

## Avaya Solution & Interoperability Test Lab

# **Application Notes for MultiTech FaxFinder® FFx40 with Avaya IP Office – Issue 1.0**

#### **Abstract**

These Application Notes describe the configuration steps required to integrate the MultiTech FaxFinder® FFx40 with Avaya IP Office. The MultiTech FaxFinder FFx40 is a fax server that uses analog ports from Avaya IP Office to send and receive fax. The FaxFinder FF240 was used in the compliance test.

Readers should pay attention to **Section 2**, in particular the scope of testing as outlined in Section 2.1 as well as any observations noted in **Section 2.2**, to ensure that their own use cases are adequately covered by this scope and results.

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 to integrate the MultiTech FaxFinder® FFx40 with Avaya IP Office. The MultiTech FaxFinder FFx40 is a fax server that uses analog ports from Avaya IP Office to send and receive fax. The FaxFinder FF240 which provides two built-in analog ports was used in the compliance test.

For each user on Avaya IP Office that desires to use fax, a fax extension is assigned and configured on MultiTech FaxFinder FFx40. Incoming fax calls to these fax extensions are routed to MultiTech FaxFinder FFx40 via an available analog port. The received incoming fax can be sent to the fax recipient's email address, printed automatically, or stored in a shared folder, depending on the provisioning in MultiTech FaxFinder FFx40. In the compliance testing, the shared folder method was used to store incoming faxes.

Outgoing faxes can be sent from the MultiTech FaxFinder client application, from any PC application that supports print, from any email client using the T.37 interface, or from the MultiTech FaxFinder web interface. In the compliance testing, the web interface method was used to send outgoing faxes.

# 2. General Test Approach and Test Results

The feature test cases were performed manually. Internal and external fax calls to and from MultiTech FaxFinder FFx40 were made. The fax calls were sent and received using the MultiTech FaxFinder FFx40 web interface and the analog fax destination at the PSTN.

The serviceability test cases were performed manually by disconnecting/reconnecting the Ethernet cable to MultiTech FaxFinder FFx40, and by rebooting the MultiTech FaxFinder FFx40 server.

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

# 2.1. Interoperability Compliance Testing

The interoperability compliance test included feature and serviceability testing. The feature testing focused on verifying the following with MultiTech FaxFinder FFx40:

- Proper handling of faxes via analog ports, including send/receive, internal fax, external fax over ISDN (PRI) trunk and SIP trunk, simultaneous bi-directional faxes, and miscellaneous failure scenarios.
- Proper handling of faxes with different pages, complexity, format and data rates.
- No adverse impact on any internal or external calls during faxes.

The serviceability testing focused on verifying the ability of MultiTech FaxFinder FFx40 to recover from adverse conditions, such as disconnecting/reconnecting the Ethernet cable to MultiTech FaxFinder FFx40.

#### 2.2. Test Results

All test cases were executed and passed.

## 2.3. Support

Technical support on MultiTech FaxFinder FFx40 can be obtained via phone or MultiTech support website.

Phone: 763-717-5863 or 800-972-2439
Web: <a href="https://support.multitech.com">https://support.multitech.com</a>

# 3. Reference Configuration

In the compliance testing, the Avaya IP Office Server Edition system consists of Avaya IP Office Primary Linux running on Virtualized Environment and a 500V2 Expansion. The IPO Primary was configured to connect to PSTN via a SIP trunk while the 500V2 Expansion connected to PSTN via a PRI trunk, IPO Primary and 500V2 Expansion is communicated by Small Community Network (SCN) IP Office Line. The following are typical scenarios verified during the compliance test:

- Bi-directional faxes between FaxFinder FF240 analog ports.
- Bi-directional faxed between FaxFinder FF240 server and the fax endpoint that connected to an analog port in the IPO 500V2 Expansion.
- Bi-directional faxes between FaxFinder FF240 server and PSTN fax endpoint via SIP trunk.
- Bi-directional faxes between FaxFinder FF240 server and PSTN fax endpoint via PRI trunk.

