AVAYA

Avaya Solution & Interoperability Test Lab

Application Notes for emFAST FACSys Fax Messaging Suite with Avaya IP Office – Issue 1.0

Abstract

These Application Notes describe the configuration steps required for emFAST FACSys Fax Messaging Suite to interoperate with Avaya IP Office. The emFAST FACSys Fax Messaging Suite is a fax family solution that uses the SIP trunk interface with T.38 fax from Avaya IP Office to send and receive fax.

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.

1. Introduction

These Application Notes describe the configuration steps required for emFAST FACSys Fax Messaging Suite to interoperate with Avaya IP Office. The emFAST FACSys Fax Messaging Suite is a fax family solution that uses the SIP trunk interface with T.38 fax from Avaya IP Office to send and receive fax.

The emFAST FACSys Fax Messaging Suite consists of the FACSys Administrator, FACSys Desktop, and FACSys Web Access, and enterprise users can send and receive fax through several interfaces. In the compliance testing, the FACSys Web Access interface was used to send and receive fax for users on Avaya IP Office.

1.1. Interoperability Compliance Testing

The interoperability compliance test included feature and serviceability testing.

The feature testing focused on verifying the following on emFAST FACSys Fax Messaging Suite:

- Proper handling of faxes via the SIP trunks including send/receive, internal fax, external fax over ISDN (PRI), simultaneous with bi-directional faxes, and miscellaneous failure scenarios.

- Proper handling of faxes with different pages, complexity, format, and data rates.

- No adverse impact on the internal and external VoIP calls during VoIP faxes.

The serviceability testing focused on verifying the ability of the emFAST FACSys Fax Messaging Suite to recover from adverse conditions, such as disconnecting/reconnecting the Ethernet cable and stopping/starting the fax service on the emFAST FacSys Fax Messaging Suite server.

1.2. Support

Technical support on emFAST FACSys Fax Messaging Suite can be obtained through the following:

- **Phone:** (866) 436-3278
- **Web:** http://www.emfast.com/support.aspx

2. Reference Configuration

Figure 1 below shows the configuration used for the compliance testing.
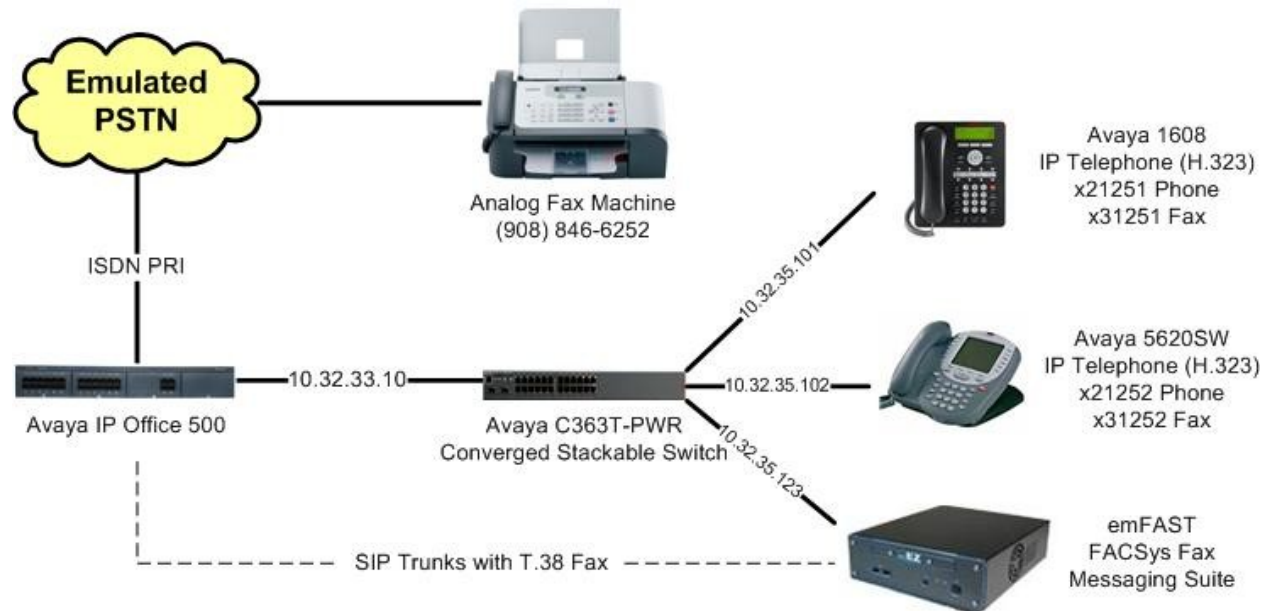

Figure 1: emFAST FACSys Fax Messaging Suite with Avaya IP Office

3. Equipment and Software Validated

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

Equipment	Software
Avaya IP Office 500	5.0 (4)
Avaya 1608 IP Telephone (H.323)	1.2
Avaya 5620SW IP Telephone (H.323)	8.016
emFAST FACSys Fax Messaging Suite • FACSys Administrator • FACSys Desktop • FACSys Web Access	5.1

4. Configure Avaya IP Office

This section provides the procedures for configuring Avaya IP Office. The procedures include the following areas:

- Verify IP Office license
- Obtain LAN IP address
- Enable SIP trunks
- Administer SIP line
- Administer incoming call route

4.1. Verify IP Office License

From a PC running the Avaya IP Office Manager application, select **Start > Programs > IP Office > Manager** to launch the Manager application. Select the proper IP Office system, and log in with the appropriate credentials.

