AVAYA

Avaya™ Interchange

Release 5.4
Adding a VPIM System to Your Network

Adding a VPIM System To Your Network

This document describes how to add to your Interchange network a new system that uses the Voice Protocol Internet Messaging v2 (VPIM v2) protocol.

Please keep in mind the following aspects of the instructions:

- Examples are included to aid in understanding, but the actual configurations and data you enter can vary greatly.

- The instructions apply only to Avaya Interchange R5.4.

- In general, the dial plan of the Interchange should maintain as much consistency as possible between the mailbox IDs subscribers enter to send messages and the phone numbers subscribers dial when simply calling other subscribers. The examples in this document are designed to show such consistency.

Overview of VPIM Addressing

Adding a VPIM system requires that you first understand how messages are actually addressed, either when sent from the VPIM system or when sent to the VPIM system.

Addressing Messages Sent From a VPIM System

When a subscriber who is using Voice Protocol Internet Messaging v2 (VPIM v2) uses a graphical user interface (GUI) to send a message to a remote subscriber in an Interchange network, the VPIM subscriber normally uses the full Interchange address of that remote subscriber (as defined in the Dial Plan Mapping screen for the remote system). The subscriber also attaches the domain name of Interchange, using the address format *Network Address@Local Interchange Domain Name*. For example, a VPIM sender might send a message to an AUDIX subscriber with the address format **9705562244@central.co.acme.com**, where central.co.acme.com is the fully qualified domain name of the Interchange and 9705562244 is the Interchange address for that AUDIX subscriber.

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Overview of VPIM Addressing

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On the other hand, when a VPIM subscriber uses a telephone to address messages to a remote subscriber in the Interchange network, the VPIM subscriber simply dials the full Interchange address. This is, again, usually the full phone number of the remote recipient. For example, the VPIM subscriber would send a message to the same AUDIX subscriber from the phone with the address **9705562244**.

However, in the latter case, the VPIM system actually passes the message to Interchange over the Internet or Intranet by, again, using the address format *Network Address@Local Interchange Domain Name*. Thus, the VPIM system would send the message, as in our example, in a format such as **9705562244@central.co.acme.com**.

When Interchange receives the message, it does the following:

- Identifies the target system by the dialed network address

- Converts the message to the appropriate messaging format of the target system

- Strips off the prefix digits according to the entries on the Dial Plan Mapping screen for the target system

- Sends the message to the target system with the appropriate mailbox ID

Addressing Messages Sent to a VPIM System

Conversely, when a remote subscriber in the Interchange network sends messages to a VPIM v2 subscriber, the remote subscriber also uses the full Interchange address as determined in the Dial Plan Mapping screen for the VPIM system. Again, this address is usually the phone number of the VPIM subscriber. For example, a message from an AUDIX subscriber to a VPIM subscriber in the network might have the address **3035555444**.

Interchange actually passes the message to the VPIM system over the Internet or an intranet using the address format *VPIM mailbox ID@VPIM Domain Name*. Therefore, Interchange would send the message in our example with an addressing format of **55444@Englewood.co.acme.com**, where Englewood.co.acme.com is the fully qualified domain name of the VPIM system and 55444 is the mailbox ID on the VPIM system.

When Interchange receives the message, it does the following:

- Identifies the VPIM system by the dialed network address

- Converts the message to the VPIM messaging format

- Strips off the prefix digits according to the entries on the Dial Plan Mapping screen for the VPIM system

- Sends the message to the VPIM system with the appropriate mailbox ID in the format *VPIM mailbox ID@VPIM Domain Name*

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Checklist for Adding a VPIM Endpoint

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As a result, you must administer the domain names, IP addresses, and mailbox dial plans of both the VPIM system and the Interchange network. These are the central tasks of adding a VPIM endpoint.

> ➡ **NOTE:**
> The following recommended procedure assumes that you will want remote subscribers to address mail messages to VPIM subscribers who are using the phone number that remote subscribers would use to simply call VPIM subscribers. Such an approach is usually the easiest for subscribers to learn.

