



Avaya Solution & Interoperability Test Lab

Application Notes for IA770 INTUITY™ AUDIX Messaging and Mutare Enabled Voice Mail using SpinVox Speech to Text – Issue 1.0

Abstract

This Application Note describes the configuration steps required for Mutare Enabled Voice Mail with SpinVox Speech to Text to interoperate with Avaya IA770 INTUITY™ AUDIX Messaging Application.

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

The Mutare Enable Voice Mail (EVM)-SpinVox application provides users the ability to receive a text transcription of voice messages received on Avaya IA770 INTUITY Audix. The integration with Avaya IA770 INTUITY Audix is achieved using standard IMAP4 protocol. The Mutare EVM-SpinVox application retrieves new voice messages from the users' voice mailboxes on the IA770 and sends them securely to the SpinVox service for transcription. The message is re-encrypted and sent back to a corporate email account, which the EVM application will monitor for new messages. When a new message arrives from SpinVox (after being transcribed) EVM will decrypt the message and send it to the email or SMS address defined by the user for delivery of the message. Users can view up to 500 characters of the transcription and can listen to the attached copy of the voice message if this option has been selected (and if sound files can be played back on the device used to retrieve the message). Fax messages are not sent to SpinVox, but are converted (if necessary) by the EVM application, to the format selected by the user (.tif or .pdf) and sent to the destination address defined by the user.

1.1. Message Flow and High-Level Architecture

The following diagram depicts the message flows between the Avaya IA770 INTUITY Audix, Mutare EVM server, and the SpinVox service. It also depicts the areas of the environment where the message is transferred in plain text and where the message is transferred encrypted:

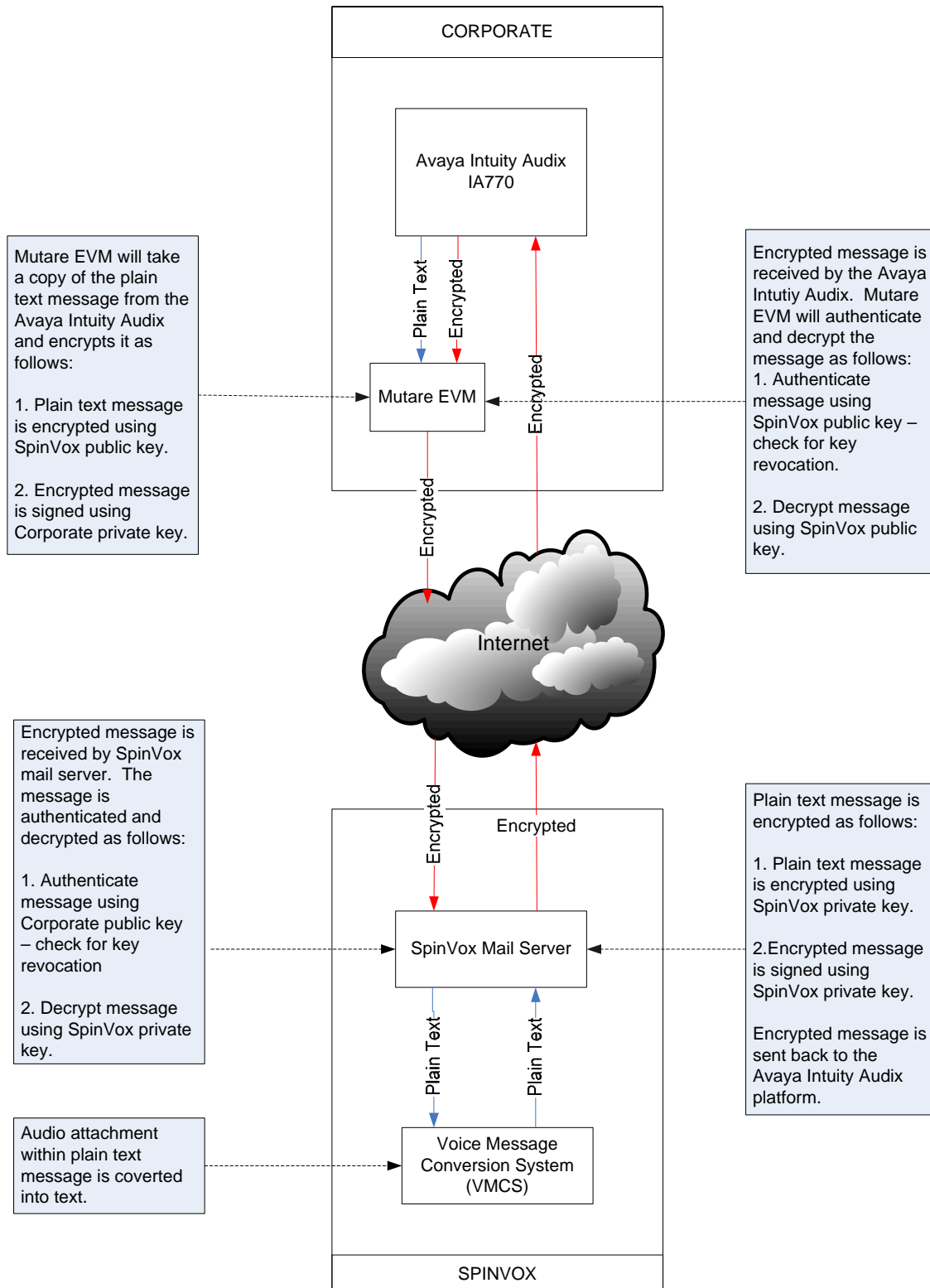


Figure 1 - Message Flow

2. Equipment and Software Validated

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

Tables are recommended:

Equipment	Software
Avaya™ G350 w S8300/IA770	R015x.01.1.415.1/5.1-3.0
Dell PowerEdge 860 Server	Microsoft Windows 2003 Server, (Enterprise version) with the latest Service Pack installed. Microsoft Internet Information Server version 6.0 FTP Server SMTP Virtual Server Web Server Microsoft Terminal Services Microsoft SQL Server McAfee Enterprise 8.1 – anti-virus software Mutare EVM application – release 2.0

3. Installation of the Mutare-Spinvox Application

The EVM application, related SQL Server database components, and other utilities are installed by Mutare on a customer-provided server running Windows Server 2003, communicating with Avaya Intuity Audix IA770. Detailed implementation requirements are provided by Mutare, but as a general statement, the customer would be responsible for the server, network connectivity, DNS records, and whatever would be required to route mail messages from their network to/from the Internet (securely to SpinVox).