The **Avaya IP Office R5 Manager** screen is displayed. From the configuration tree in the left pane, select **License > SIP Trunk Channels** to display the **SIP Trunk Channels** screen in the right pane. Verify that the **License Status** is "Valid".
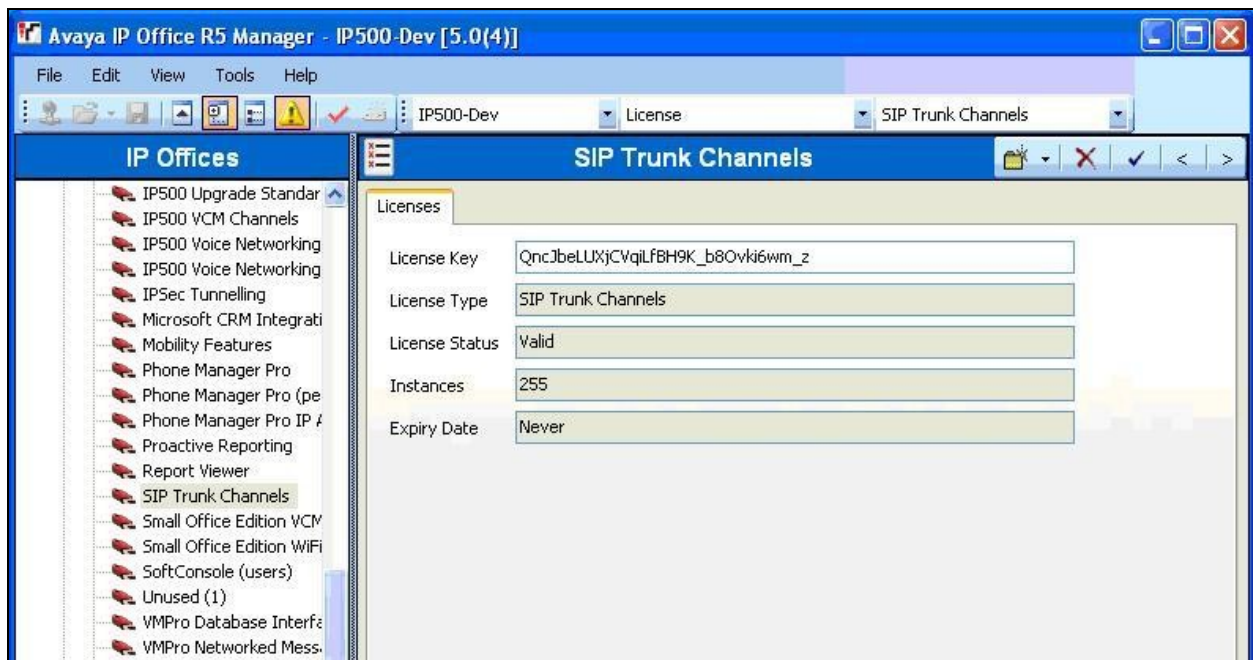
4.2. Obtain LAN IP Address

From the configuration tree in the left pane, select **System** to display the **IP500-Dev** screen in the right pane. Select the **LAN1** tab, followed by the **LAN Settings** sub-tab in the right pane. Make a note of the **IP Address**, which will be used later to configure emFAST. Note that IP Office can support SIP trunks on the LAN1 and/or LAN2 interfaces, and the compliance testing used the LAN1 interface.
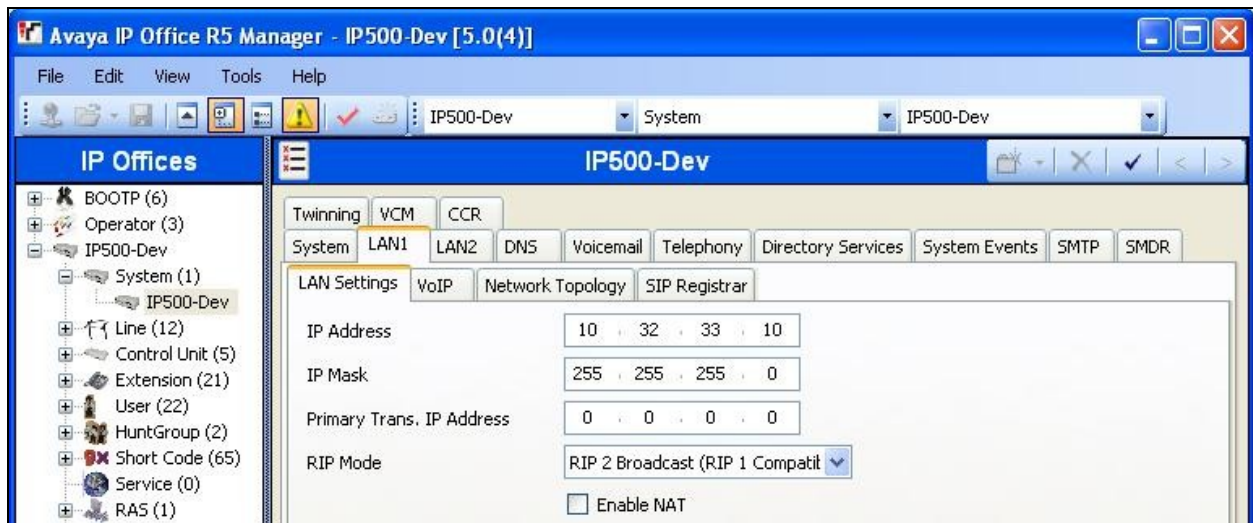

4.3. Enable SIP Trunks

Select the **VoIP** sub-tab. Make certain that **SIP Trunks Enable** is checked, as shown below.
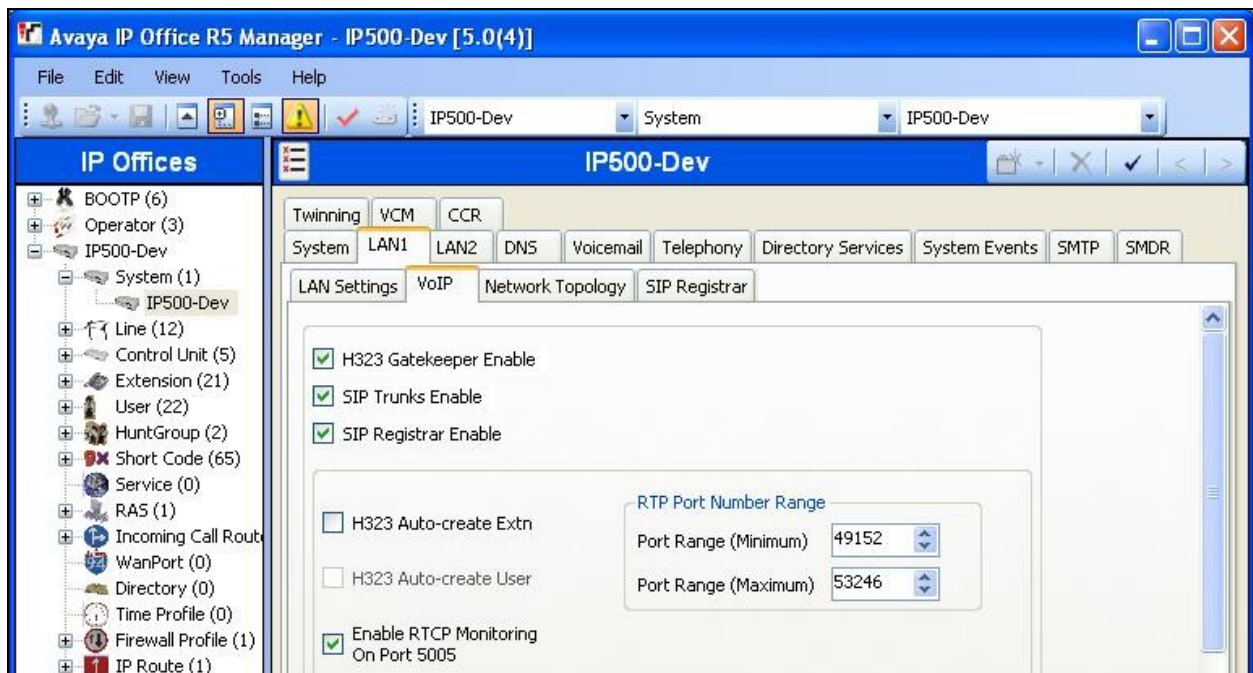
4.4. Administer SIP Line