Checklist for Adding a VPIM Endpoint

To add a new VPIM messaging system to an existing Avaya Interchange network, do the following:

Task	What the Task Consists Of
Task 1: Get Information About the System You Are Adding (see Page 4)	Complete the Planning Worksheet included in this document. The data net-working administrator for your Interchange system and the switch administrator and/or VPIM system administrator for the new system will need to give you the dial plan, exact phone numbers, domain names, and IP addresses.
Task 2: Determine How to Map the New System's Dial Plan (see Page 8)	Complete the Dial Plan Mapping Worksheet in this document (Professional Services normally does this for you).
Task 3: Check the Available VPIM Ports (see Page 18)	Display the Feature Options screen.
Task 4: Define the Interchange Domain and VPIM DNS, If Any (see Page 19)	Complete the VPIM-related fields on the General Parameters screen.
Task 5: Identify the New System To the Interchange System (see Page 20)	Complete the VPIM Machine Administration screen for the new system.
Task 6: Administer Remote Machine Parameters (see Page 22)	Complete the Remote Machine Parameters screen for the new system. Also complete the VPIM Machine Profile screen by using the Dial Plan Mapping Worksheet.

Task 7: Map the New System's Dial Plan for Interchange (see Page 26)	Complete the Dial Plan Mapping screen for the new system by using the Dial Plan Mapping Worksheet.
Task 8: Add Remote Subscribers to Interchange (see Page 29)	Set up the self-registration phone number on the General Parameters screen and then tell remote subscribers on the new system to send a message.
Task 9: Verify the Endpoint Has Been Administered (see Page 33)	Check for a new system entry on the Remote Machine List and the Remote Machine Dial Plan List.
Task 10: Create an Interchange Profile on the New System (see Page 35)	Enter the Interchange as a VPIM network node into the new system. ⇒ **NOTE:** Be sure to enter the *exact* name, domain name, and IP address of Interchange.
Task 11: Test the Connection (see Page 36)	Send messages to and from the test mailbox on the new system.
Task 12: Update Remote Systems for Subscribers on the New System (see Page 37)	Add information to Directory Views, if appropriate. Run Get Remote_Update from Intuity AUDIX systems. Run Demand Update Push from Interchange to Aria and Serenade systems.

Task 1: Get Information About the System You Are Adding

You need the following information about the VPIM system you are adding:

- The system's name and fully qualified domain name

- The domain name server (DNS) or servers, if any, that support the new system

- If no DNS is used for the system, the IP address of the new system

- The range of mailbox extensions (mailbox IDs)

- The prefix or prefixes that the Interchange system will attach to mailbox IDs so they fit the Interchange network dial plan

- A specific mailbox ID on the new system that will receive and send a test message over the Interchange network

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Task 1: Get Information About the System You Are Adding

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Your account executive determines these items with you and completes a *Planning Worksheet*. Retrieve these items and enter them in the Planning Worksheet that follows.

Additionally, you need to know how many digits are in the Interchange dial plan, usually 7 or 10.

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Task 1: Get Information About the System You Are Adding

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Planning Worksheet

VPIM System Name _____

VPIM Domain Name _____

One of the following: IP address of VPIM System _____
                       or
                       IP address of DNS 1 (up to 3) _____
                       IP address of DNS 2   _____
                       IP address of DNS 3   _____

End Node Test Mailbox(es)*: _____

*These mailboxes should be identified by the customer and must fall within the System dial plan and must be a unique network address.

Full Network Address Ranges for this End Node: excluding address ranges associated with those mailboxes which will never receive messages, such as Auto Attendant, Bulletin Board, etc. **Keep ranges as specific to the actual mailboxes as possible** and consider any potential growth. In an existing system, verify existing ranges (see Existing Point to Point Screen Information for mailbox list information. Interchange requires one network address length.

	Area Code and/or Local Exchange Prefix (if any)	**Starting Extension**	**Ending Extension**
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____
4.	_____	_____	_____
5.	_____	_____	_____
6.	_____	_____	_____
7.	_____	_____	_____
8.			

To complete the worksheet, do the following:

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Task 1: Get Information About the System You Are Adding   *Page 7*

1. Determine the **VPIM System Name**. The name cannot exceed 30 characters, and the it is case sensitive.   For example, **Englewood** is a valid name.

2. Determine the **VPIM System Domain Name**. This name is the fully qualified domain name that includes the server name. The name cannot exceed 64 characters. For example, a name might be **Englewood.co.acme.com**.

3. Do only one of the following:

   - Determine the **IP address of the VPIM system**. The address of the system must be a fully qualified domain server. If Interchange will use this address to exchange messages with the system, do not enter a DNS address below.

     For example, the IP address for Englewood might be **147.5.45.23**.