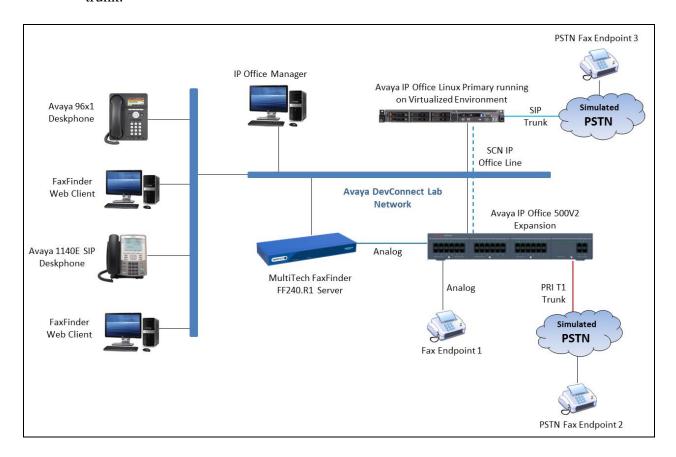


Figure 1: MultiTech FaxFinder FF240 with Avaya IP Office Server Edition using Analog Ports

# 4. Equipment and Software Validated

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

Equipment/Software	Release/Version
Avaya IP Office Primary Linux running on Virtualized Environment	10.0.0.1 Build 53
Avaya IP Office 500V2 Expansion	10.0.0.1 Build 53
Avaya 96x1 Series IP Deskphones (H.323)	6.6229
Avaya 1140E SIP Deskphones	4.04.23
HP Super G3 Fax Machine	-
MultiTech FaxFinder FF240	3.5.2

# 5. Configure Avaya IP Office

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

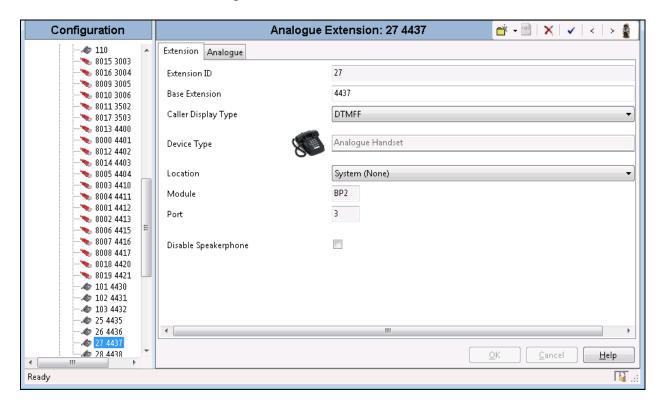
- Administer Physical Fax Ports
- Administer Fax Hunt Group
- Administer Virtual Fax Users

# 5.1. Administer Physical Fax Ports

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

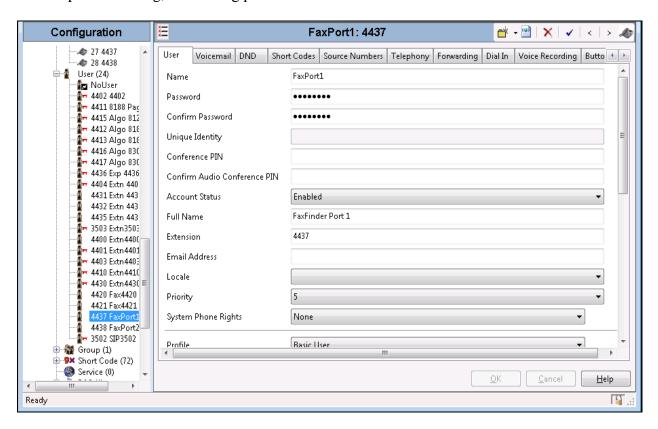
The **Avaya IP Office R10 Manager** screen is displayed. From the configuration tree in the left pane, right-click on **Extension** to enter a new extension for the first analog port connected to MultiTech FaxFinder.

The **Analogue Extension** screen is displayed. In the Base Extension field, enter the extension for the analog port. In this example, the first analog port is extension "4437". In **Caller Display Type**, select "DTMFF" from the drop-down list, to enable the called number to be outpulsed via DTMF to MultiTech FaxFinder upon call connection.



From the configuration tree in the left pane, right-click on **User** and select **New** from the pop-up list to add a new user. Select the **User** tab and enter a descriptive **Name** and **Full Name**. Enter the extension configured above in the **Extension** field. In this case, the user is "4437".