From the configuration tree in the left pane, right-click on **Line**, and select **New > SIP Line** from the pop-up list to add a new SIP line. In the **ITSP IP Address** field, enter the IP address of the emFAST FACSys Messaging Suite server. Retain the default values for the remaining fields.
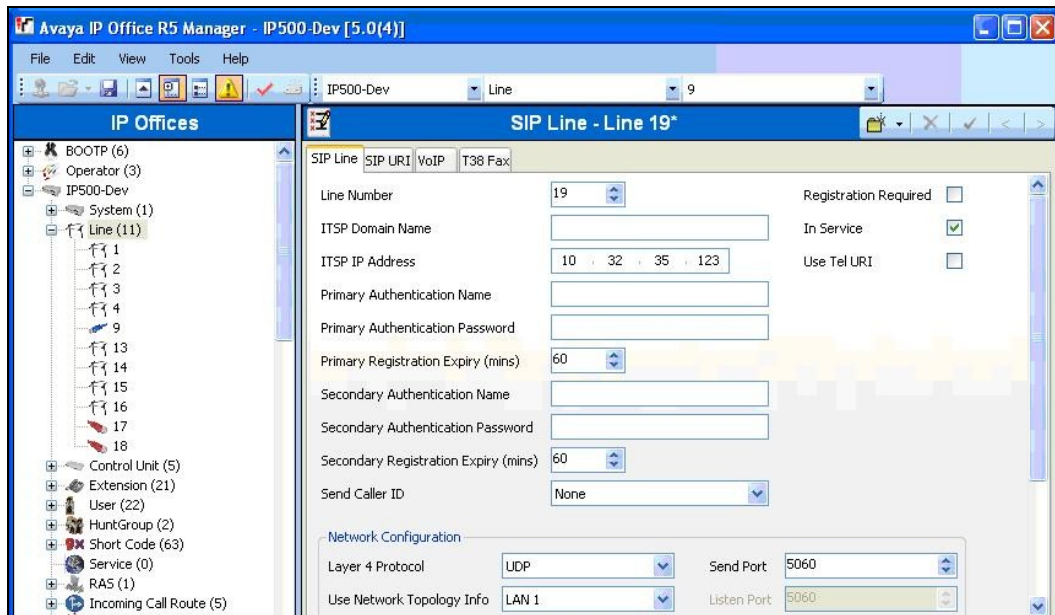

Select the **SIP URI** tab, and click **Add** to display the **Edit Channel** section. Enter the wild character "*" for **Local URI**, **Contact**, and **Display Name**. Enter unused group numbers for **Incoming Group** and **Outgoing Group**, and make a note of the group numbers to be used later to configure emFAST. Click **OK**.