   - Determine the **IP address of DNS 1**, and if available and needed, **DNS 2** and **DNS 3**. These addresses are the IP addresses through which Interchange will determine the address of the VPIM endpoint. Companies may use a Directory Name Server to map domain names to IP addresses within the network. In this way, maintenance of network IP addresses is easier.

4. Determine the **End Node Test Mailbox** on the new system. You use this mailbox to send and receive test messages through Interchange. Ask the administrator of the new system for a mailbox number.

5. Determine the **Starting** and **Ending Extensions** of the voice mailboxes on the new system. Consult with the administrator of the new system to determine the appropriate ranges.

   The remote messaging system can have 3-digit, 4-digit, 5-digit, or up to 10-digit extensions in various ranges. For example, it can have 5-digit ranges of **20000** to **29999**, followed by **30000** to **39999**, and finally **50000** to **59999**.

   > ⚠ **CAUTION:**
   > *Be sure that ranges do **not** include the extensions of automated attendants, bulletin boards, and other special mailboxes that should not accept messages. If these mailboxes are included, then messages sent to Enterprise Lists defined by remote machine will fail and show up in your delivery status reports. More importantly, messages may actually be sent to mailboxes that should not receive E-list messages.*

6. Determine the **Area Code and/or Local Exchange Prefix(es)** that Interchange must use to send messages to mailboxes on the new system. Ask the switch administrator for the new system to get the correct digits. These digits are required because Interchange uses a specified address length (normally 7 or 10 digits for the US) to process all messages.

The prefix comprises the digits that normally precede the mailbox IDs when someone calls the mailbox from outside of the switch location. The prefix could actually replace digits in the mailbox IDs, as will be defined as a part of Dial Plan Mapping. Usually, prefixes are associated with Direct Inward Dial (DID) trunks that direct calls to the mailboxes. That is, the prefix combined with the mailbox ID is usually the phone number of a subscriber.

For example, mailboxes in the range **20000** to **29999** may normally be preceded by **303-55**. So, if an outside caller wanted to leave a message for mailbox **20001**, that caller would actually dial **303-552-0001**. This example assumes the local area requires 10-digit dialing.

It is possible, however, in a 10-digit dialing area, that mailboxes on the new system could be preceded by *different* prefixes. So, although some mailboxes are preceded by **303-55,** the extension range **50000** to **59999** might be preceded by **720-48**. In this case, an outside caller would dial **720-485-5460** to call mailbox **55460**.

Task 2: Determine How to Map the New System's Dial Plan

> **NOTE:**
> Avaya Professional Services normally determines how to map the dial plan for you and sends you a Dial Plan Mapping Worksheet. In this case, you can skip this task.

Interchange normally uses a 7-digit or 10-digit dial plan. The new system will likely have a different dial plan, one that usually uses 4 or 5 digits You will have to map the dial plan of the new system to the Interchange network address length.

> **NOTE:**
> If subscriber mailboxes on the VPIM system use their 7-digit or 10-digit phone numbers as mailbox IDs, and the digit length matches the Interchange Network Dial Plan, skip this task. In this case, you do *not* need to map the dial plan.

Use the following instructions and the to determine how to map the new system's dial plan. This worksheet is normally provided to you by Avaya Professional Services.

1. Note these two most critical rules:

   a. The digit or digits you enter in the Map From column for each Mailbox ID range must be *unique*.

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b. If you have only one prefix that you are mapping to and you do not have to replace the initial digit or digits of the mailbox IDs[1], you can set the Map From Length to **0**.

⚠ CAUTION:

If you change your dial plan later (for example, if you add more extensions that have a different DID prefix) and need to add Mailbox ID ranges for this system, you will have to remove the system from the Interchange network and re-add it to the network with the new dial plan. This task could entail a significant amount of work.

*Therefore, if you anticipate the need to change the dial plan for this endpoint in the future, you might want to use a Map From Length of **1** or more.*

2. Check your Planning Worksheet (see Page 6) for the mailbox ID (extension) ranges of the new system. Review the examples that follow, and fill out the Dial Plan Mapping Worksheet (see Page 16), according to whether you have:

   - A broken or unbroken range of extensions

   - Ranges of extensions that have different prefixes and the first digit or digits in the **start** field are unique.

   - Ranges of extensions that have different prefixes and the first digit or digits in the **start** field are shared.

