Avaya Solution & Interoperability Test Lab

A Configuration of Avaya Voicemail Pro Networked with Avaya INTUITY™ AUDIX® through Avaya Interchange for Voice Message Exchange - Issue 1.0

Abstract

These Application Notes describe a configuration of Avaya Voicemail Pro and Avaya INTUITY™ AUDIX® networked through an Avaya Interchange. Each Messaging System provides messaging service to its associated communication system. Through the inter-messaging system networking, users are able to exchange messages, including messages sent to a list, forwarded messages, and replies with message priority and privacy preserved.
1. Introduction

These Application Notes describe the steps required to configure Avaya Voicemail Pro networked with Avaya INTUITY™ AUDIX® through Avaya Interchange as shown in Figure 1.

Avaya Voicemail Pro is the messaging system for the Avaya IP Office 406. The Avaya S8100 Media Server/ Avaya G600 Media Gateway has an internal Avaya INTUITY™ AUDIX® messaging system. The Avaya Interchange is designed to be the “hub” of a “hub and spoke” store and forward messaging architecture and can perform protocol conversion between various vendors’ implementation of message exchange protocols.

If either messaging system of this configuration has a voice message to be forwarded to a mailbox on the other messaging system, it sends the message through the Avaya Interchange. The Avaya Interchange handles protocol conversions needed to forward messages between the Voice Profile for Internet Messaging (VPIM) protocol supported by Avaya Voicemail Pro and the proprietary digital messaging protocol supported by the Avaya INTUITY™ AUDIX®.

![Figure 1: VPIM Test Configuration](image-url)
2. Equipment and Software Validated

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

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Software</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avaya IP 406 Office Server</td>
<td>2.0(10)</td>
</tr>
<tr>
<td>Avaya Voicemail Pro</td>
<td>2.0(11)</td>
</tr>
<tr>
<td>Avaya S8100 Media Server/Avaya G600 Media Gateway</td>
<td>1.3.1 (R011c.03.1.532.0)</td>
</tr>
<tr>
<td>(with Avaya INTUITY™ AUDIX®)</td>
<td></td>
</tr>
<tr>
<td>Avaya Interchange</td>
<td>5.4.11</td>
</tr>
<tr>
<td>Avaya P330 Workgroup Switch</td>
<td>3.12</td>
</tr>
<tr>
<td>Avaya P333T Modular Stackable Switch</td>
<td>3.12</td>
</tr>
<tr>
<td>Avaya X330-2USP Access Router Module</td>
<td>3.12.10</td>
</tr>
<tr>
<td>Avaya 4612 IP Telephone</td>
<td>1.8</td>
</tr>
<tr>
<td>Avaya 6408D+ Digital Telephone</td>
<td>N/A</td>
</tr>
</tbody>
</table>

3. Configure the Avaya IP Office and Voicemail Pro

This section describes the IP Office and Voicemail Pro configuration required to exchange messages with the INTUITY™ AUDIX® through the Avaya Interchange.

**Step 1:** Follow Voicemail Pro installation instructions, including the VPIM option. In particular, ensure that in the Select Features dialog box, VPIM and its sub-items are selected. Follow the subsequent instructions to complete the installation.
Figure 2: Feature Selection

Step 2: From the IP Office Manager, ensure that the Voicemail Pro and VPIM licenses are installed and valid. The “Instances” value will reflect the purchased license value.

<table>
<thead>
<tr>
<th>Status</th>
<th>License</th>
<th>Instances</th>
<th>Expire</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td>Additional Voicemail Pro (ports)</td>
<td>Unlimited</td>
<td>Never</td>
</tr>
<tr>
<td>Valid</td>
<td>IP Endpoints</td>
<td>Unlimited</td>
<td>Never</td>
</tr>
<tr>
<td>Valid</td>
<td>Phone Manager Pro</td>
<td>Unlimited</td>
<td>Never</td>
</tr>
<tr>
<td>Valid</td>
<td>Phone Manager Pro (per seat)</td>
<td>Unlimited</td>
<td>Never</td>
</tr>
<tr>
<td>Valid</td>
<td>Phone Manager Pro IP Audio Enabled</td>
<td>Unlimited</td>
<td>Never</td>
</tr>
<tr>
<td>Valid</td>
<td>VMPro Database interface</td>
<td>Unlimited</td>
<td>Never</td>
</tr>
<tr>
<td>Valid</td>
<td>VMPro Outlook interface</td>
<td>Unlimited</td>
<td>Never</td>
</tr>
<tr>
<td>Valid</td>
<td>VMPro Recordings Administrators</td>
<td>Unlimited</td>
<td>Never</td>
</tr>
<tr>
<td>Valid</td>
<td>VMPro VB Script</td>
<td>Unlimited</td>
<td>Never</td>
</tr>
<tr>
<td>Valid</td>
<td>VMPro VPIM</td>
<td>Unlimited</td>
<td>Never</td>
</tr>
<tr>
<td>Valid</td>
<td>Voicemail Pro (4 Ports)</td>
<td>Unlimited</td>
<td>Never</td>
</tr>
</tbody>
</table>