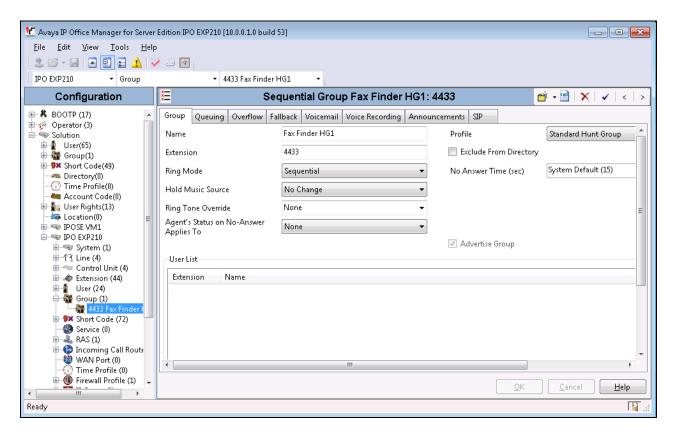
Repeat this section for all analog ports that are physically connected to MultiTech FaxFinder. In the compliance testing, two analog ports with extensions "4437" and "4438" were used.



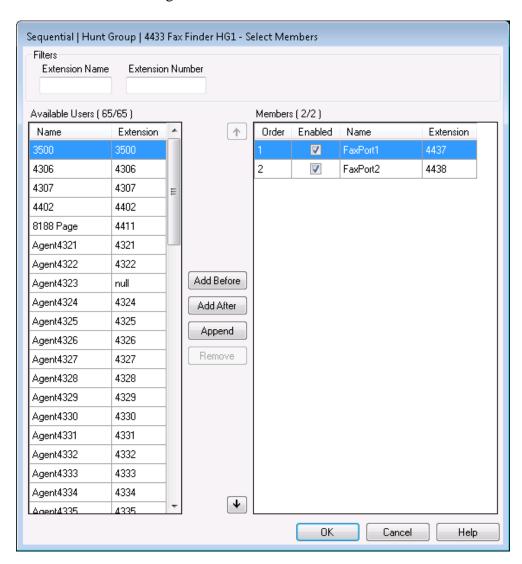
## 5.2. Administer Fax Hunt Group

From the configuration tree in the left pane, right-click on **HuntGroup** and select **New** from the pop-up list to add a new hunt group. In the Group tab enter the desired values for the **Name** and **Extension** fields.

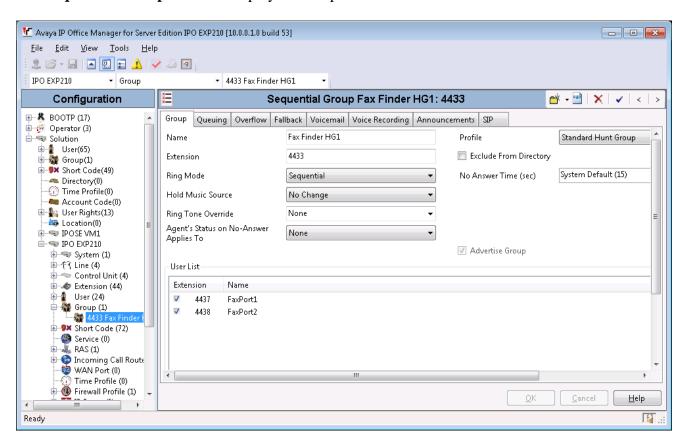
Click on **Edit** in the **User List** section to add members.



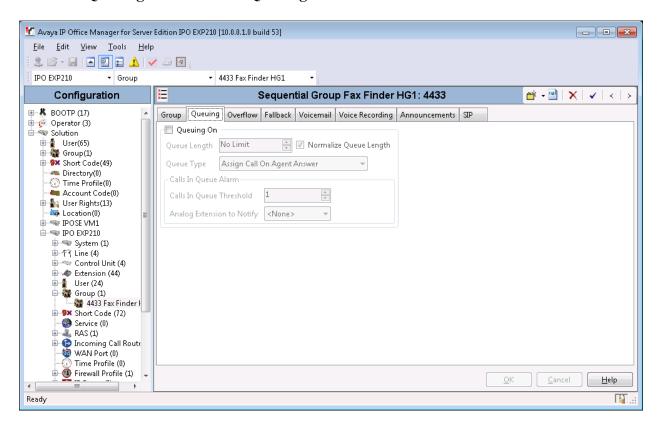
The **Select Members** screen is displayed. Select the entries with **Extension** values that correspond to the physical analog fax ports from **Section 5.1**, and click the **Append** button to move the selected entries to the right. Click **OK**.