Mutare provides remote (or on-site) installation of the application, including creation of the certificates required to securely send (encrypt) and receive (decrypt) messages from the SpinVox service. Upon completion of the install, the customer can begin to configure the application to communicate to IA770 server, customize the way the application can be used, and begin adding user accounts.

3.1. Special Procedures Required

The test plan (and subsequent implementation) of the Mutare EVM-SpinVox application requires that an email address be established for the IA770 unit being used to receive the transcribed messages back from SpinVox. For this test plan to be executed a Google GMAIL account provided this address. At installation, the specified GMAIL address was registered with SpinVox to allow for the Speech to Text conversions and target return address to be established with the service.

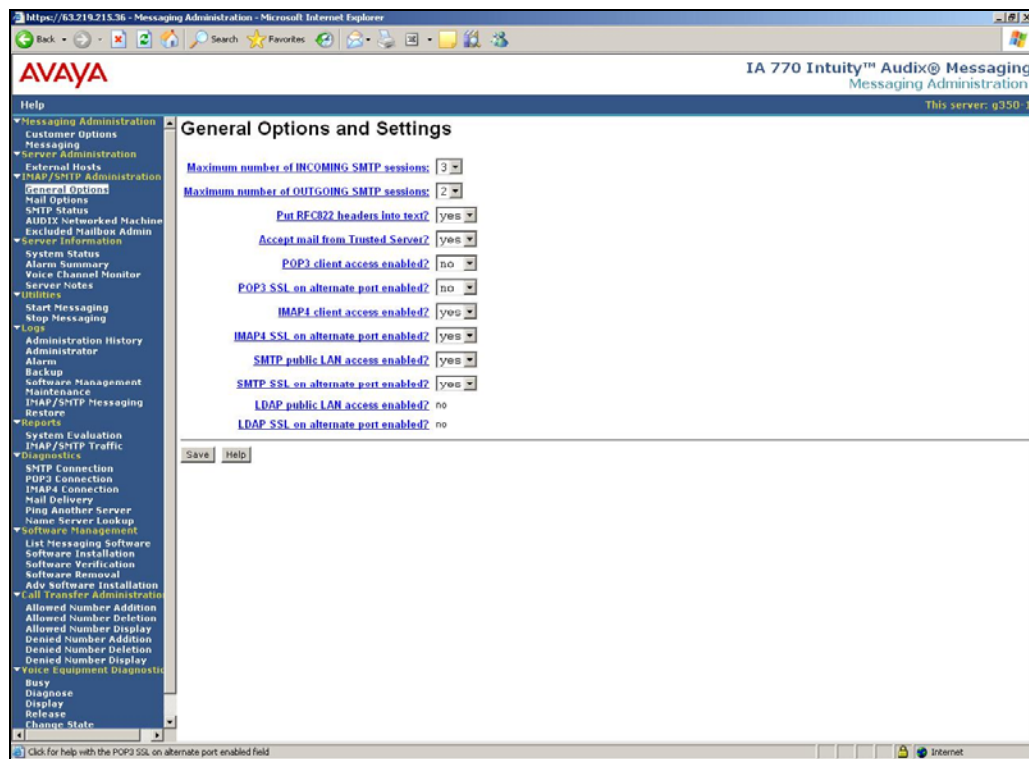
3.2. Installation Test Results

All components of the EVM-SpinVox application were successfully installed on a Dell 860 server running Windows Server 2003. The server was protected during the test with McAfee Enterprise 8.5.0 anti-virus software. There appeared to be no conflicts with the application and the anti-virus software.

Upon completion of the installation, access to the EVM administration page was confirmed to be available on the server (<http://localhost/admin.asp>) and was available via a network URL such as <http://evmsv.ataclabs.avaya.com>). EVM uses the Default Virtual SMTP Server in IIS 6.0 to queue messages for delivery to a smart email host. Security Certificates and Private Keys were installed for the S/MIME encryption of messages from the application to SpinVox, and to verify and decrypt the transcriptions when received from SpinVox.