Figure 3: IP Office VPIM Licence

Step 3: Administer Voicemail Pro to include the Interchange as a message system eligible for message exchange.

a. Start the VoiceMail Pro from the PC Start Menu, and select Administration ➔ Preferences ➔ VPIM.
b. From the Server section, select **Add**, and enter the name of the Interchange or its IP address. To determine how the Interchange identifies itself, telnet to its ip address and SMTP port (25) as described in **Section 7**, **Verification 2**. A response similar to “220 holeo27.rowe.lab.com SMTP service ready” will be displayed. The name after “220” is the machine name to use.

![VFIM Server(s) and Users for VFIM Server(s)](https://example.com/screenshot.png)

**Figure 4: Adding Servers and Mailboxes**

c. Select **Add** to add a single remote mailbox or **Add Range** to add a range of extensions. Select the mailboxes server, a Full name for the mailbox and the local and remote extension. Interchange supports a feature called “self-registration”, which is a method for users to register themselves on the Interchange by sending a message to a special address. If the Interchange self-registration feature is to be used, include the Interchange registration mailbox (from the Interchange **General Parameters** form.) Also, include any enhanced lists on the Interchange that Voicemail Pro users may be allowed to use.

i. **Section 4**, **Step 4** describes how to examine the INTUITY™ AUDIX® for valid subscribers.

Note that the extension length of the mailboxes entered should be compatible with the VPIM Server. In this case, the VPIM Server (the Avaya Interchange) was configured to expect 5 digit mailboxes from this Voicemail Pro.
4. Configure the Avaya INTUITY AUDIX

This section describes the configuration of the S8100/G600 INTUITY™ AUDIX®. Please see reference [INT-AUDIX] for detailed Interchange and Intuity message networking instructions.

It is assumed that the reader has the IP address of the S8100 processor and has a browser and the Avaya Terminal Emulator or the equivalent to do the necessary configuration.

**Step 1.** Use `telnet` to the S8100/G600. Log in and enter “audix” to reach the audix command prompt.

**Step 2.** Enter `list configuration` and verify that the “TCP/IP digital ports” value is set to at least 1. If not, these ports must be activated through the license process before proceeding.

<table>
<thead>
<tr>
<th>Configuration Option</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audix Application</td>
<td>ON</td>
</tr>
<tr>
<td>DCS</td>
<td>ON</td>
</tr>
<tr>
<td>Fax</td>
<td>ON</td>
</tr>
<tr>
<td>High speed digital ports</td>
<td>N/A</td>
</tr>
<tr>
<td>Low speed digital ports</td>
<td>N/A</td>
</tr>
<tr>
<td>Max Number of IMAPI Sessions</td>
<td>32</td>
</tr>
<tr>
<td>Multilingual</td>
<td>ON</td>
</tr>
<tr>
<td>SCSI Disk Mirroring</td>
<td>N/A</td>
</tr>
<tr>
<td>TCPIP digital ports</td>
<td>2</td>
</tr>
<tr>
<td>Text-to-Speech Sessions</td>
<td>2</td>
</tr>
<tr>
<td>Trusted Servers</td>
<td>6</td>
</tr>
<tr>
<td>hours_of_speech</td>
<td>100</td>
</tr>
<tr>
<td>voice_ports</td>
<td>8</td>
</tr>
</tbody>
</table>

Press [NextPage], [PrevPage] or [Cancel]

enter command: `list configuration`

![Figure 5: List Configuration](image.png)
**Step 3.** From a PC browser, access the S8100 processor IP address and log in. At the S8100 main page, select **Administer System** ➔ **Audix Networking** ➔ **Administrative Menu** ➔ **Network Channel Administration** and enable each channel in the Channel Configuration Column. Select **Save**.