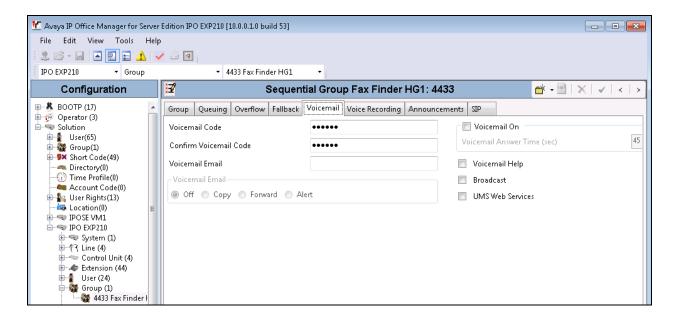
The **Sequential Group** screen is displayed and updated with the selected members.



Select the **Queuing** tab and disable **Queuing On** as shown below.

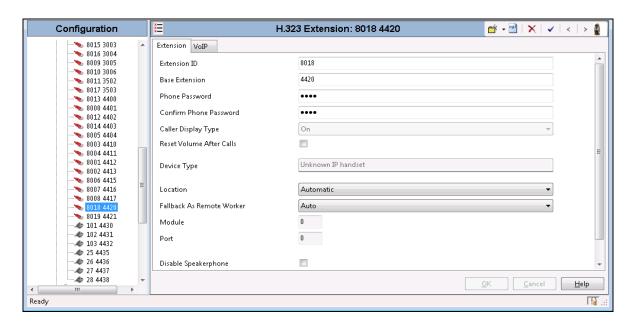


Select the **Voicemail** tab, and verify that **Voicemail On** and **Voicemail Email** are disabled as shown below.

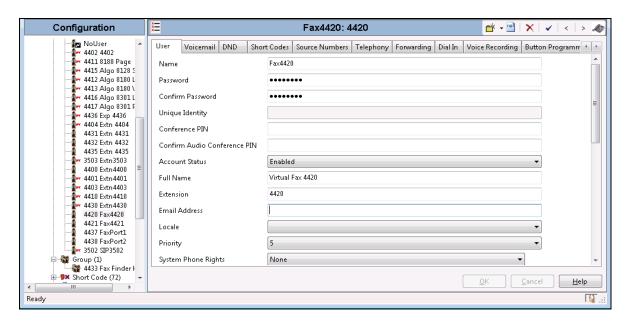


#### 5.3. Administer Virtual Fax Users

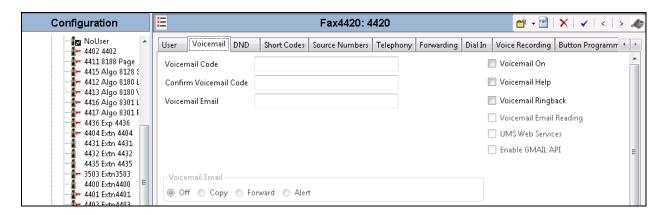
For every IP Office user who desires to use MultiTech FaxFinder with a personal identifiable fax number, a virtual fax extension and user needs to be created. From the configuration tree in the left pane, right-click on **Extension** and select **New → H323 Extension**, the **H323 Extension** screen is displayed. In the **Extension** tab enter the desired **Base Extension**, in this case "4420". Click OK button to save.



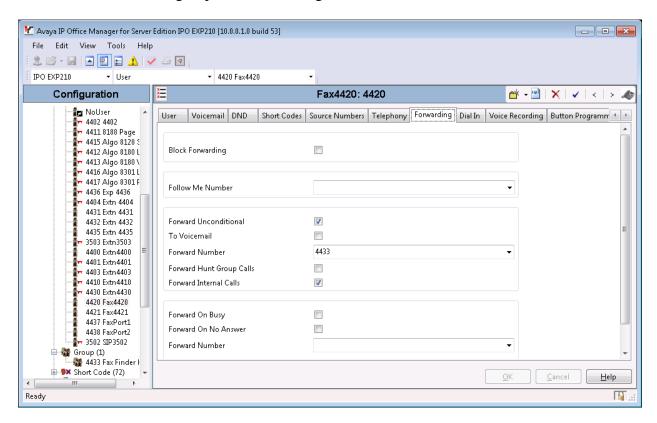
From the configuration tree in the left pane, right-click on **User**, and select **New**. The **User** screen is displayed. Select the **User** tab. Enter a descriptive **Name** and **Full Name**. For **Extension**, enter the base extension number configured above (e.g., "4420"). Click OK button to save.