4. Configuring the Avaya Intuity Audix IA770

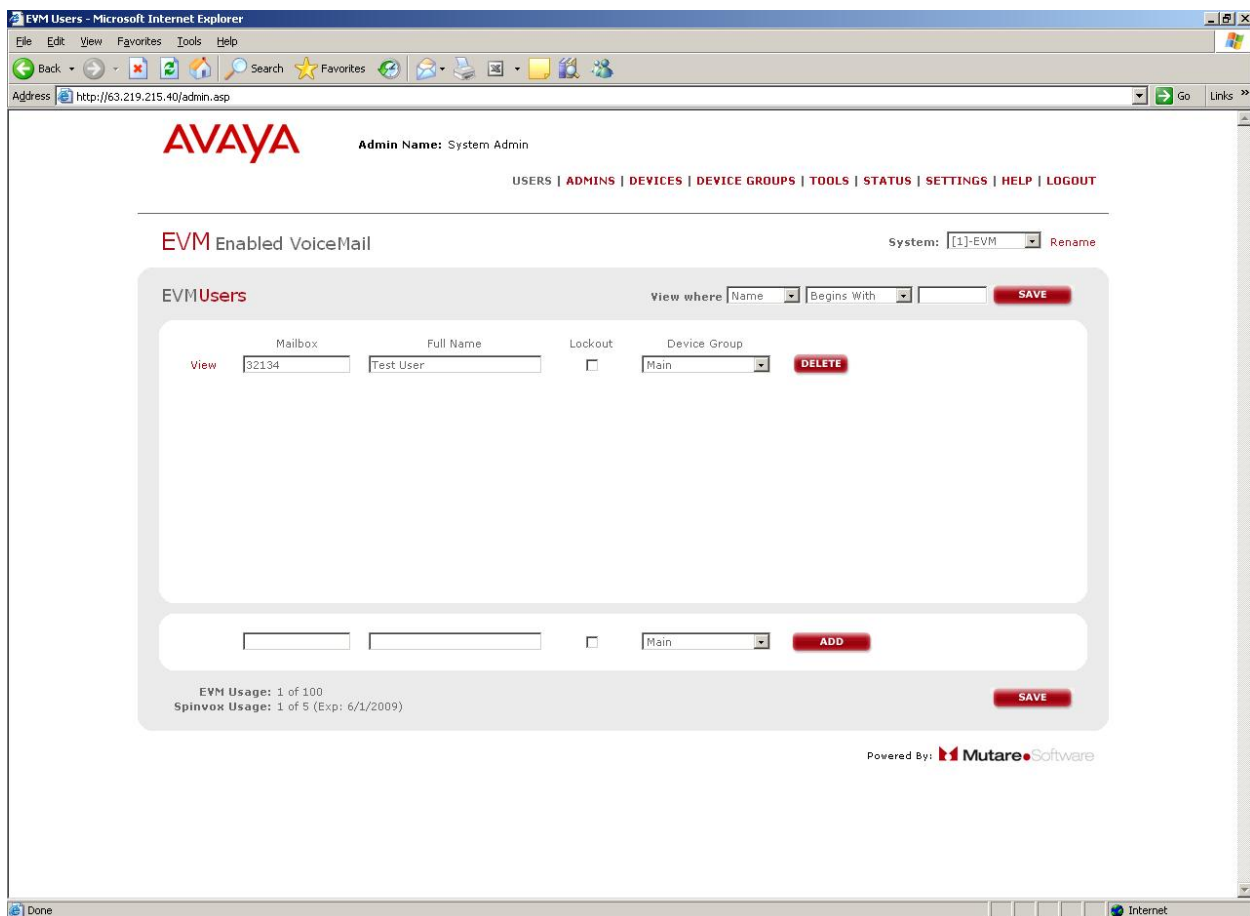
The Avaya Intuity Audix IA770 is setup as described in “Avaya IA 770 INTUITY AUDIX, Messaging Application, Release 5.1, Administering Communication Manager Servers to Work with IA770”. Verify that the “General Options and Settings” are configured as below:



5. Configuring the Mutare/SpinVox Application

The EVM application can check for transcribed messages (from SpinVox) on an IMAP4 capable email server. For example, a customer could have the return mailbox (for SpinVox transcriptions) on a Microsoft Exchange or Lotus Domino email server – and the EVM application would check for messages on that server. Since the Avaya Intuity Audix IA770 supports IMAP4, it can also be used to receive the transcribed messages from SpinVox – and in the case of this lab testing, a mailbox on an Avaya IA770 was used.

Once the mailbox configuration was completed, test user accounts were configured on the IA770, and added as new accounts in the EVM-SpinVox application.

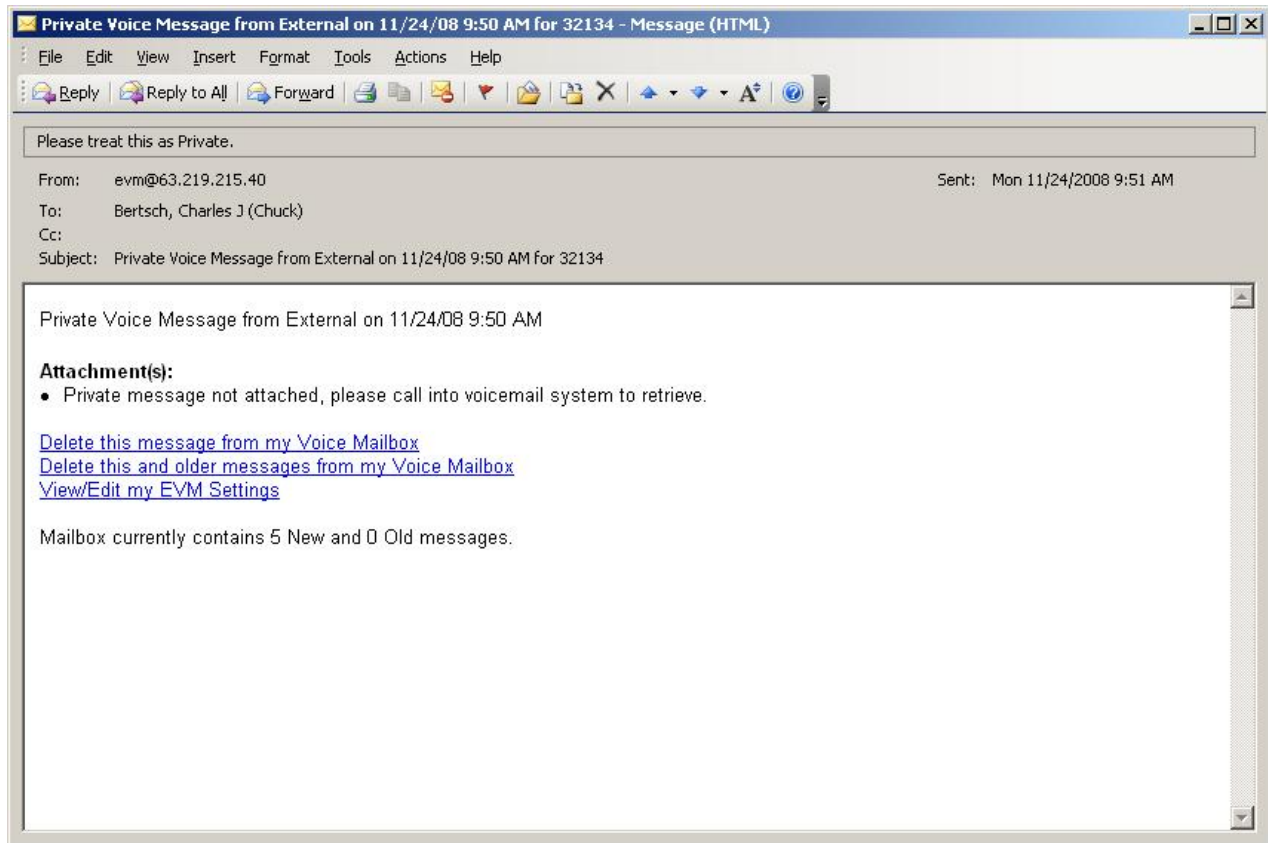


The screen below shows the User Settings screen for EVM-SpinVox and the mailbox account for Test User 32134. This is typical of the web page screen a user would complete to being using the application. For the testing, we defined one Device Type in EVM (Desktop), and allowed the test users to set up the parameters for the devices. Screen entry was straight-forward and required only about 2-3 minutes to complete.