![Network Channel Administration](image)

**Figure 6: Network Channel Administration**
Step 4. Return to the Audix command prompt screen and inspect the system for the list of mailboxes that will be eligible to receive messages. Type change machine. Note the range of local extensions. List subscribers will provide a more specific list, but it is best to distinguish mailboxes that are eligible to receive messages (i.e., call answer mailboxes).

```
11ip600sit   Active    Alarms: M wA
Logins: 1
change machine
Page 1 of 2

MACHINE PROFILE
Machine Name: 11ip600sit   Type: local       Location: local
Voiced Name? n        Extension Length: 5
Voice ID: 0            Default Community: 1
ADDRESS RANGES
Prefix          Start Ext.  End Ext.  Warnings
1: 2:0000       39000
3: 4: 5: 6: 7: 8: 9: 10:
```

Figure 7: change machine form, page 1

On Page 2 of the change machine form, ensure that all the update settings are set to y as is Network Turnaround. Select Enter.

```
11ip600sit   Active    Alarms: M wA
Logins: 1
change machine
Page 2 of 2

MACHINE PROFILE
Allow Automatic Full Updates? y
Updates:    In? y      Out? y
Network Turnaround? y
```

Figure 8: change machine form, page 2

Step 5. To administer the password for message exchange:

Step 5.1. From the S8100 home page, select Administer SystemÆÆÆÆ Audix NetworkingÆÆÆÆ Administrative MenuÆÆÆÆ Local Machine Administration.
Step 5.2. Enter the password to be used for transfer of messages between this system and the Avaya Interchange. Click Change.

![Figure 9: Password Screen](http://172.16.254.111/audix/AudixAdminGet.exe?Source=LocalMachineAdmin)

**Local Machine Administration**

<table>
<thead>
<tr>
<th>Local Machine Name</th>
<th>Flp600sit</th>
<th>Connection Type</th>
<th>TCP/IP</th>
</tr>
</thead>
<tbody>
<tr>
<td>IP Address</td>
<td>172.16.254.111</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Password</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Help</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cancel</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Step 6. To enter the information for connecting to the Interchange:

Step 6.1. From the S8100 home page, select **Administer System** ➔ **Audix Networking** ➔ **Administrative Menu** ➔ **Remote Machine Administration** ➔ **Digital Machine Administration**.

Step 6.2. Select **Add New Machine**.
Step 6.3. Enter the Avaya Interchange name, IP address and networking password. Also, define the schedule for exchanging messages. Click Add to complete.

**Figure 10:** Digital Machine Administration
**Step 7.** From the AUDIX command prompt screen, type `change machine` holeo27 to administer parameters associated with the Interchange. In this configuration, all extensions that are not on the INTUITY™ AUDIX® are configured to be on the Interchange so that the Interchange can forward them to the proper endpoint. Also, verify that “Send to non-Administered Recipients” is set to “y”. The danger of such a broad setting is that errant messages can be sent which will waste bandwidth and processing time. The Extension Length setting of 5 is the dialplan length that has been configured in the Avaya Interchange, holeo27. Set all the parameters of Page 2 to y. Select **F3** to **Add** this remote machine.

<table>
<thead>
<tr>
<th>Prefix</th>
<th>Start Ext.</th>
<th>End Ext.</th>
<th>Warnings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:</td>
<td>00000</td>
<td>29999</td>
<td></td>
</tr>
<tr>
<td>2:</td>
<td>32000</td>
<td>99999</td>
<td></td>
</tr>
</tbody>
</table>

![Figure 11: Interchange Machine settings](image-url)
5. Configure the Avaya Interchange

5.1. Configure the Interchange INTUITY™ AUDIX® interface

These steps follow [INT-AUDIX] which should be referenced for greater description of the options. Also, [INT-AUDIX] provides very useful forms for tracking planning information.

Step 1. Login to the Intuity Interchange and, from the Interchange Main Menu, select Customer/Service Administration to verify that the system is optioned for TCP/IP digital ports. Note also that VPIM ports will be required for interfacing to the Voicemail Pro.