   - Initial digits in mailbox IDs that must be replaced with different digits

Sample Dial Plan Mapping (Single Unbroken Range of Mailbox IDs)

In Figure 1, since there is a single unbroken MAILBOX ID range (**2000** to **5999**), you enter **0** in the **Map From Length** field on the Dial Mapping Worksheet. In this case, you leave the **Map From** field for the range blank. Then, the **Map To** digits specify the area code and local exchange 3-digit prefix. You can get these numbers from your Planning Worksheet (see Page 6).

When these digits are added to the 4-digit mailbox IDs, Interchange has the necessary 10 digits.

---

1.   If the new system's mailbox IDs must conform to a Uniform Dial Plan, the initial digit or digits of the mailbox IDs can overlap, **and differ from**, the ending digit or digits of the local exchange prefix. See Sample Dial Plan Mapping (When Prefixes Replace Initial Mailbox Digits) (see Page 14).

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Dial Plan with 0 Map From Length

| Remote Machine Name: Englewood | Mailbox ID Length: 4 |
| | Map From Length: **0** |

MAILBOX ID:		NETWORK ADDRESS DIAL PLAN MAPPING	
Start	End	Map From	Map To
2000	5999		303555

Figure 1.   Sample Dial Plan Map with a Single Range (0 Map From Length)

Sample Dial Plan Mapping (Broken Ranges of Mailbox IDs with Map From 0)

In , there are broken MAILBOX ID ranges. In this case, ranges 4000 to 4999 and 5500 to 5799 can be omitted for one of two reasons:

- The range contains auto-attendant mailboxes and other extensions for which mailboxes have not been assigned.

- Another messaging system, which uses the same prefix as this system, will use the mailbox ranges 4000 to 4999 and 5500 to 5799.

In this example, you can still enter **0** in the **Map From Length** field on the Dial Mapping Worksheet. In this case, you leave the **Map From** field for the range blank. Then, for the **Map To** digits for the first range, specify the area code and local exchange 3-digit prefix. Then, leave the remaining Map From and Map To fields blank. Interchange will automatically apply the prefix to the remaining ranges.

When the prefix digits are added to the 4-digit mailbox IDs, Interchange has the necessary 10 digits.

> ⚠️ **CAUTION:**
> *If it is possible that this system will add mailbox ranges at a later time, do **not** use Map From Length 0. Instead, use Map From Length 1, as in . If you use Map From Length 0, and then later must change the dial plan so that you must use a different Map From Length, you will have to remove the system from the Interchange network and then add it again.*

Dial Plan with 0 Map From Length

Remote Machine Name: Englewood		Mailbox ID Length: 4
		Map From Length: **0**

MAILBOX ID:		NETWORK ADDRESS DIAL PLAN MAPPING	
Start	End	Map From	Map To
2000	2999		303555
3000	3999		
5000	5499		
5800	5999		

Figure 2.   Sample Dial Plan Map with Multiple Ranges (0 Map From Length)

Sample Dial Plan Mapping (Broken Ranges of Mailbox IDs with Map From 1)

In Figure 3, as in the previous example, there are also broken MAILBOX ID ranges.

However, say that in this example, you anticipate that you will need to change the dial plan for this system in the future, so you avoid entering a **0** Map From Length. If you were to enter **0**, you would have to remove the system and add it again to change its dial plan. So, instead, you can enter **1** in the **Map From Length** field on the Dial Mapping Worksheet. In this case, enter the first digit of the first Mailbox ID range in the **Map From** field. Then, for the **Map To** digits for the first range, specify the area code, local exchange 3-digit prefix, and the first digit of that same Mailbox ID range. Then, enter the first digit of the next range with a unique start digit, and so on.

When the prefix digits are added to the 4-digit mailbox IDs, Interchange has the necessary 10 digits.

> ➡️ **NOTE:**
> Notice that the last Mailbox ID range, **5800** to **5899** does not have **Map From** and **Map To** digits entered next to it. This is because the **Map From 5** and **Map To 3035555** digits apply to any range that starts with **5**.

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Remote Machine Name: Englewood		Mailbox ID Length: 4	
		Map From Length: **1**	
MAILBOX ID:		NETWORK ADDRESS DIAL PLAN MAPPING	
Start	End	Map From	Map To
2000	2999	2	3035552
3000	3999	3	3035553
5000	5499	5	3035555
5800	5999		

Figure 3.   Sample Dial Plan Map With Multiple Ranges (1 Map From Length)

Sample Dial Plan Mapping (Ranges That Require Different Prefixes)

In Figure 4, there are broken MAILBOX ID ranges, and one range has a different `Map To` prefix. This situation requires a `Map From Length` of **1** or greater.