Select the **Voicemail** tab, and make sure **Voicemail On** is unchecked, and that **Voicemail Email** is **Off**, as shown below.



Select the **Forwarding** tab. Check the **Forward Unconditional** field. Set the **Forward Number** to the fax hunt group extension configure in **Section 5.2**.



# 6. Configure MultiTech FaxFinder FFx40

This section provides the procedures for configuring MultiTech FaxFinder. The procedures include the following areas:

- Launch FaxFinder Web Management
- Administer Network
- Administer Modem
- Administer Network Shares
- Administer Inbound Routing Recipients
- Administer Users

# 6.1. Launch FaxFinder Web Management

Launch the FaxFinder Web Management interface by using the URL "http://ip-address" in an Internet browser window, where "ip-address" is the IP address of FaxFinder. The **Login** screen below is displayed. Log in using the appropriate credentials.

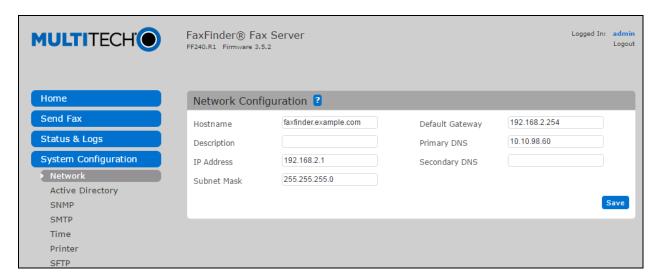


The screen below is displayed next.



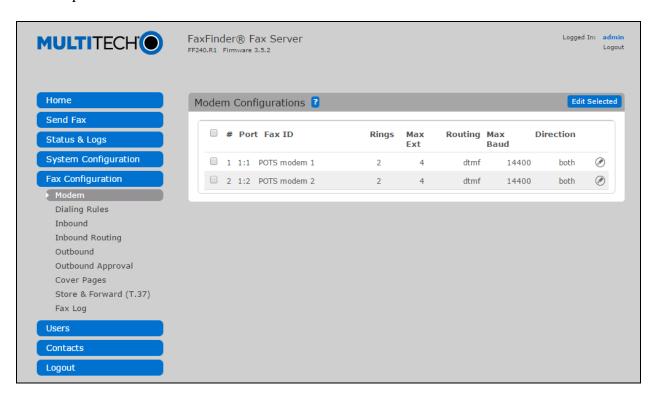
#### 6.2. Administer Network

Under **System Configuration** in the left pane, select **Network**. The **Network Configuration** screen is displayed. Modify the **Hostname, IP Address**, **Subnet Mask** and **Default Gateway** to the appropriate network values.



#### 6.3. Administer Modem

Under **Fax Configuration** in the left pane, select **Modem**. The **Modem Configurations** screen is displayed as shown below. Select the ports to configure by selecting the checkbox associated with the port and click **Edit Selected**.



In the **Modem Configuration** screen shown below, enter the following values for the specified fields, and retain the default values for the remaining fields.

• **Routing:** "DTMF Digits"

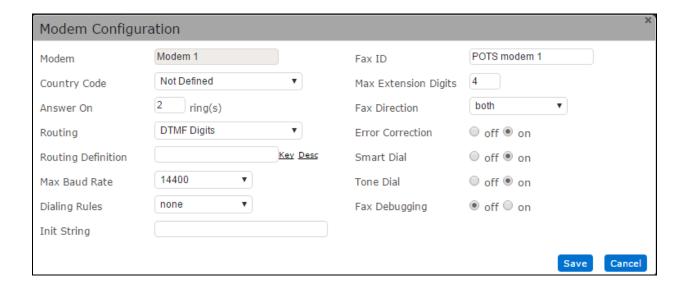
• **Fax ID:** Enter a descriptive name.