<table>
<thead>
<tr>
<th>Feature Option</th>
<th>Current</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aria Digital Ports</td>
<td>0</td>
<td>16</td>
</tr>
<tr>
<td>Call Detail Recording (CDR)</td>
<td>ON</td>
<td>N/A</td>
</tr>
<tr>
<td>Enterprise Lists Administration</td>
<td>ON</td>
<td>N/A</td>
</tr>
<tr>
<td>High speed digital ports</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Low speed digital ports</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Max Number of Octel Nodes</td>
<td>10</td>
<td>500</td>
</tr>
<tr>
<td>Maximum Number of AMIS Nodes</td>
<td>10</td>
<td>500</td>
</tr>
<tr>
<td>Maximum Number of Digital Nodes</td>
<td>300</td>
<td>500</td>
</tr>
<tr>
<td>SCSI Disk Mirroring</td>
<td>ON</td>
<td>N/A</td>
</tr>
<tr>
<td>SNMP</td>
<td>OFF</td>
<td>N/A</td>
</tr>
<tr>
<td>Serenade Digital Ports</td>
<td>0</td>
<td>16</td>
</tr>
<tr>
<td>TCP/IP Administration</td>
<td>ON</td>
<td>N/A</td>
</tr>
<tr>
<td>TCPIP digital ports</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Text-to-Speech Sessions</td>
<td>5</td>
<td>30</td>
</tr>
<tr>
<td>VPIM Ports</td>
<td>4</td>
<td>20</td>
</tr>
<tr>
<td>hours_of_speech</td>
<td>285</td>
<td>289</td>
</tr>
<tr>
<td>voice_ports</td>
<td>12</td>
<td>12</td>
</tr>
</tbody>
</table>

Figure 12: Feature Options

Step 2. From the Main Menu, select Networking Administration→TCP/IP Administration and ensure that the TCP/IP networking is setup properly such that this machine can communicate with the INTUITY™ AUDIX®. Note this information for later administration.

<table>
<thead>
<tr>
<th>TCP/IP Administration</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNIX Machine Name: holeo27</td>
</tr>
<tr>
<td>IP Address: 172.16.254.62</td>
</tr>
<tr>
<td>Subnet Mask: 255.255.255.0</td>
</tr>
<tr>
<td>Default Gateway IP Address: 172.16.254.60</td>
</tr>
</tbody>
</table>

Figure 13: TCP/IP Administration
Step 3. From the Main Menu select Networking Administration ➔ Local Machine Administration and ensure that an entry exists with the data that corresponds to the data entered in Step 6 of Section 4.

![Local Machine Administration](image)

Figure 14: Local Machine Information

Step 4. Select Networking Administration ➔ Networking Channel Administration to verify that there are equipped TCP/IP ports for the networking to INTUITY™ AUDIX® and to Voicemail Pro.

![Networking Administration](image)

Figure 15: Networking Administration
**Step 5.** Select Networking Administration ➔ Remote Machine Administration ➔ Audix Digital Networking Machine Administration. Enter the information corresponding to the INTUITY™ AUDIX® configuration entered in Section 4, Step 4. Enter also the transmission schedule for sending messages to the Audix System. Select Chg-Keys and then the Add key to enter the form.

![Audix Digital Network Machine Administration](image)

**Step 6.** Administer the INTUITY™ AUDIX® parameters in the Interchange.

**Step 6.1.** Select Interchange Administration ➔ Remote Machine Administration ➔ Remote Machine Parameters. Select Choices and select the system of interest from the list. Set the parameters as shown. In particular, ensure that the address range corresponds to mailboxes on the INTUITY™ AUDIX® system that are eligible to receive messages.

```
*Remote Machine Name: llip600sit          Machine Type: INTUITY 4.0          *
*AVAYA Interchange?  n  Mailbox ID Length: 5   Default Language: us-eng          *
*Failed Msg. Notification Priority? n  Msg ID? y  Send Message for Warning? n  *
*Default NameNet Type: u Organization:          *
*Org Unit: Node ID: 14          *
*Comments: none                        *

* Start    End
* ADDRESS RANGE: 30000 - 39000  
  [(Mailbox ID)  
  30000  ^  39000  ]  [ **   NOTE   ***  
  * Press <DETAILS> to **  
  * administer additional **  
  * machine parameters **  
  v  ***********************  

*  **************************************************  *
```

**Figure 17: Remote Machine Parameters**
Step 6.2. Select the Details key to enter parameters shown. Select Save, Continue and then Save again.