TLT; Reviewed:
SPOC 10/20/2009

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FACSys-IPO
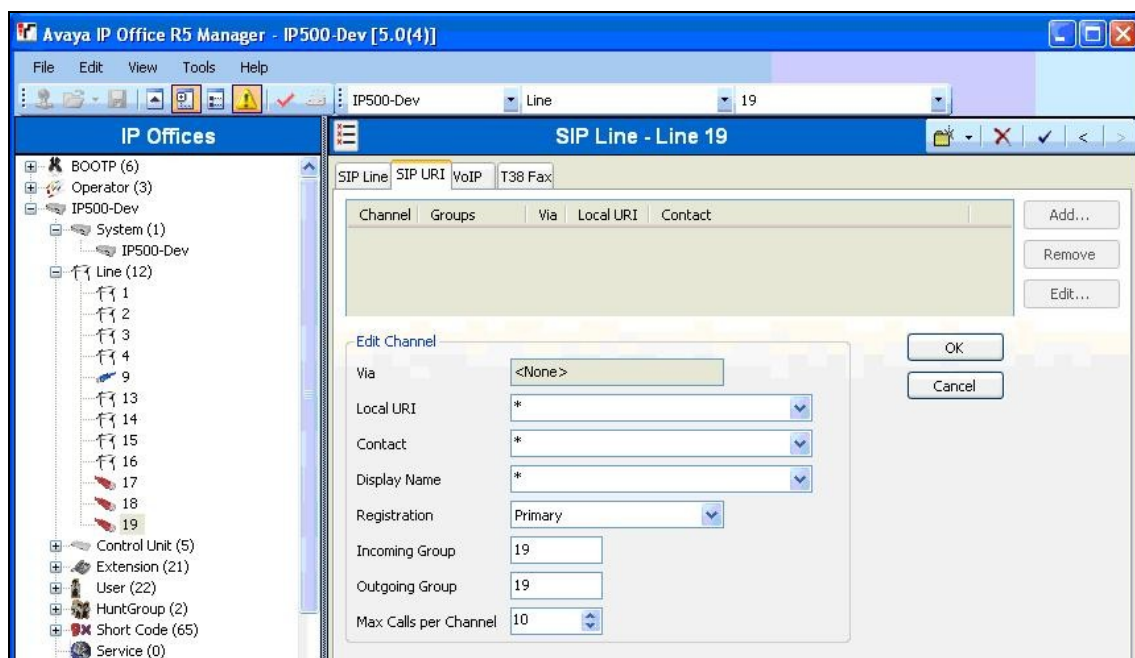
Select the **VoIP** tab. Check **Re-invite Supported**, followed by **Fax Transport Support**.
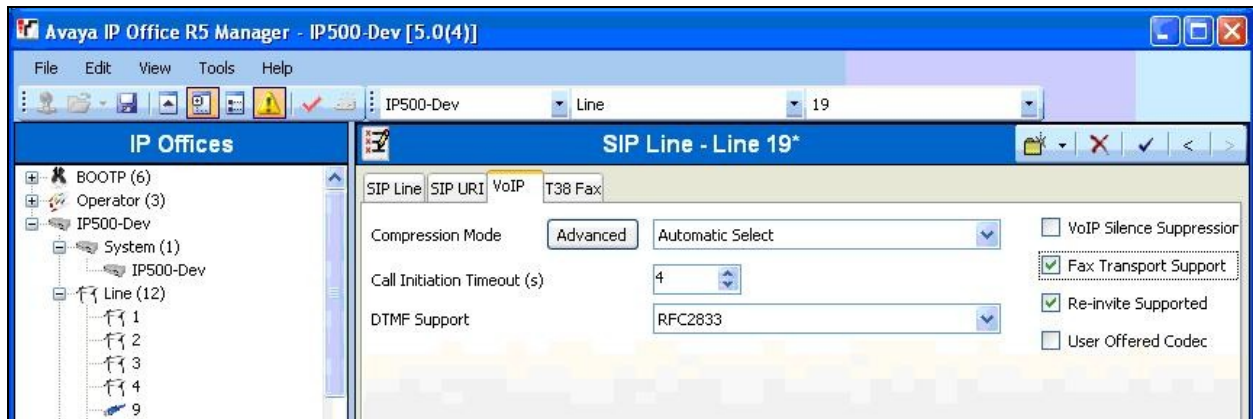
Select the **T38 Fax** tab. In the **T38 Fax Version** field, select "1". Retain the default values for the remaining fields, and click **OK**.
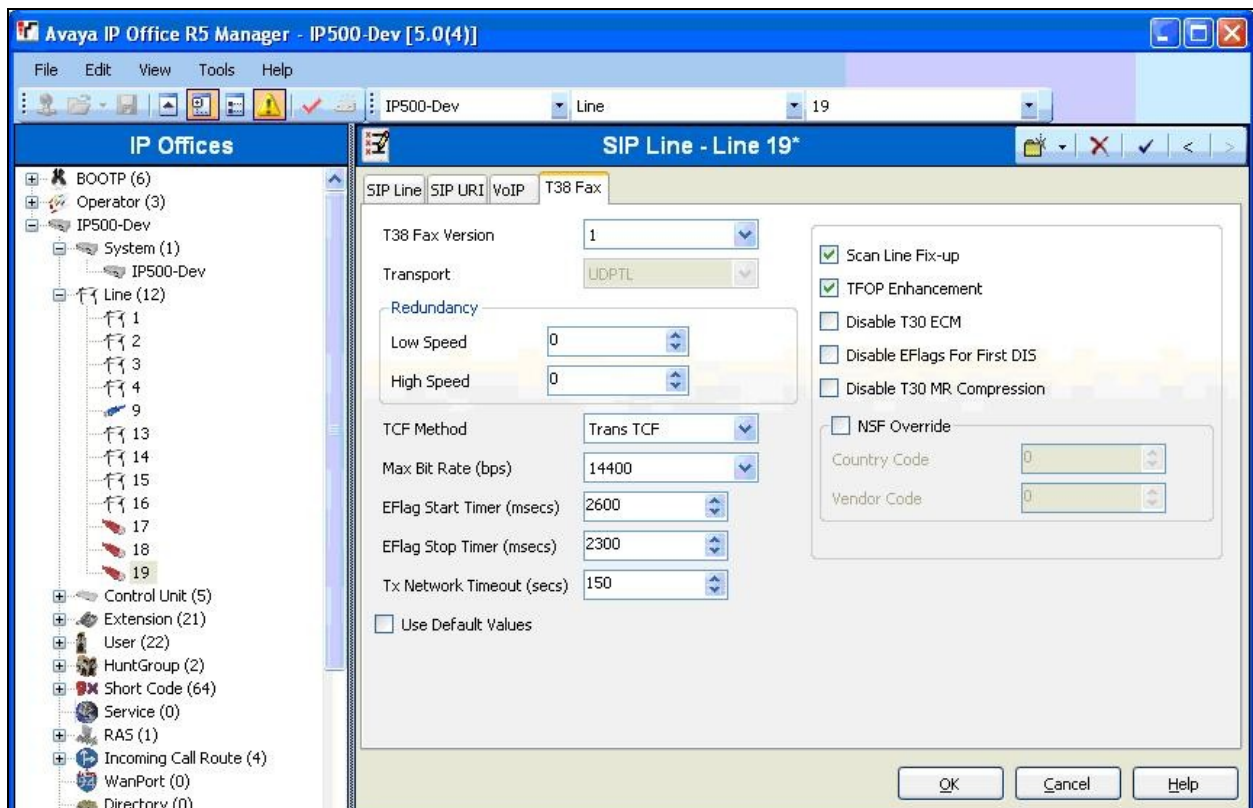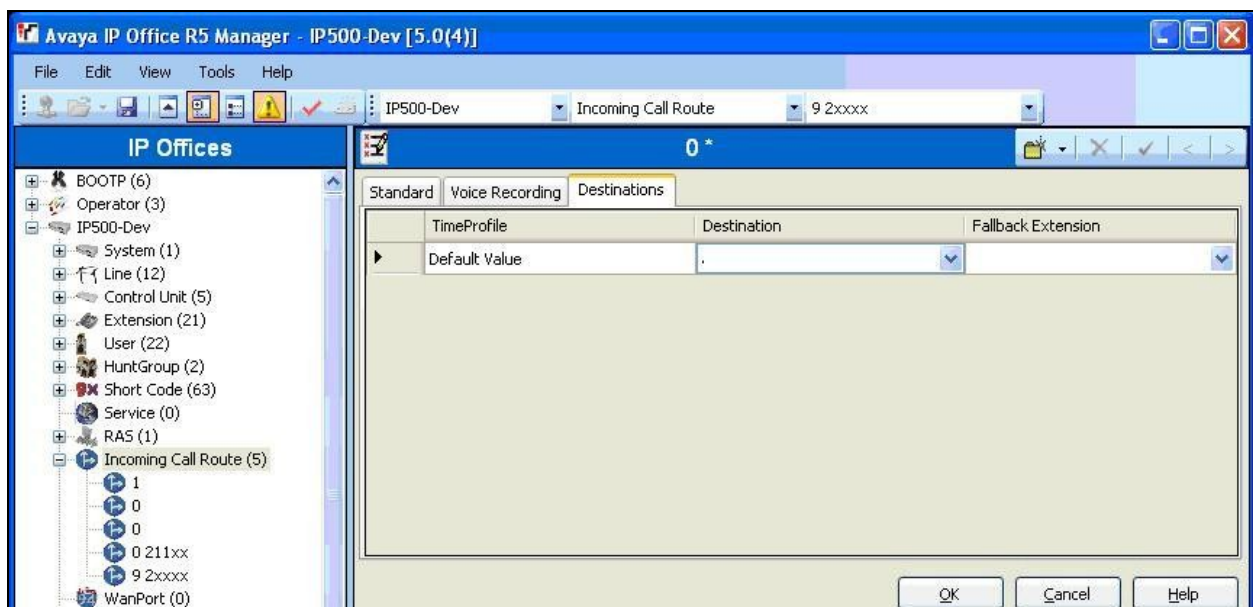
4.5. Administer Incoming Call Route