Max Extension Digits: Enter number of digits for the virtual fax numbers from Section 5.1.
FaxDirection: Specify whether the modem will be used for incoming and outgoing

Fax calls.

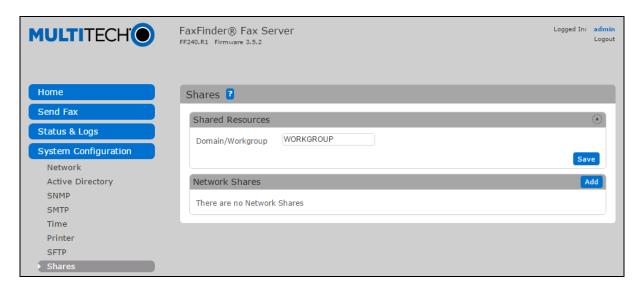
• Max Baud Rate: Specify the maximum baud rate for fax calls using this modem.

Testing was performed with a baud rate from 2400 to 14400.

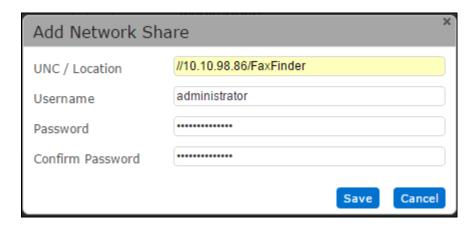


#### 6.4. Administer Network Shares

Under **System Configuration** in the left pane, select **Shares**. The screen below is displayed. Click **Add** to add a network share. Note that the configuration in this section is only necessary for the shared folder method of storing incoming faxes.

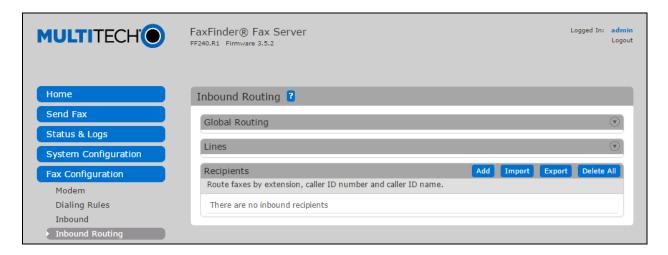


The **Add Network Share** screen is displayed. For **UNC / Location**, enter the path to the shared location. Enter the appropriate credentials for **Username**, **Password** and **Confirm Password**. Note that this location must allow network sharing so that other users can write to it.

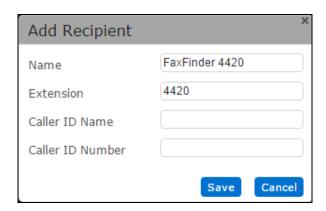


## 6.5. Administer Inbound Routing Recipients

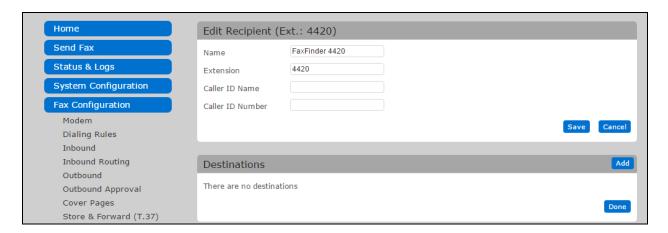
Under **Fax Configuration**, select **Inbound Routing**. The screen below is displayed. In the **Recipients** section, click **Add** to add a new recipient.



The **Add Recipient** screen is displayed next. In the **Name** field enter a descriptive Name. For **Extension**, enter the first fax extension.



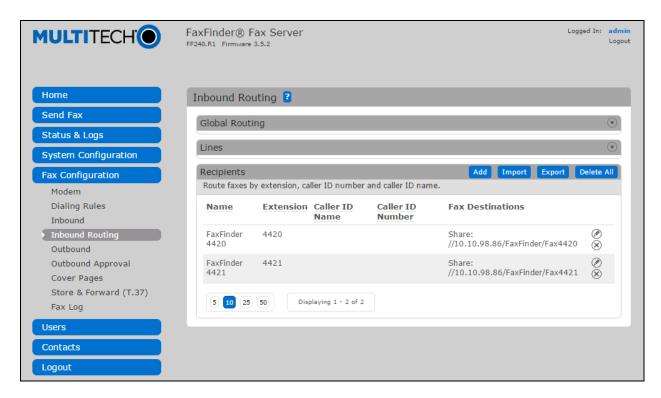
The screen is updated as shown below. Click **Add** to add a destination for incoming faxes. Note that the fields **Caller ID Name** and **Caller ID Number** should be left as blank.