** Remote Machine Name: llip600sit
**
**
** Subscriber Updates Type: dynamic UPDATES In? y UPDATES Out? y
**
**
** Voiced Names for Dynamic? y Network Turnaround? y
**
**
** Provide Local Mapped Addresses? n Dynamic Sub Expiration Days: 90

Figure 18: Remote Machine Parameters, Details

Step 7. In general, the form of Interchange AdministrationÆRemote Machine AdministrationÆDial Plan Mapping can be used to map mailbox identification from the Interchange Dial Plan to the INTUITY™ AUDIX® dial plan, but in this configuration, both systems are set for 5 digit dialing, so this step can be skipped.

Section 5.3 provides instructions for Directory View configuration after the Interchange VPIM interface to Voicemail Pro is completed in the next section.

5.2. Configure the Interchange VPIM interface to VoicemailPro

These steps follow [INT-VPIM] which should be referenced for greater detail on Interchange configuration steps and options.

Step 1. Check that Interchange has available VPIM ports

Step 1.1. From the Interchange Main Menu, select Customer/Service AdministrationÆFeature Options to view the screen of Figure 12 Check that there are sufficient current entries for the Maximum Number of Digital Nodes and VPIM ports.
Step 2. From the Interchange Main Menu, set the Interchange General Parameters by selecting **System Parameters ➔ General Parameters**. Ensure that the VPIM Port field is set to 25.

```
************** General Parameters **************
*
* Local Machine Name: holeo27                Network Address Length: 5 *
* System Prime Time: Start: 08:00  End: 17:00  CDR Retention: 4 *
*
* MAXIMUM DELIVERY TIMES: *
*  Priority: 0 days 4 hrs 0 mins *
*  Non-Priority: 0 days 12 hrs 0 mins *
* STATUS MESSAGES TIMES: *
*  Expiration: 7 days 0 hrs 0 mins *
*  Poll Interval: 0 days 1 hrs 0 mins *
*
* Octel Analog Networking Serial Number:5454          VPIM Port: 25 *
*  Self Registration Agent ID: 90000 *
*  Organization: avaya *
*  Org Unit: lincroft                          Country: us *
*  Domain Name: holeo27.rowe.lab.com *
*  DNS IP Addresses: *
*  1: 172.16.254.23                            2: *
*  3:                                                                 *
****************************************************************************
```

Figure 19: General Parameters

Step 3. From the Interchange Main menu, identify the Avaya Voicemail Pro to the Interchange system by selecting **Networking Administration ➔ Remote Machine Administration ➔ VPIM Machine Administration**.

Step 3.1. Select the name of the machine by performing a telnet to the SMTP port of the Voicemail Pro to see how it is identified, as described in **Section 7 Verification 2**.

```
VPIM Machine Administration
k
Machine Name: avaya-8ccy2i4d3
IP Address: 172.16.254.197
```

Figure 20: VPIM Machine Administration

Step 4. To set the IP Office machine parameters, select from the Interchange main menu, **Interchange Administration ➔ Remote Machine Administration ➔ Remote Machine Parameters**.
Step 4.1. Select Choices and then select the Voicemail Pro name as the Remote Machine Name. Enter the values as shown, in particular VPIM for machine type and the associated start and end mailbox addresses. Note that these mailboxes are identified as they are on the Voicemail Pro system, independently of any Dialplan mapping. Try to include only extensions in the address range that are capable of receiving messages.

```
Step 4.1.

*Remote Machine Name: avaya-8ccy214d3     Machine Type: VPIM *
*AVAYA Interchange? n  Mailbox ID Length: 5  Default Language: us-eng *
*Failed Msg. Notification Priority? n  Msg ID? y  Send Message for Warning? n *
*Default NameNet Type: u  Organization: *
*Org Unit:                               Node ID: 25 *
*Comments: none                          *
*                                      *
*                                      *
* ADDRESS RANGE:****************************
* (Mailbox ID)  
* 40200  
* 49999  
*                                      *
*                                      *
*                                      *
*                                      *
*                                      *
*                                      *
*                                      *
*                                      *
*                                      *

Figure 21: Remote Machine
```

Step 4.2. Select Details and enter names as shown. Note that if the Voicemail Pro had included the entire domain suffix when it identified itself, then the Domain Name and suffix would have to be entered on the Domain Name: line.

```
Step 4.2.

* Remote Machine Name: avaya-8ccy214d3     Default Community ID: 1   *
** Submitter Updates Type: dynamic            *
** Voiced Names for Dynamic? y                *
** Use DNS? n                                *
** Domain Name: avaya-8ccy214d3               *
**
Figure 22: VPIM Machine Profile
```

Step 5. If the Voicemail Pro dial plan length is shorter than the Interchange dial plan, select Interchange AdministrationÆRemote Machine AdministrationÆDial Plan Mapping. Follow the instructions of [INT-VPIM] to map from the shorter length to the longer length dial plan.