The screenshot shows a web browser window titled "EVM Settings - Microsoft Internet Explorer". The address bar displays "http://63.219.215.40/evm.asp". The page header features the Avaya logo, the user's name "Name: Test User", mailbox number "Mailbox: 32134", and navigation links "SETTINGS | HELP | LOGOUT". The main content area is titled "EVM Enabled VoiceMail" and "EVMSettings". It contains a form with the following fields and controls:

- Device Type:** A dropdown menu set to "Desktop EVM".
- Active:** A checked checkbox.
- Email Address:** A text field containing "cbertsch@avaya.com".
- Send when I receive:** Checkboxes for "Voice" and "Fax", both of which are checked. A dropdown menu next to "Voice" is set to "ALL".
- SpinVox (Speech-to-Text):** A checked checkbox. Below it are two dropdown menus: "WAV" for "Audio Format" and "PDF" for "Fax Format".
- Buttons:** "ADD DEVICE", "DELETE", "TEST", and "SAVE".
- Footer:** "Spoken through SpinVox" and "Powered By: Mutare Software".

The Test button at the right side of the User Settings screen was useful to verify the settings. Clicking the Test button creates an email that is sent to the destination (email address, phone number / SMS address) for each device. A sample of the test message is shown below.



After verifying receipt of the test message, voice calls were placed to the test mailboxes. A message was left after each call, and the messages were tracked in the EVM application.

6. Application Customization and Functional Testing of Administration Pages

6.1. Customization of the Web Pages and Messages

To customize the appearance of the EVM web pages and the messages sent to the users, the administrator of the EVM system can add a corporate logo to the EVM application. For the test, loaded an Avaya logo as a GIF file (in the \images directory) and configured it for display on the web pages.

The setting to display a corporate logo on the web pages is defined under the EVM administrator Settings page. The setting is named CustLogo and the Value is the path to the file containing the logo.

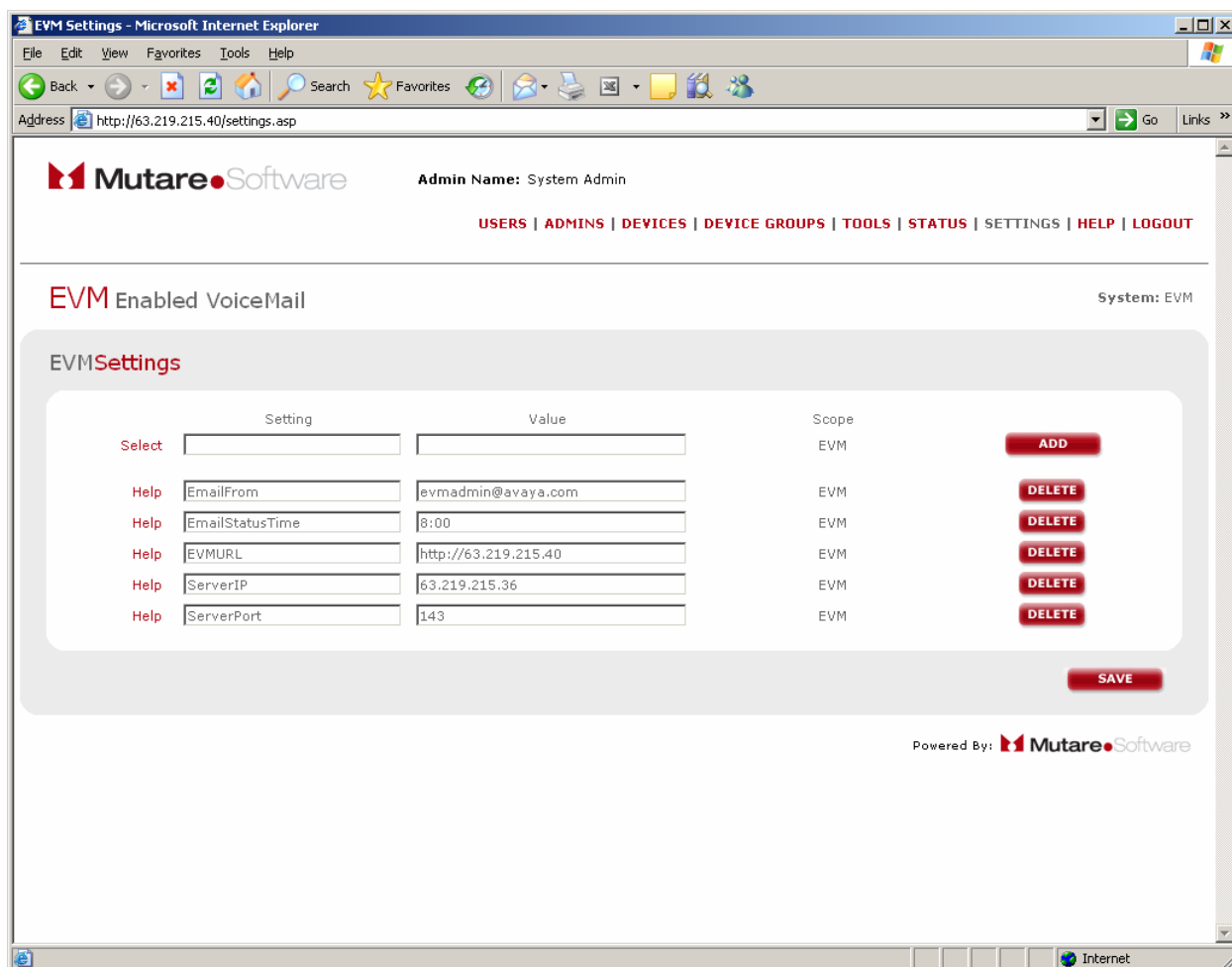


Figure 2 - Mutare System Admin Screen Configuration

The corporate logo for the messages is added by the administrator into the definition for the body of the email EVM sends out. The definition is in the Devices area of EVM.

