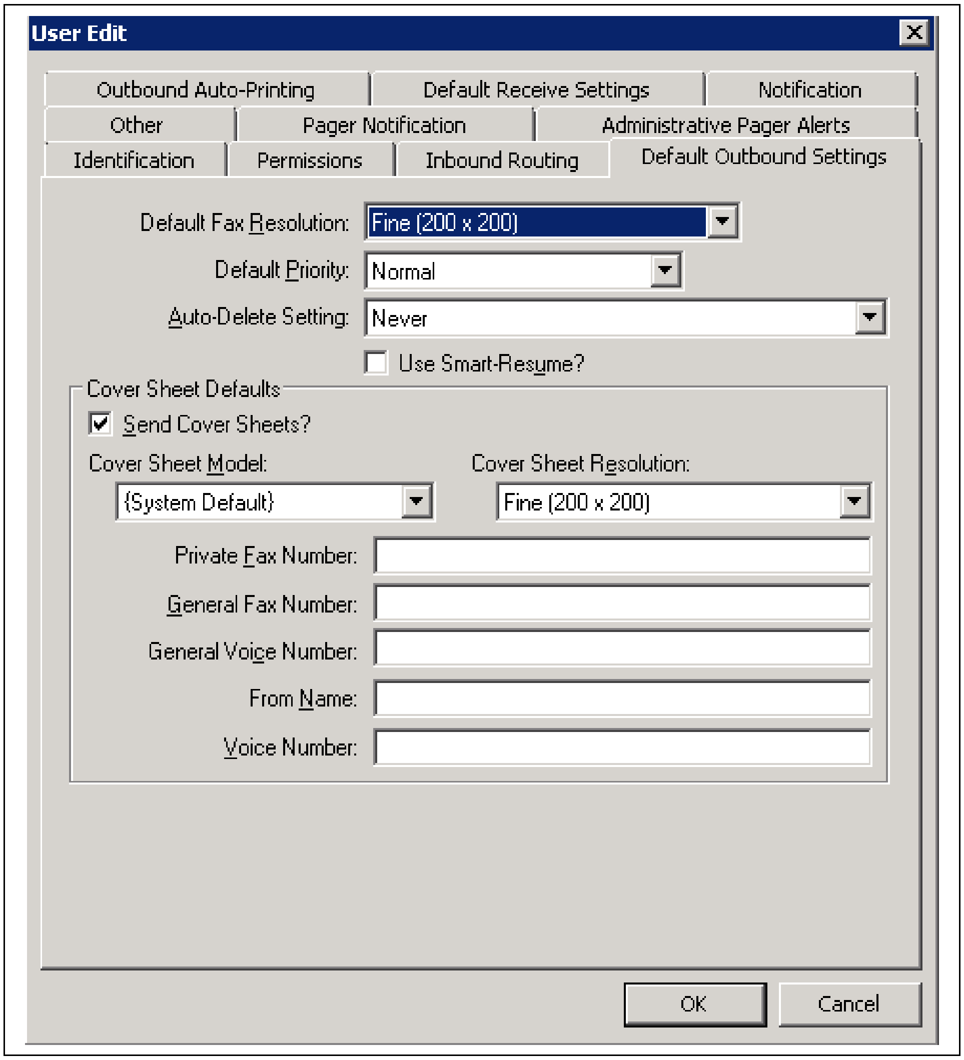


18. **Configure Users – Identification**

The **User Edit** window will appear as shown below. Select the **Identification** tab. The example below shows the settings used for the compliance test at Site 1. The **User ID** field is set to a descriptive name. Appropriate values should be entered or selected for other fields.



19.	**Configure Users – Inbound Routing** On the **Inbound Routing** tab, the **Routing Code** field is set to the fax number of the recipient. In the case of the compliance test, this was extension ***35000*** for Site 1 as shown below. Default values may be used for all other fields. 

20.	**Configure Users – Outbound Settings** The **Default Outbound Settings** tab configures various outbound fax call settings. Configure these settings as appropriate. 

Verification Steps

The following steps may be used to verify the configuration:

- From Communication Server 1000 command line (CLI) use **LD 32** to find the status of the trunks for both SIP (Site 1) and ISDN (between Site 1 and 2) are up and in service.
- From Communication Server 1000 CLI use **LD 96** to check the status of D-channel (DCH) for both the SIP and ISDN configured and make sure they are active and in service with no alarms.
- Verify that fax calls can be placed to/from OpenText RightFax server to an analog fax machine at both Sites 1 and 2.
- From Communication Server 1000 CLI use **LD 96** to capture DCH messages and verify that the fax calls are routed through the correct DCH and trunks.
- From System Manager, confirm that the Entity Link between Session Manager and the OpenText RightFax server is in service.

Conclusion

These Application Notes describe the procedures required to configure OpenText RightFax to interoperate with Avaya Communication Server 1000 and Avaya Aura® Session Manager. OpenText RightFax successfully passed compliance testing.

Additional References

- *Software Input Output Reference — Administration Avaya Communication Server 1000 7.5 NN43001-611, Standard 05.13 September 2012.*
- *Element Manager System Reference – Administration Avaya Communication Server 1000 7.5 NN43001-632, Standard 05.15 August 2012.*
- *Unified Communications Management Common Services Fundamentals Avaya Communication Server 1000 7.5 NN43001-116, 05.17 January 2012.*
- *ISDN Primary Rate Interface Installation and Commissioning Avaya Communication Server 1000 7.5 NN43001-301, 05.08 February 2012.*
- *Administering Avaya Aura® Session Manager*, Doc # 03-603324, Release 6.2, July, 2012.
- *Administering Avaya Aura® System Manager*, Release 6.2, Issue 2.0, July 2012
- *OpenText RightFax 10.5 Administrator's Guide,* July, 2012.
- *OpenText RightFax 10.5 Installation Guide,* June, 2012.

Documentation for:
Avaya products may be found at http://support.avaya.com.
RightFax products may be found at https://knowledge.opentext.com. (Valid login required)

Please e-mail any questions or comments pertaining to these Application Notes along with the full title name and filename, located in the lower right corner, directly to the Avaya DevConnect Program at devconnect@avaya.com.