In this example, the range with a different prefix, 5000 to 5999 begins with a unique Start digit. Therefore, you can enter **1** in the `Map From Length` field on the Dial Mapping Worksheet. In this case, then, the `Map To` digits for the ranges consist of the first digit of each range, and the `Map From` digits specify the area codes and local exchange 3-digit prefixes for their respective Mailbox ID ranges.

Remote Machine Name: Englewood		Mailbox ID Length: 4	
		Map From Length: **1**	
MAILBOX ID:		NETWORK ADDRESS DIAL PLAN MAPPING	
Start	End	Map From	Map To
2000	2999	2	3035552
3000	3999	3	3035553
5000	5999	5	7205515

Figure 4.   Sample Dial Plan Map With Multiple Prefixes (1 Map From Length)

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Sample Dial Plan Mapping (Ranges With Different Prefixes and Shared Start Digits)

In the following example, the new system had two MAILBOX ID ranges with the same initial digit **5** (**5000** to **5499** and **5500** to **5999**), but their DID prefixes were different and, therefore, must be differentiated in the Dial Plan Map. Also, because entries in the **Map From** column for each range must be unique, there must be **2** Map From digits. That is, you *cannot* set up dial plan mapping with one Map From digit as follows:

Remote Machine Name: Englewood — Mailbox ID Length: 4 — Map From Length: **1**

You cannot do this!! See Figure 5 instead.

MAILBOX ID:		NETWORK ADDRESS DIAL PLAN MAPPING	
Start	End	Map From	Map To
2000	2999	2	3035552
3000	3999	3	3035553
5000	5499	**5**	3035555
5500	5999	**5**	7205515

Instead, you must break out every MAILBOX ID range so that the first two digits in each range are unique (see Figure 5). This requirement includes ranges that have unique initial digits (**2000** to **2999** and **3000** to **3999** in our example). The **Map To** digits include 8 digits that specify area code, the local exchange 3-digit prefix, and two additional digits that match the **Map From** digits. When the Map To digits are added to the remaining 2 digits of the mailbox IDs, Interchange has the 10 digits required for the mailboxes.

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Remote Machine Name: Englewood   Mailbox ID Length: 4

Map From Length: **2**

MAILBOX ID: NETWORK ADDRESS DIAL PLAN MAPPING

These match

Start	End	Map From	Map To
2000	2999	20	3035552**0**
3000	3999	21	30355521
5000	5499	22	30355522
5500	5999	⋮	⋮
		29	30355529
		30	30355530
		⋮	⋮
		39	30355539
		50	30355550
		51	30355551
		52	30355552
		53	30355553
		54	30355554
		55	72055155
		56	72055156
		57	72055157
		58	72055158
		59	72055159

Originally 5000-5499 and 5500-5999.
Now, broken out for mapping.

Figure 5.   Dial Plan With Multiple Prefixes (2 Map From Length)

Sample Dial Plan Mapping (When Prefixes Replace Initial Mailbox Digits)

In , there are broken MAILBOX ID ranges, and the two ranges have
different **Map To** prefixes. *Additionally,* the mailbox IDs are part of a 5-digit
Uniform Dial Plan across two switches so that the initial digits of the mailbox IDs
overlap the final digits of the phone number prefixes. In this case, the Dial Plan

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Map will replace the initial digit of the MAILBOX ID ranges with a different digit. This situation also requires a `Map From Length` of **1** or greater.

In this example, a mailbox in the first range might be **21333**, but its external phone number would be **303-555-1333**. In the Dial Plan Mapping screen, the initial mailbox digit **2** is replaced with the final digit of the prefix, in this case, **5**. A mailbox in the second range might be **54444**, but its external phone number would be **720-551-4444**. In the Dial Plan Mapping screen, the initial mailbox digit **5** is replaced with the final digit of the prefix, in this case, **1**.

Remote Machine Name: Englewood		Mailbox ID Length: **5**	
		Map From Length: **1**	
MAILBOX ID:		NETWORK ADDRESS DIAL PLAN MAPPING	
Start	End	Map From	Map To
20000	29999	2	303555
50000	59999	5	720551

Figure 6.   Sample Dial Plan Map When Prefixes Replace Initial Mailbox Digits (1 Map From Length)

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Dial Plan Mapping Worksheet

Remote Machine Name: _____   Mailbox ID Length: ___

Map From Length: ___

MAILBOX ID:		NETWORK ADDRESS DIAL PLAN MAPPING	
Start	End	Map From	Map To

3. In the **Mailbox ID Length** field, enter the number of digits in each mailbox ID. Normally, this number is **4** or **5**. Check your Planning Worksheet (see Page 6).