6.2. Adding and Maintaining Users

Users are easily added to EVM-SpinVox and can be selectively enabled for SpinVox capability. (It is not a requirement to enable all users for SpinVox. Some users may be a perfect fit for the standard EVM capability of sending notification and copies of the voice message to user-defined addresses.) Users are added on the screen pictured below.

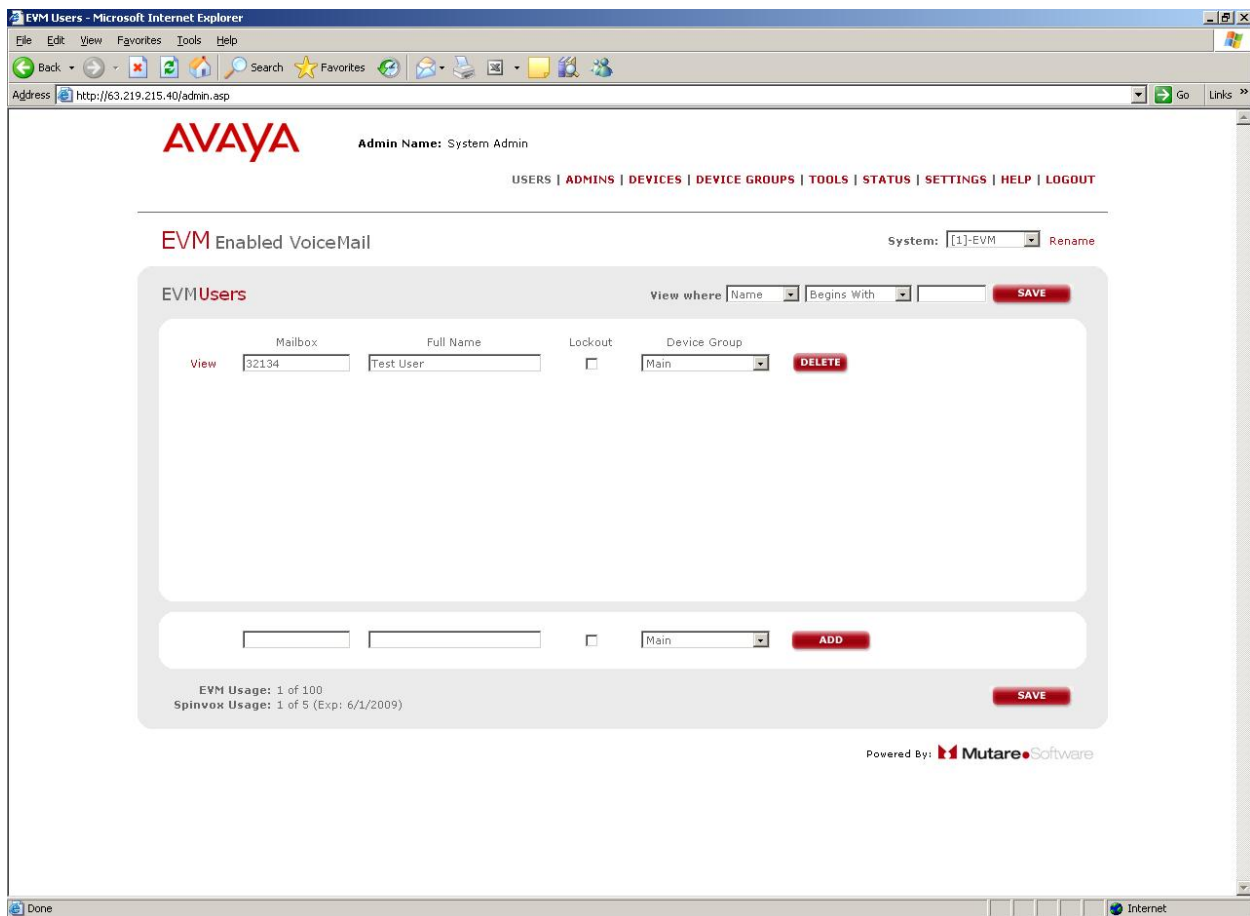


Figure 3 - Mutare User Admin Configuration

Users can also be deleted from EVM-SpinVox by clicking the Delete button next to the user's entry on the same screen.

6.3. Status Information

Status information – a log of messages that are being processed and an error log – are available from the administrative interface. Status information can be viewed per system, or globally for all systems.

The screenshot shows a web browser window titled "EVM Status - Microsoft Internet Explorer". The address bar shows "http://63.219.215.40/evmstatus.asp". The page header includes the Mutare Software logo and the text "Admin Name: System Admin". A navigation bar contains links: "USERS | ADMINS | DEVICES | DEVICE GROUPS | TOOLS | STATUS | SETTINGS | HELP | LOGOUT". The main content area is titled "EVM Enabled VoiceMail" and "System: EVM". Below this, the "EVMStatus" section displays a green box with "EVM Running OK". It shows cycle information: "Current Cycle Start (Duration): 10/9/2008 11:20:34 AM (0 Sec)", "Current Cycle Progress: Done - 1 of 1 Active Users", "Last EVM Sent: 10/7/2008 6:19:49 PM (41 Hours, 48 Sec)", "Previous Cycle Start (Duration): 10/9/2008 11:19:19 AM (0 Sec)", and "EVM Messages Today: 0". There are two tables: "Message Log (Last 5) - More" and "Event Log (Last 5) - More".

Mailbox	Log Date	Msg Date	Msg ID	Type	Size	From	To	Dev	XScribe	Result
32134	10/7/2008 6:19:49 PM	10/7/2008 5:21:49 PM	34	VOICE	3	evm@avaya.com	cbertsch@avaya.com	1	No	SUCCESS
32134	10/7/2008 6:19:49 PM	10/7/2008 5:13:12 PM	17	VOICE	5	evm@avaya.com	cbertsch@avaya.com	1	No	SUCCESS

Type	Log Date	Event	Details
Info	10/9/2008 8:00:52 AM	Status Email Sent (OK)	To:canderson@mutare.com
Info	10/8/2008 8:01:02 AM	Status Email Sent (OK)	To:canderson@mutare.com
Info	10/7/2008 6:19:49 PM	Status Email Sent (OK)	To:canderson@mutare.com
Info	10/7/2008 6:19:48 PM	Service Started	

View Delete Log

Powered By: Mutare Software

Figure 4 - Mutare EVM System Status Screen

If additional detail is required, clicking the More link on either log will open a new window with an expanded view of the log. The log can show the Top 25, 50, or 100 matching records – selectable via the drop-down box at the top of the window. An administrator may also filter the records displayed by using the boxes above each column.