From the configuration tree in the left pane, right-click on **Incoming Call Route**, and select **New** from the pop-up list to add a new route. In the **Line Group Id** field, select the incoming group number from **Section 4.4**, in this case "19".
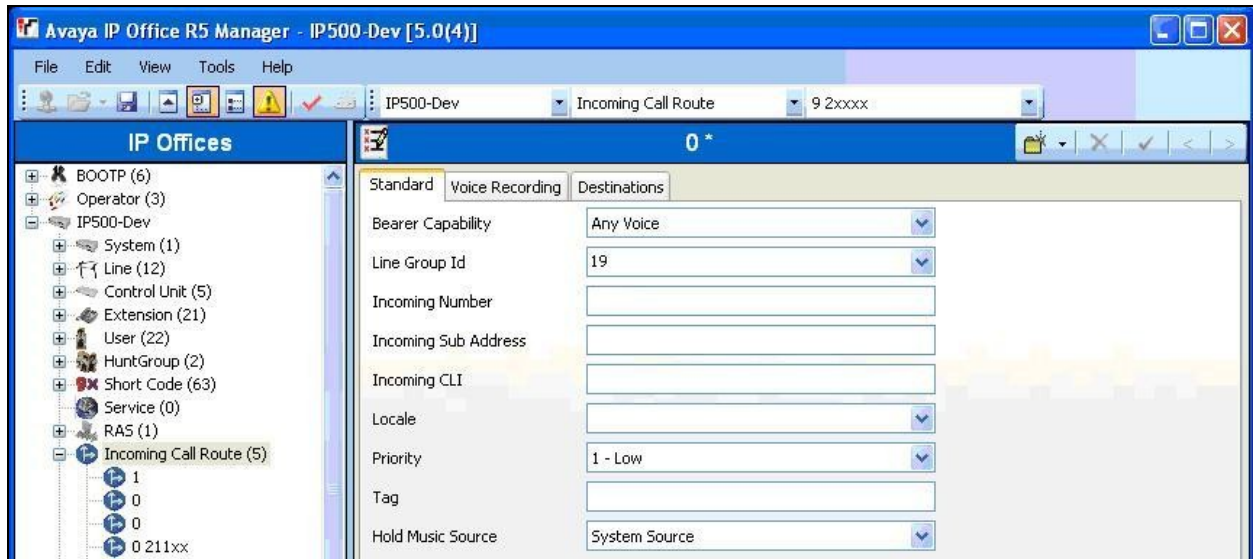
Select the **Destinations** tab. In the **Destination** field, enter "." to match to any dialed number from emFAST. Click **OK**.

4.6. Administer Short Codes

From the configuration tree in the left pane, right-click on **Short Code** and select **New** from the pop-up list to add a new short code for fax calls to emFAST. In the compliance testing, users on Avaya IP Office have fax numbers 312xx.

For the **Code** field, enter "312N". Select "Dial Fax" from the **Feature** drop-down list. For the **Telephone Number** field, enter the value shown below where "312N" is the short code and "10.32.35.123" is the IP address of the emFAST FACSys Messaging Suite server. For **Line Group Id**, enter the outgoing group number from **Section 4.4**. Click **OK**.
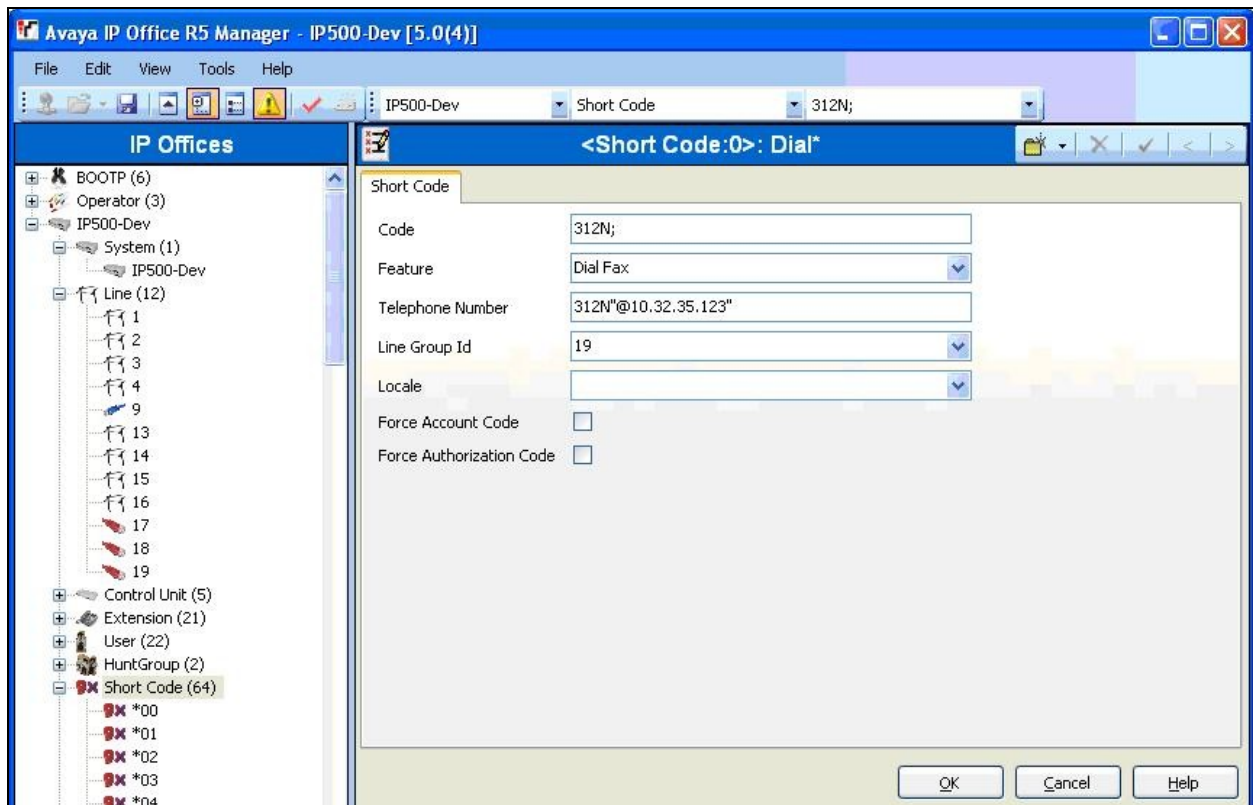
5. Configure emFAST FACSys Messaging Suite

This section provides the procedures for configuring the emFAST FACSys Messaging Suite server. The procedures include the following areas:

- Launch FACSys Administrator
- Administer IP address
- Administer devices
- Administer user profiles
- Reboot server

5.1. Launch FACSys Administrator

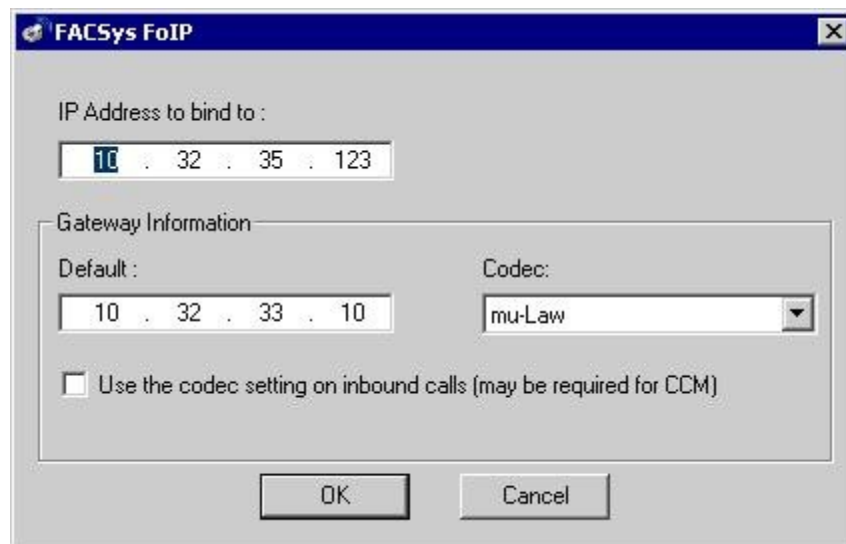From the FACSys Messaging Suite server, double-click on the **FACSys Administrator** icon shown below, which is created as part of installation.