The **Add Destination** screen is displayed. The default setting is to send incoming faxes to the recipient's email. In the compliance testing, the destination was configured to use the shared folder method to store incoming faxes. Select "Share" from the drop-down box, and enter the path to a shared folder in the next field. The **Enter Share** field was set to //10.10.98.86/FaxFinder/Fax4420. Repeat this section to add an inbound routing recipient for each fax user.



In the compliance testing, two inbound routing recipients were created to correspond to the two fax users as shown below.

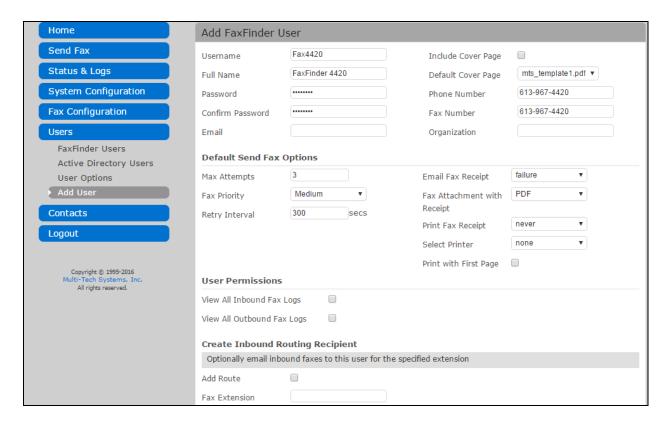


#### 6.6. Administer Users

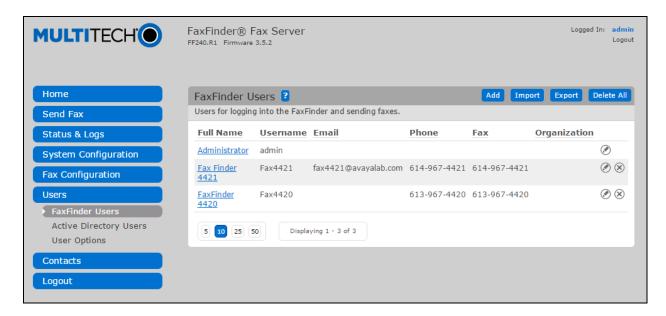
Under **Users**, select **FaxFinder Users** to display the **FaxFinder Users** screen. Click **Add** to add a new user.



The **Add FaxFinder User** screen is displayed next (shown below is the **Edit** screen since the user was previously configured). Enter descriptive values for **Username** and **Full Name**. Enter the desired value for **Password** and **Confirm Password**. Enter the full telephone and fax numbers for the user in the **Phone Number** and **Fax Number** fields, respectively and leave other fields at default



Repeat this section to create all desired users. In the compliance testing, two fax users were created as shown below.



# 7. Verification Steps

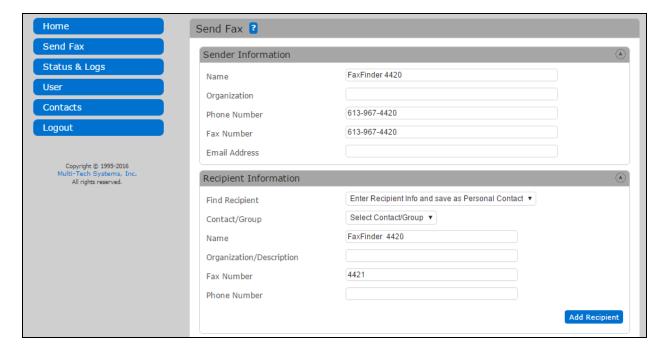
This section provides the tests that can be performed to verify proper configuration of MultiTech FaxFinder and Avaya IP Office.