Step 6. Add the subscribers for Voicemail Pro. The following is one of several ways to do this.
Step 6.1. Select Interchange Administration→Remote Machine Administration→Dial Plan Mapping. Select avaya-8ccy2i4d3 (the Voicemail Pro) as the Remote Machine and then select Options. Select Add Subscribers from range. Only mailboxes that are eligible to receive messages should be included. Otherwise, network bandwidth will be wasted on messages that result in, at best, logged errors.

| ** | * | Start Mailbox ID (Extension): 40201 | * |
| ** | * | * | * |
| ** | * | End Mailbox ID (Extension): 41000 | * |
| * | * | * | *

Figure 23: Add subscribers from Range

Step 6.2. Subscriber entries can be checked from Interchange Administration→Subscriber Administration→Subscriber Lists→By Remote Machine Name. From Choices, select the Voicemail Pro PC name to see the list of known subscribers.

5.3. Directory View in Interchange for INTUITY™ AUDIX®

Setting the Directory View specifies which other messaging machines can provide subscriber updates to a particular messaging machine. Each machine listed is associated with a range of mailboxes from which updates can be accepted. Also for each listed machine, an indication is shown as to whether a voiced name can be accepted. No Directory View for the Voicemail Pro is required, as Voicemail Pro does not accept subscriber updates over the VPIM interface.


Step 2. At the Machine Name prompt, select the INTUITY™ AUDIX®. Select the Options key and then Add all entries. Select Return.

5.4. Avaya Interchange Enterprise List Administration

This section describes how to configure a list of endpoints in the Interchange. Interchange-based lists are an efficient way to send messages to stable lists of mailboxes. Only one copy of the message is sent from the originating system to the Interchange, which takes care of distributing that message to the destination machines and mailboxes.
Step 1. From the Interchange Main Menu, select Interchange AdministrationÆÆÆÆEnterprise List AdministrationÆÆÆÆSystem Parameters. Set or check the address range of the Interchange dialplan that can be used for lists.

![Figure 24: ELA System Parameters](image)

Step 2. From the Interchange Main Menu, select Interchange AdministrationÆÆÆÆEnterprise List AdministrationÆÆÆÆList Definition. Choose a unique list id from the list range and assign an owner. In the Network Address grid, enter the list of destination addresses from the Interchange dial plan. The Remote Machine grid should contain the systems where those destinations reside. The range of mailboxes that have permissions to send through this list is set in the Permissions grid.

![List Definition](image)

6. Configure a DNS Server

A Domain Name Service Server is not required for the messaging systems, but may be a highly desirable way to centralize the mapping of names to IP addresses for the machines involved. This section briefly describes the setup of a DNS server used in this configuration.

Step 1: From the Start menu of the server, select ProgramsÆÆÆÆAdministrative ToolsÆÆÆÆDNS. If DNS is not available, you must install DNS from the operating system CD.
Step 2: As shown in Figure 25 ensure that there is an entry within the domain for each messaging host involved.

![Figure 25: DNS Screen](image)

Step 3: Configure each PC to use the DNS server to resolve names. This is done in the Internet Protocol (TCP/IP Properties form) of each LAN interface.

7. Verification Steps

The basic test of the configuration is to create a message and forward it to a mailbox at the far end system. Check that the message is received at the correct destination. If this is not successful, one of the following procedures may isolate the problem. Spot-checking among mailboxes may be a good way to check that permissions are set appropriately.

Verification 1: Ping

a) Make sure that all endpoints can be pinged. If DNS is used, ping using the machine name. See step 5 to ping from the Interchange.