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4. In the **Map From Length** field, enter the number of digits that Interchange will replace with mapping digits to convert the current mailbox IDs to Interchange network address length.   As in the samples above, this number will be based on whether you have:

   - One range (for example, **0000** to **9999**) — in this case, type **0** (but see the Caution that follows)

   - Broken ranges, each with unique prefixes (for example, **2000** to **2999** with prefix 303-555 and **4000** to **4999** with prefix 720-551) — in this case, type **1**

   - Multiple ranges that share start digits but have different prefixes (for example, **5000** to **5499** with prefix 303-555 and **5500** to **5999** with prefix 720-551, where **5** is a shared start digit) — in this case, type **2**

   - Ranges whose initial digits must be replaced with different digits (for example, a uniform dial plan range of **50000** to **59999**, but a local exchange prefix that ends in **1**) — in this case, type **1**

⚠ CAUTION:

*If you use Map From Length **0**, you **cannot** change this later. Instead, you must remove the remote system from the Interchange network and add it again.*

5. In the **Mailbox ID Start** and **End** fields, list the mailbox ID ranges of the new system. You get the ranges from your .

6. In the first **Map From** field, type the digit(s) that match the first digit(s) of the first **MAILBOX ID Start** and **End** range. This field can be blank if Interchange will add the same Map To digits for all ranges, and no digits in the mailbox IDs must be replaced with different digits. However, the number of digits you enter must match the number of digits specified in the **Map From Length** field.

   In our example in , the first field contains **20**, because the mailbox ID range starts with 20, and these first two digits will be replaced with the last two digits of the **Map To** digit string.

7. In the first **Map To** field, type the area code and DID prefix of the mailbox IDs. For these numbers, check your Planning Worksheet. The last digits in this field must match the digits in the **Map From** field.

   In our example in , we entered **30355520**, with the last two digits, **20**, as substitutes for the first two digits **20** of the mailbox range, thereby creating mailbox IDs of 10 digits. For example, the first mailbox would have a virtual ID of **303-555-2000**, and the last mailbox in this range would have an ID of **303-555-2099**.

➡ NOTE:

If the **Map From** field is blank, the **Map To** digits will simply be added to the mailbox IDs to total 10 digits.

Task 3: Check the Available VPIM Ports

1. Start at the Interchange main menu and select

> **> Customer/Services Administration**

> **> Feature Options**

The system displays the Feature Options screen. (Figure 7).

```
                    Feature Options (Read Only)
            Feature Option              Current      Maximum

Aria Digital Ports                       8            8
Call Detail Recording (CDR)              ON           N/A
Enterprise Lists Administration          ON           N/A
High speed digital ports                 2            12
Low speed digital ports                  2            12
Max Number of Octel Nodes                6            50
Maximum Number of AMIS Nodes             6            50
Maximum Number of Digital Nodes          20           50
SCSI Disk Mirroring                      OFF          N/A
SNMP                                     ON           N/A
Serenade Digital Ports                   8            8
TCP/IP Administration                    ON           N/A
TCPIP digital ports                      12           12
Text-to-Speech Sessions                  0            30
VPIM Ports                               5            10
hours_of_speech                          200          1114
voice_ports                              6            6
```

Figure 7.　Feature Options Screen

2. Check that the following fields contain the right data:

Maximum Number of Digital Nodes	The Current column should exceed the number of nodes currently administered on Interchange.
VPIM Ports	The number of ports must be sufficient to handle VPIM messaging traffic between Interchange and the new system.

3. Press F6 (Cancel).

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Task 4: Define the Interchange Domain and VPIM DNS, If Any Page 19

Task 4: Define the Interchange Domain and VPIM DNS, If Any

If your company uses Directory Name Servers (DNS) to map the IP address of the new VPIM system, you will need to identify the DNS address or addresses in this task. Also, since Interchange sends messages to and receives messages from the new system through the Internet or an intranet, you must define the Interchange domain name.