5.2. Administer IP Address

The **FACSys Administrator** screen is displayed. Click on the **Configure FACSys FOIP** icon, as shown below.
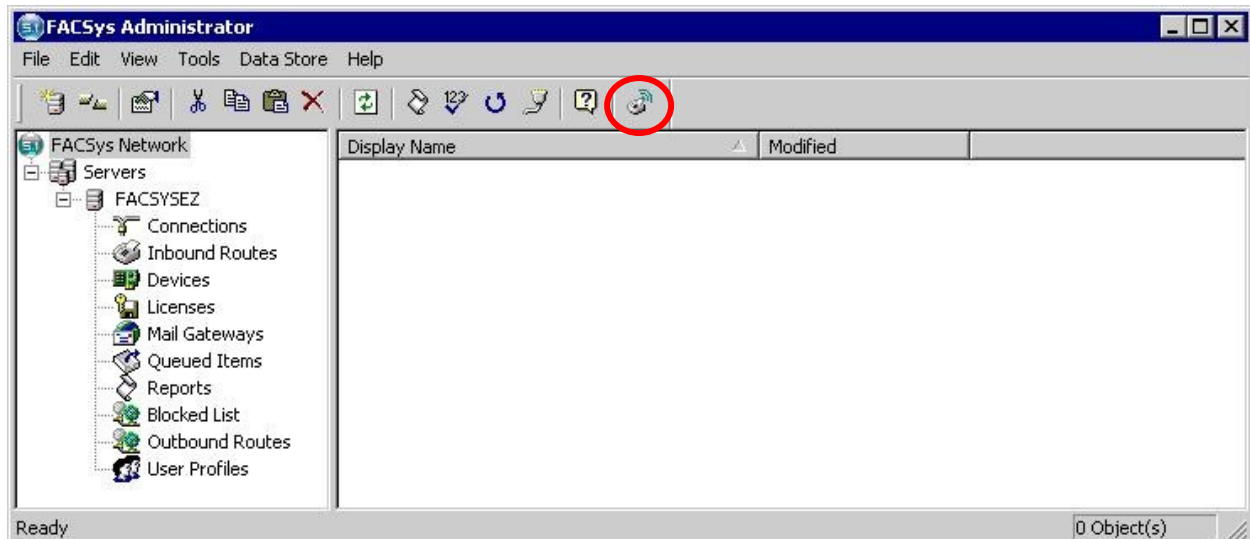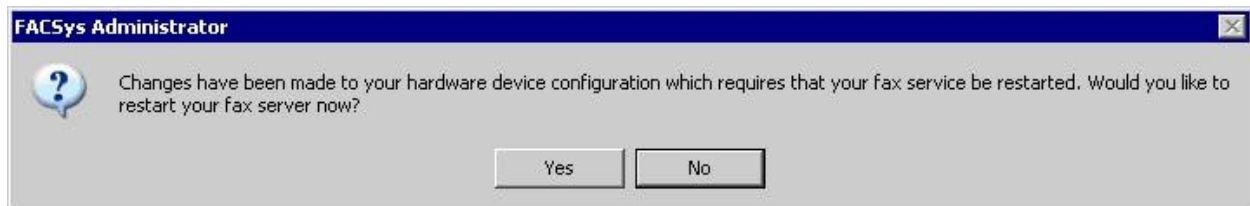
The **FACSys FoIP** screen is displayed. In the **Gateway Information Default** field, enter the LAN IP address of Avaya IP Office from **Section 4.2**. Retain the default values in the remaining fields, and click OK.

The **FACSys Administrator** dialog box is displayed next. Click **Yes** to restart the server.

5.3. Administer Devices

After the server has been restarted, follow the procedures in **Section 5.1** to re-launch the FACSys Administrator. In the **FacSys Administrator** screen, select **Devices** from the left pane to display a list of fax ports. Select all fax port entries as shown below, right-click and select **Properties**.
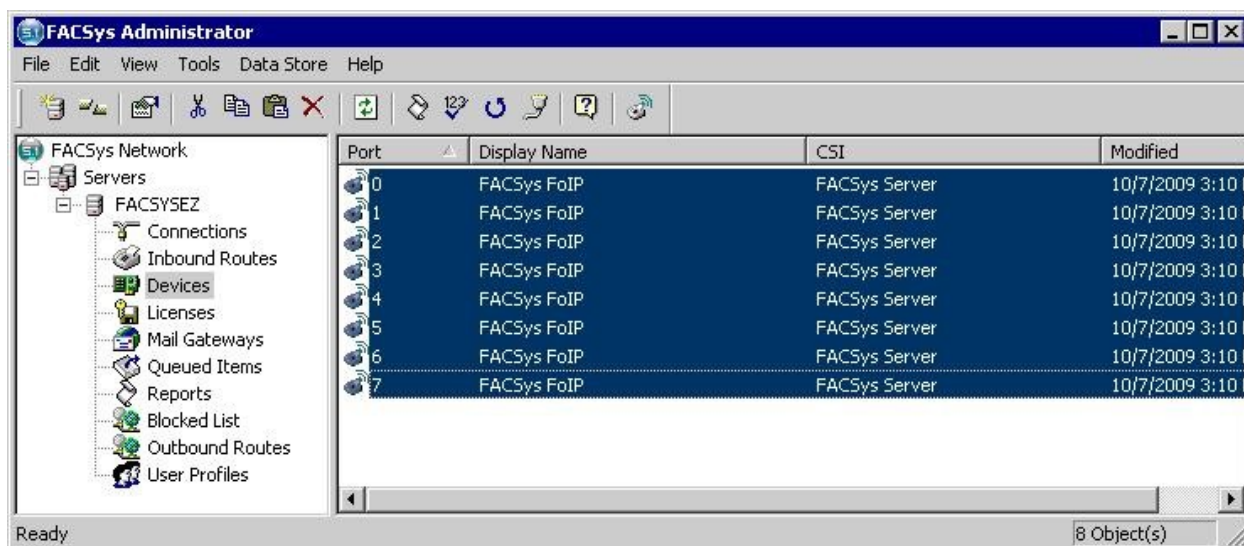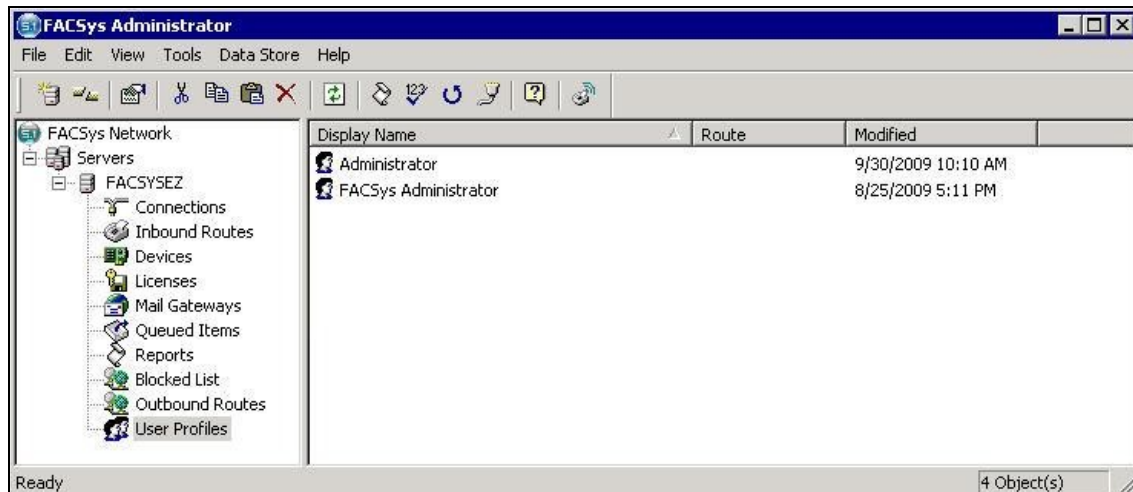