## 7.1. Verify MultiTech FaxFinder FFx40

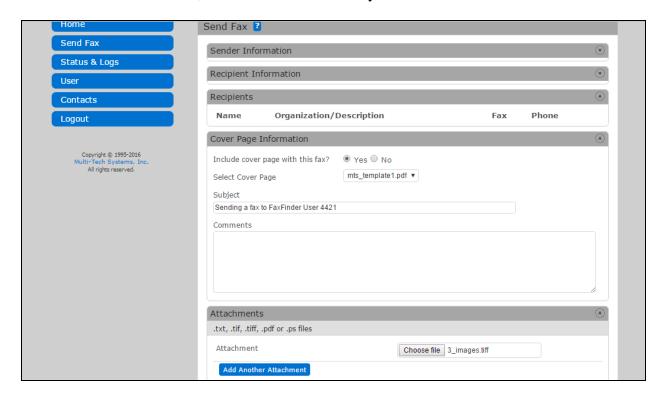
Follow the procedures in **Section 6.1** to launch the FaxFinder Web Management interface, and log in using a fax user's credentials from **Section 6.6**. Select **Send Fax** to display the **Send Fax** screen.

The **Sender Information** section is populated automatically.

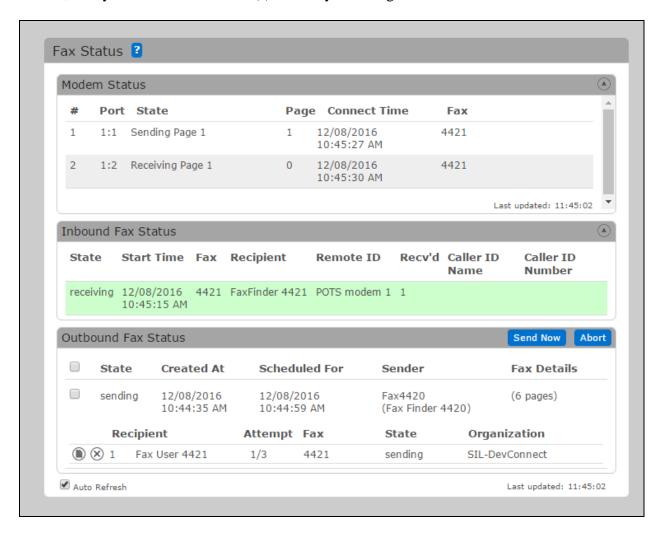
In the **Recipient Information** section, enter the appropriate **Name** and **Fax Number** for the fax recipient as shown below. Retain the default values in the remaining fields.



Scroll down the screen to the **Cover Page Information** section. Modify this section as desired. In the **Attachments** section, click **Browse** to select any desired attachment. Click **Send Fax**.



Under **Status & Logs**, select **Fax Status** to display the screen below. In the **Modem Status** section, verify that there is a channel(s) in use by checking the **State**.

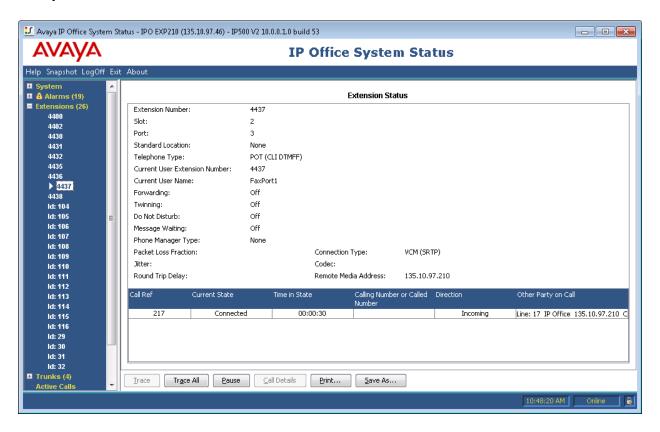


## 7.2. Verify Avaya IP Office

From the Avaya IP Office R10 Manager screen shown in Section 5, select File  $\rightarrow$  Advanced  $\rightarrow$  System Status to launch the System Status application, and log in using the appropriate credentials.

The **IP Office System Status** screen is displayed. Expand **Extensions** in the left pane and select the analog line from **Section 5.1**, in this case "4437".

Verify that the **Current State** of the extension is "Connected".



## 8. Conclusion

These Application Notes describe the configuration steps required to integrate the MultiTech FaxFinder FFx40 with Avaya IP Office using analog ports. All feature and serviceability test cases were completed and passed.

## 9. Additional References

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

- [1] Administering Avaya IP Office Platform with Manager. Release 10, September 2016
- [2] FaxFinder® FFx40 Administrator User Guide, available at http://www.multitech.com

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