6.4. Additional Administrator Logins

Additional logins can be configured for administrators. The new logins can have permissions to perform administrative tasks on all systems, or only on a specific system. In addition, an admin login can allow the ability to edit users, restrict the login to view-only access to user accounts, or disallow access to users. Admin logins can also be locked out, if necessary.

EVM Admins - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <http://63.219.215.40/editadmins.asp> Go Links >>

Mutare Software Admin Name: System Admin

[USERS](#) | [ADMINS](#) | [DEVICES](#) | [DEVICE GROUPS](#) | [TOOLS](#) | [STATUS](#) | [SETTINGS](#) | [HELP](#) | [LOGOUT](#)

EVM Enabled VoiceMail System: EVM

EVMAdmins

Admin Login	Admin Name / Email	Admin Permissions	Lockout	
ID: <input type="text" value="admin"/> Pwd: <input type="password" value="*****"/>	Name: <input type="text" value="System Admin"/> Email: <input type="text" value="canderson@mutare.cor"/> <input checked="" type="checkbox"/> Status <input checked="" type="checkbox"/> Errors	<Can Access All Systems> Allowed to Edit Users	<input type="checkbox"/>	DELETE
ID: <input type="text"/> Pwd: <input type="password"/>	Name: <input type="text"/> Email: <input type="text"/> <input type="checkbox"/> Status <input type="checkbox"/> Errors	<Can Access All Systems> Allowed to Edit Users		ADD

[SAVE](#)

Powered By: **Mutare Software**

Figure 5 - Mutare Administrator User Configuration

7. Functionality of Mutare/SpinVox User Settings pages

The lab test verified access to the user Login and user Settings web pages via the URL for EVM-SpinVox. Once in the Settings page, the user was able to successfully configure devices. In the case of the lab test, one device (Desktop) was enabled by the administrator. Users were able to enter the delivery address and other parameters for delivery of the message and transcription to their PC, and the mobile number, cellular carrier, and other parameters for delivery of the message and/or transcription to their mobile device. Users could also use the Test button to generate a test message to each device (to verify they have configured the settings correctly). The test also validated that users could select the format for the audio file delivered to the user (WAV or MP3), and that the user could select the format for the fax images delivered (TIF or PDF).

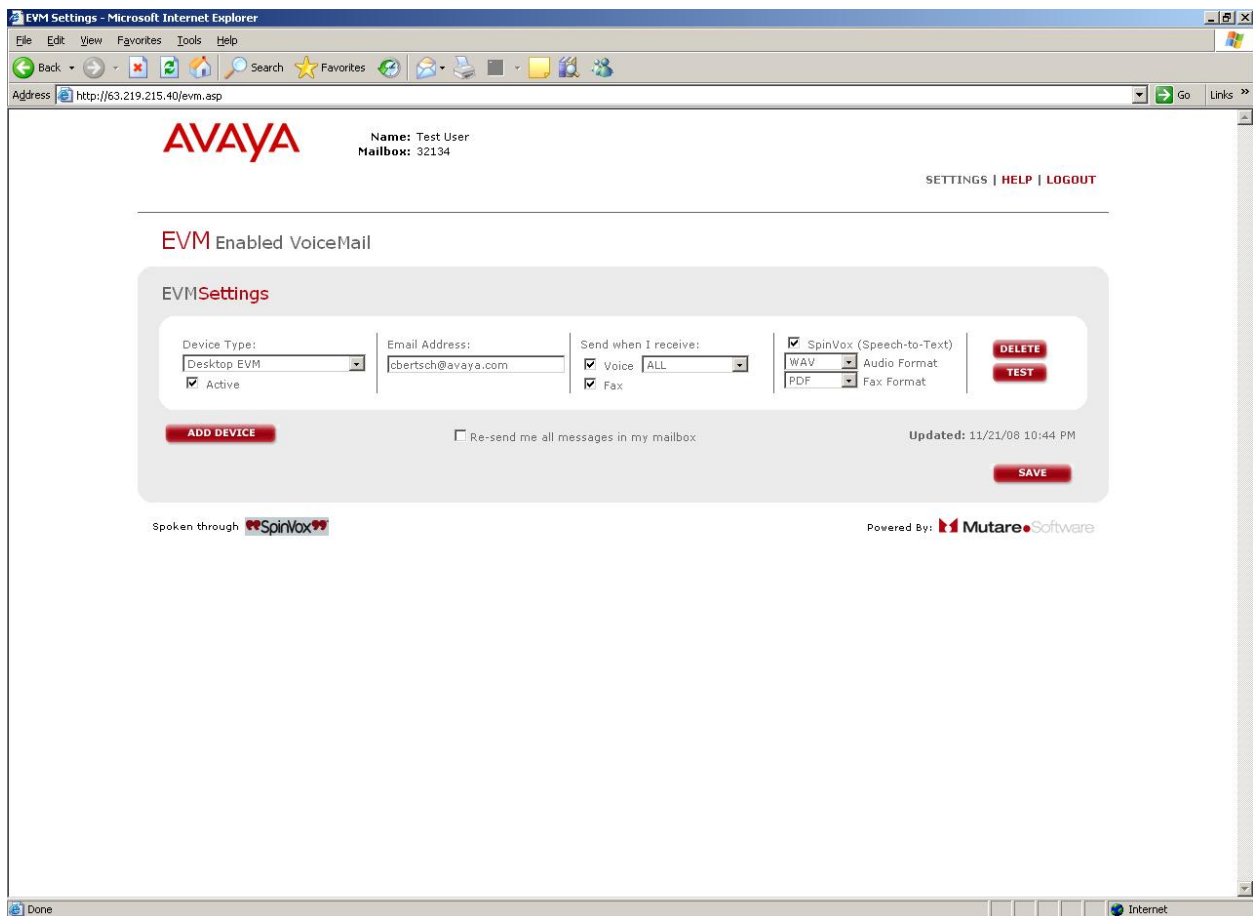


Figure 6 - Configuration of a Mutare/SpinVox User

8. Delivery of Transcriptions

The lab test verified successful delivery of email messages containing a transcription of the voice message, and the audio file of the recorded message. Delivery of the fax image was also verified in the testing. Specifically, the testing validated that EVM-SpinVox delivered the message sound file in the correct codec (format) selected by the user (WAV or MP3), and that images of the fax messages were also delivered in the correct format selected by the user (TIF or PDF).