The **FACSys FoIP Properties** screen is displayed. In the **Use the following number of digits when routing** field, select the proper number of digits used for fax numbers, in this case "5". Click **OK**.
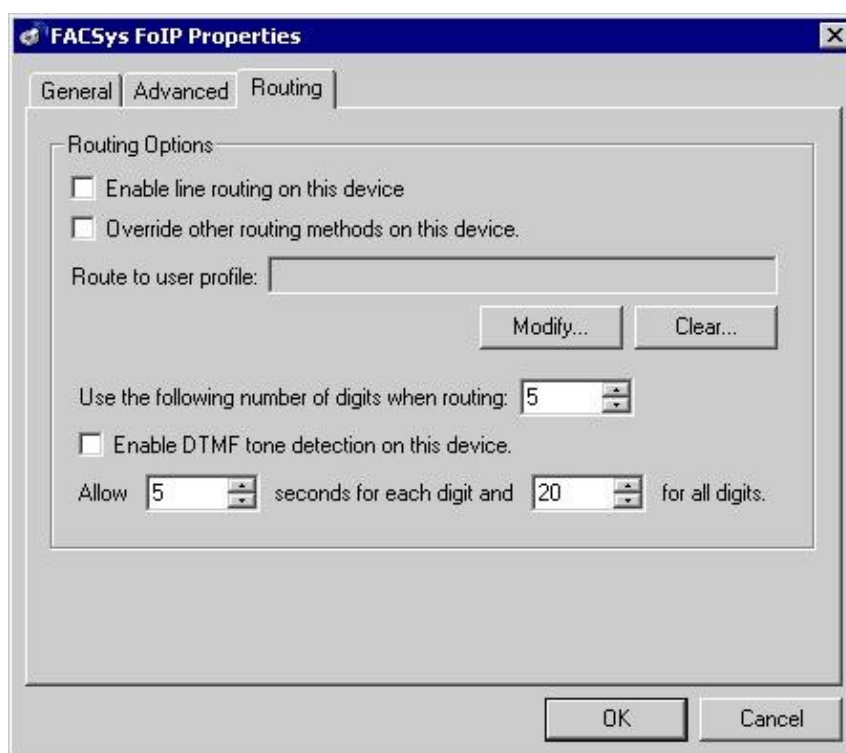
5.4. Administer User Profiles

From the **FACSys Administrator** screen, select **User Profiles** from the left pane to display a list of users. Right-click on **User Profiles** in the left pane, and select **New User Profile** from the pop-up list to add a new user.
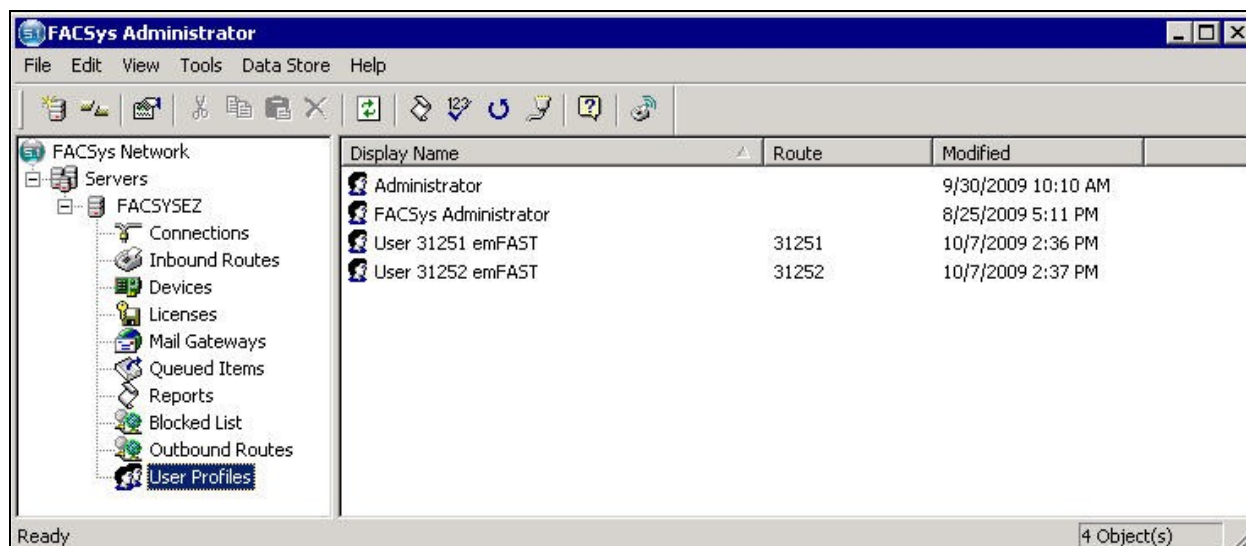

The **New Profile Properties** screen is displayed. Enter desired values for **First Name**, **Last**, **Alias**, and **Password**. In the **Routing** field, enter the first fax number shown in **Figure 1**, in this case "31251". Click **OK**.

Repeat this section to create a profile for each fax user. In the compliance testing, two users with fax numbers of 31251 and 31252 were created, as shown below.

5.5. Reboot Server

Manually reboot the FACSys Messaging Suite server.

6. General Test Approach and Test Results

The feature test cases were performed manually. Internal and external fax calls to and from the emFAST FACSys Messaging Suite server were made. The fax calls were sent and received using the emFAST FACSys Web Access and the analog fax machine at the PSTN.