Verification 2: SMTP Service test and Name determination

Test that the SMTP service of a messaging system is working by using the telnet command as follows:

i) From a DOS or UNIX prompt type `telnet <ip-address> 25`

ii) At the response, type `Helo`
iii) At the response type **quit**
b) If the response is not as shown in [Figure 26](#) then the SMTP service may not be running on the machine and it will not process incoming VPIM messages. Try the procedure described in **Verification 3**.

```
E:\Documents and Settings\Administrator>telnet 172.16.254.197 25
220 avaya-8ccy2i4d3 Microsoft ESMTP MAIL Service, Version: 5.0.2195.6713 ready
HELO
250 avaya-8ccy2i4d3 Hello [172.16.254.197]
QUIT
221 2.0.0 avaya-8ccy2i4d3 Service closing transmission channel
```

Figure 26: Simple SMTP test

**Verification 3:**  PC Services

Check to see that the needed PC Services are running on the Voicemail Pro PC:

a) From the Control Panel, select the **Administrative Tools** ➔ **Services**.

b) Check that the following services are **Started** with Startup Type: **Automatic**:

i) SMTP, VPIM Database Server, Voicemail Pro Service, VPIM Server, VPIMReceiver.

![Services](image.png)

Figure 27: Services
Verification 4: Check that the Voicemail Pro SMTP settings are correct.

a) From the PC Control Panel, select the Avaya Voicemail Pro Icon and select the SMTP tab. Ensure that the Mail Server name is the DNS name of the Voicemail Pro server. Click “Check” to verify that you can successfully connect to the SMTP service.

![SMTP Settings](image)

Figure 28: SMTP Settings

b) The “Drop” directory is where the SMTP service will leave messages to be picked up by Voicemail Pro VPIM receiver. Check that there are no messages left there. If there are, open one with Notepad and check that the addressed mailbox and machine name are valid. If so, try Verification #3 to check that the SMTP service is running.

Verification 5: Interchange basic tests

From the Interchange Main Menu, select Customer/Services Administration → Diagnostics to perform the following basic checks:

a) TCP/IP Diagnostics
   i) Send & Receive Test Packets – ping the entered IP address
   ii) View Packet Statistics – look for any interface issues (e.g., collisions)
b) Display Message Queue – monitors the contents of the outgoing message queue. If messages cannot be sent (e.g., due to administration errors) this queue will likely contain them.

c) Remote Connection Test – test the basic connection to a remote audix system.

**Verification 6:** Audix Browser status test

a) From the Browser interface to the S8100, select **System Administration ➔ AUDIX Networking ➔ Maintenance Menu ➔ Network Snapshot** to see the status of connectivity to the Interchange.

**Verification 7:** S8100 Ping test

a) From the Avaya Terminal Emulator interface to the S8100, select **cmd** at the Enter Command prompt. At the DOS prompt, enter **ipconfig** to verify the ip address and gateway, and **ping** the Interchange to test the connection.

**Verification 8:** Check for status through the INTUITY™ AUDIX® Command Line Interface

a) To update the Audix with reachable subscribers through the Interchange, from the Audix command line prompt, type **get remote-updates machine** and **Enter** where the machine is the name of the Interchange system. Repeat the command periodically (and cancel out) until the “Status of Last Update” entry is **completed**.

```
11ip600sit         Active           Alarms: M wA
Logins: 1
get remote-updates holeo27
   REMOTE UPDATE REQUEST

Request Full Update from Machine:  holeo27
   Status of Last Update:  in progress
   Last Completed Update:
Press [Enter] for Full Update Request
[Cancel] to Abort

Command Successfully Completed
```

**Figure 29: get remote update**
b) From the command line prompt, type `display administrators-log` where message delivery failures and reasons can be found. The following is an example of an undeliverable message log:

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Log Type</th>
<th>Event</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>10/17/03</td>
<td>12:36</td>
<td>VM</td>
<td>ADM_undm</td>
<td>Undeliverable message from x30001 to leo27 x40202 (continued).</td>
</tr>
<tr>
<td>10/17/03</td>
<td>12:36</td>
<td>VM</td>
<td>ADM_undm</td>
<td>Undeliverable message from x30001 to leo27 x40202 (continued).</td>
</tr>
</tbody>
</table>

**Verification 9: Message exchange tests**

In general, the following capabilities are supported and can be verified:

a) Sending Messages to lists or individuals, preserving any combination of:
   i) Priority
   ii) Privacy
b) Replying to the sender
c) Forwarding

**8. Conclusion**

If the steps in these Application Notes are followed, the reader will have successfully configured an Avaya Voicemail Pro and Avaya INTUITY™ AUDIX® to exchange messages via an Avaya Interchange.

**9. Additional References**

From [http://support.avaya.com](http://support.avaya.com):


[Int-VPIM] – “Avaya Interchange Release 5.4 Adding a VPIM System to Your Network”.