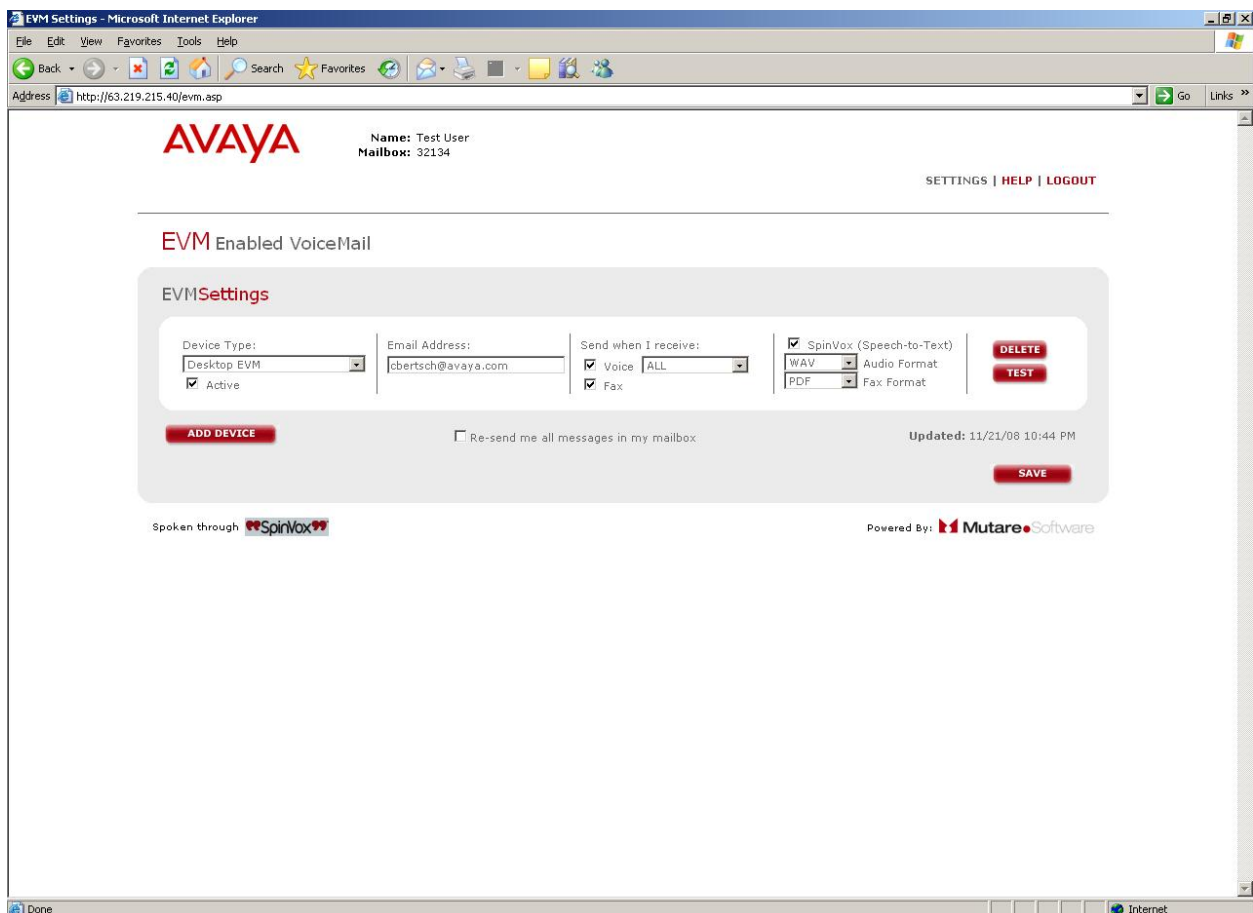


Figure 7 - Verification of Mutare/SpinVox User

Private and Urgent messages were also created to test that those markings were conveyed in the transcription messages. The tests were successful, as indicated by the copies of the screens below.