The serviceability test cases were performed manually by disconnecting/reconnecting the Ethernet cables and stop/start the fax service on the emFAST FACSys Messaging Suite server.

All test cases were executed. The one observation noted from the compliance test is that upon any failure of send/receive fax, the raw error code is only displayable from the FACSys Desktop interface, and the user will need to contact emFAST for a mapping of error codes to reasons.

7. Verification Steps

This section provides the tests that can be performed to verify proper configuration of Avaya IP Office and emFAST FACSys Messaging Suite. Prior to verification, send a fax with a PDF attachment from the analog fax machine in the PSTN to a fax user on Avaya IP Office.

7.1. Verify Avaya IP Office

From the **Avaya IP Office R5 Manager** screen shown in **Section 4.2**, select **File > Advanced > System Status** to launch the **System Status** application, and log in with the appropriate credentials.

The **IP Office System Status** screen is displayed. Select **Trunks** in the left pane to display a list of administered lines, and select the SIP line number from **Section 4.4,** in this case "19". Verify that the **SIP Trunk Summary** screen shows an active channel with **Current State** of "Connected", and **Codec** of "T38 Fax".
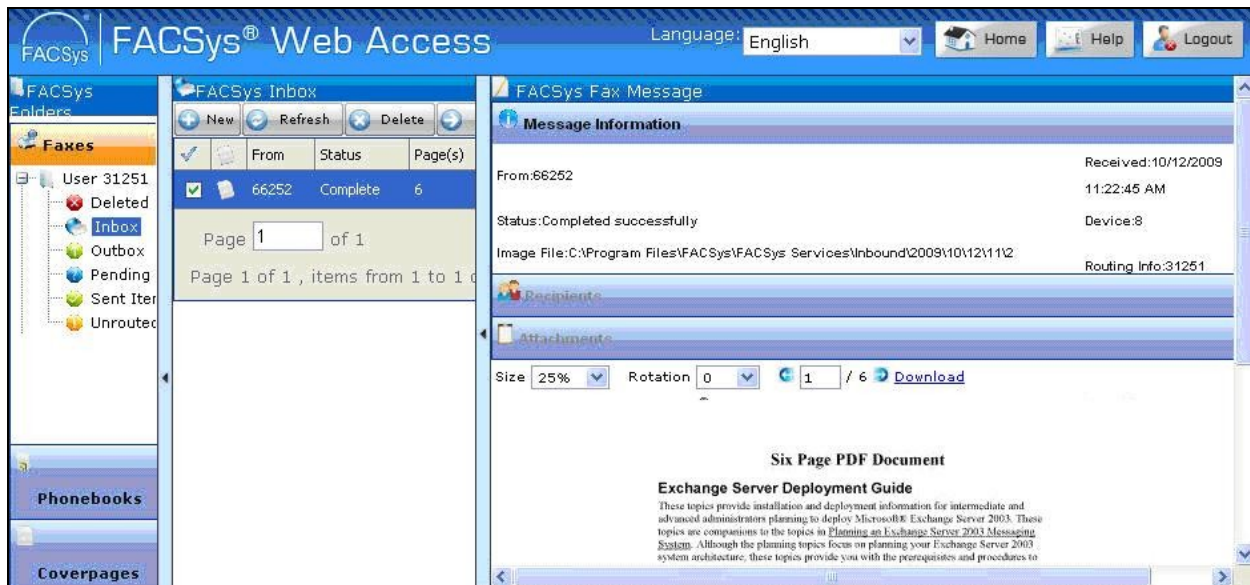
7.2. Verify emFAST FACSys Messaging Suite

Access the FACSys Messaging Suite web interface by using the URL "http://ip-address/fwa" in an Internet browser window, where "ip-address" is the IP address of the FACSys Messaging Suite server. Log in with the appropriate fax user credentials.

The **FACSys Web Access** screen is displayed. After the fax has been completed, click on the **Refresh** button to display an entry in the middle pane for the newly received fax.
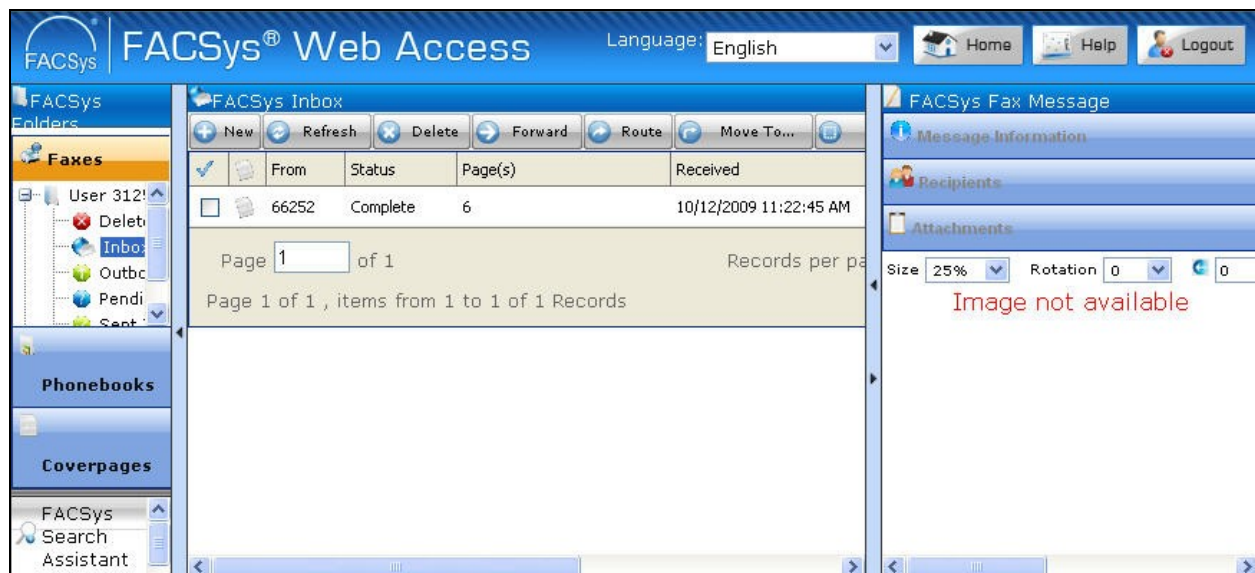
Select the new fax entry in the middle pane. Verify that the **Message Information** section in the right pane displays the high level information for the received fax. Verify that the **Attachments** section in the right pane show the contents of the PDF attachment.

8. Conclusion

These Application Notes describe the configuration steps required for the emFAST FACSys Messaging Suite to successfully interoperate with Avaya IP Office.   All feature and serviceability test cases were completed with one observation noted in **Section 6**.

9. Additional References

This section references the product documentation relevant to these Application Notes.

1. *IP Office 5.0 Documentation CD*, August 2009, available at http://support.avaya.com.

2. *FACSys 5.1 Enterprise Administrator Program Manual*, available on the FacSys installation CD.

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.