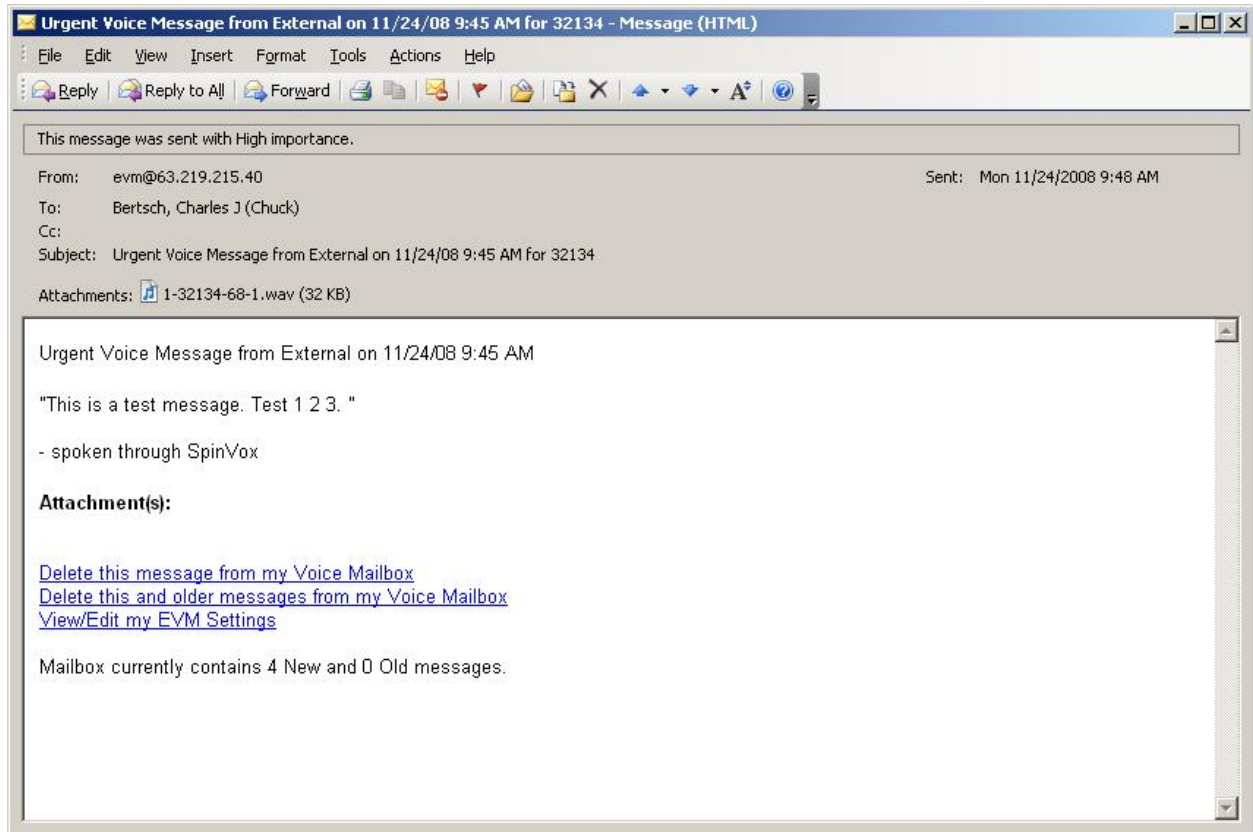


Figure 8 - Verification of Private/Urgent Voice Message

An example of a FAX message follows:

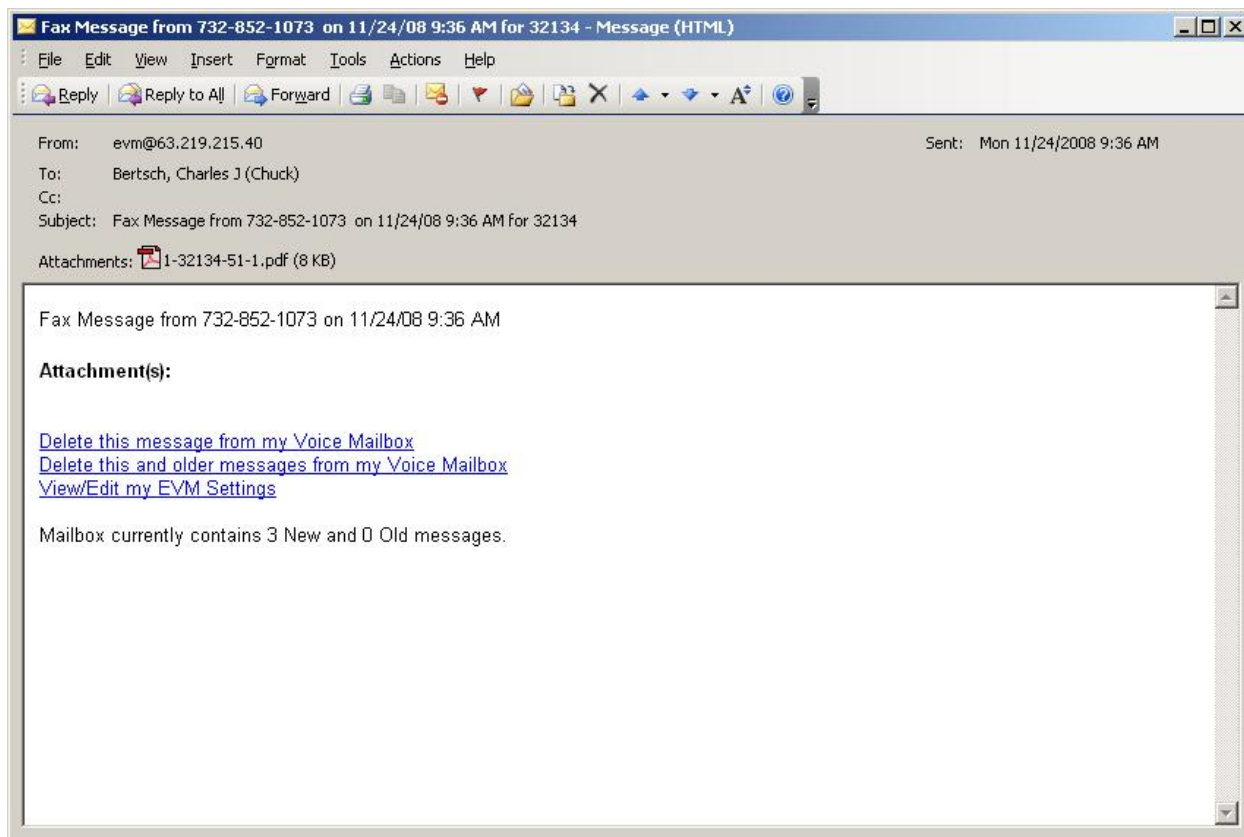


Figure 9 - Verification of Fax Message

9. Serviceability Test Results

Some basic resiliency for the application was verified as part of this test plan. The application was tested for resiliency in the event of a WAN outage, in the event of a local network (or network interface card) failure, what happens when the mailbox password in EVM does not match the password on the IA770 mailbox, and to confirm that the system will successfully (and automatically) start (and resume message processing) after a server reboot. The testing was successful.

10. Support

Pre- and post-sales technical support on EVM with SpinVox is available through Mutare Software.

Contact Information: Web: <http://www.mutare.com>

Voice: +1-847-496-9000

11. Conclusions

This Application Note describes the configuration steps required for Mutare EVM with SpinVox Speech to Text to interoperate with Avaya Intuity Audix IA770. All feature and serviceability test cases were completed successfully.

12. Additional References

- Avaya IA 770 INTUITY AUDIX, Messaging Application, Release 5.1, Administering Communication Manager Servers to Work with IA770
- Application Note for Mutare Enabled Voice Mail (EVM) application using SpinVox Speech to Text – Issue 1.0

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