1. Start at the Interchange main menu and select

> **Interchange Administration**

> **System Parameters**

> **General Parameters**
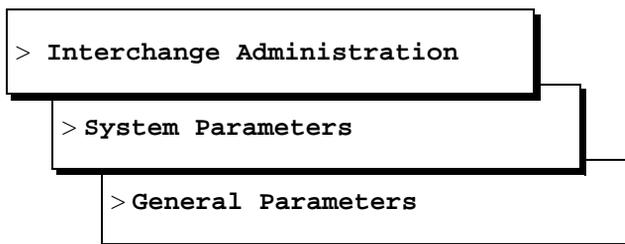
The system displays the General Parameters screen. (Figure 8).

```
┌─────────────────────── General Parameters ───────────────────────┐
│                                                                   │
│ Local Machine Name:  central               Network Address Length: 10
│ Automatic Full Updates? y   UPDATES: In? y Out? y  Network Turnaround? y
│ System Prime Time: Start: 08:00  End: 17:00            CDR Retention: 7
│                                                                   │
│ 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:80003      VPIM Port:25    │
│     Self Registration Agent ID: 9991234527                       │
│  Organization: central ops                                       │
│  Org Unit: 131222-a8                Country: usa                 │
│  Domain Name: central.co.acme.com                               │
│  DNS IP Addresses:                                               │
│     1: 146.9.1.39              2:                               │
│     3:                                                          │
│ Enter Domain Name                                                │
└───────────────────────────────────────────────────────────────────┘
```

Figure 8.   General Parameters Screen

2. In the **VPIM Port** field, type **25**. This number is the industry standard port number for VPIM communications.

3. In the **Self Registration Agent ID** field, type a 10-digit phone number to which the VPIM system subscribers can send a recorded VPIM message with a recording of the subscriber's voiced name only. This step is necessary to complete the self-registration described in . However, other messaging systems (AMIS and Octel Analog Networking, as well as VPIM, systems) in the Interchange network can also use this number.

   For this number, use a fictitious area code and prefix to ensure the messages do not go to a real phone number or mailbox, either within your Interchange network or in the public network. You might use an alphabetical code so that subscribers can easily remember the number. For example, the number 734 478 3763 spells REGISTER ME on the telephone dial pad.

   In our example, the phone number for self-registration is **9991234527**.

4. In the **Domain Name** field, type the fully qualified domain name of Interchange, including the server name. The VPIM system administrator must include this name in the VPIM system exactly as defined here.

   In our example, the domain name is **central.co.acme.com**.

5. In the **DNS IP Addresses** field or fields, leave the fields blank if Interchange will use the static IP address of the new VPIM system to communicate. However, if the new system has a dynamic IP address registered through a DNS, type the IP address of the DNS. If there is a second and a third DNS serving the new system, type the IP addresses of those systems as well.

   In our example, the ACME company uses a DNS to manage many of its networked systems, including the new VPIM system. The DNS IP address is **146.9.1.39**.

6. Press ⒡⒊ (Save).

7. Press ⒡⒍ (Cancel) to return to the System Parameters menu.

Task 5: Identify the New System To the Interchange System

1. Start at the Avaya Interchange main menu and select

> **Networking Administration**

> **Remote Machine Administration**

> **VPIM Machine Administration**

The system displays the VPIM Machine Administration screen (Figure 9).
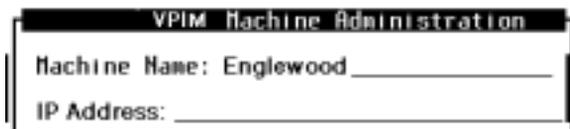
Figure 9.　Remote Machine Administration Screen

2. In the **Machine Name** field, enter a name for the new system. Check with the administrator of the new system for the exact name. Our example uses **Englewood**, the location of the system.

   The name must be unique within your Interchange network.

   Use F2 (Choices) to view the existing VPIM machine names to make sure that you enter a unique name.

   ⚠ **CAUTION:**
   The name must be unique on both the local Interchange and any other Interchange systems, if you have them, in your network. To make sure you are using a unique name, you can check the Remote Machine List on all Interchange systems in your network. This screen lists all machine names, including AUDIX systems and those that use Serenade Digital, Aria Digital, and Octel Analog Networking protocols. The path to access this screen is as follows:

> **Interchange Administration**

   > **Remote Machine Administration**

      > **Remote Machine Lists**

         > **Remote Machine List**
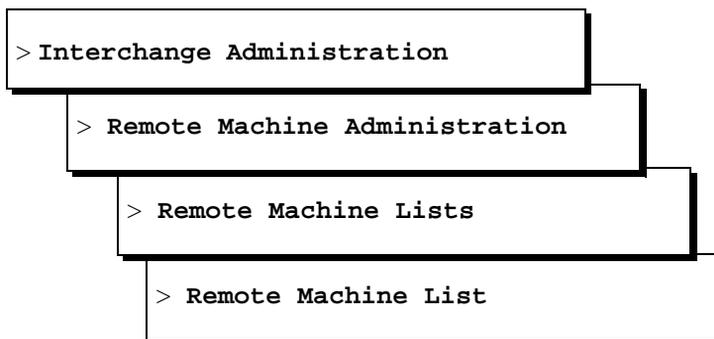
3. In the **IP Address** field, enter the IP address of the VPIM system. Check your Planning Worksheet for this address.

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> **NOTE:**
>> Leave this field blank if Interchange will use a Directory Name Server to find the VPIM system.

4. When you finish entering information for the new system, press F8 (Chg-Keys).

5. Press F3 (Add).

   After you press the key, the system adds the information and returns you to the Machine Name field. You see the following message on your screen:

   ```
   Machine Added, Enter Machine Name, use <CHOICES> for
   list
   ```

Task 6: Administer Remote Machine Parameters

Perform this task to define other characteristics of the new system, most importantly the dial plan of the mailboxes on the new system. Use the Dial Plan Mapping Worksheet from Avaya Professional Services or your Dial Plan Mapping Worksheet (see Page 16) to complete this task.

To set remote machine parameters, do the following:

1. Start at the Interchange main menu and select

   > **Interchange Administration**

   > **Remote Machine Administration**

   > **Remote Machine Parameters**

   The system displays the Remote Machine Parameters screen (Figure 10).

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Figure 10.   Remote Machine Parameters Screen

2. In the **Remote Machine Name** field, type the name of the new
   system you added in
, and press (ENTER). If you do not remember the exact
   name, press F2 (Choices) to display a list of valid remote machines. In the
   example, you would type **Englewood**.

   The system automatically fills in the **Machine Type** field with **VPIM**.

3. In the **Avaya** or **Intuity Interchange?** field, leave the default
   n (no). The new system is not an Interchange.

4. In the **Mailbox ID Length** field, type the length of the mailbox IDs
   of the new system. If a sample mailbox ID (or extension) is **2345**, the length
   is **4**.

   In most cases, this number will be **4** or **5**, but the number can be up to 10
   digits if, for example, mailboxes have their own incoming trunk group.   In
   the example, the mailbox IDs will be **4** digits long.

5. Leave the defaults in the following fields:

   - **Default Language: us-eng**

     There are no other languages currently supported.

   - **Failed Msg. Notification Priority? n**

     y means that a subscriber on this system who sends a message to a
     subscriber to another Interchange system will receive a priority
     notification if the message is not delivered to that subscriber.

   - **Msg ID? n**

     y means that failed message notification, if turned on, will include
     the original message ID.

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- **Send Message for Warning? n.**

  y indicates that the **original** message is sent back to a subscriber after he or she has sent a message from the VPIM system to a subscriber on a remote system that has the Extended Absence Greeting (EAG) warning activated. This message return is in addition to the message indicating the actual EAG warning condition.

- **Default NameNet Type: U** (means *usage based* and indicates that directory entries are temporarily available based on the network traffic of a particular remote system. This field is used when subscribers associated with this new system are stored on a legacy Octel system as NameNet entries.)

- **Organization:** Leave blank.

  This field is for your information. It can be a record of the name of the organization this system supports, the name of the organization that maintains the system, or any other name you choose.

- **Org Unit:** Leave blank.

  This field is for your information. It can be a record of the department number this system supports, the department number that maintains the system, or any other name or number you choose.

- **Node ID:** Display only, created by Interchange.

- **Comments:** Leave blank.

  This field is for your information. You might want to enter the name and phone number of the contact person for the new system.

6. In the **ADDRESS RANGE (Mailbox ID)** fields, type the address ranges (up to 10) of the new system. While the screen allows you to enter more than 10 ranges, Interchange recognizes only the first 10 ranges you enter. Check your Dial Plan Mapping Worksheet for these ranges.

⚠ CAUTION:

*Do **not** simply use the ranges from your Planning Worksheet or the ranges given to you by the switch administrator for the new system. Also use the Dial Plan Mapping Worksheet that you received from Professional Services or the worksheet you completed yourself. The ranges you enter here will reappear on the Dial Plan Mapping screen, which you will complete in* *.*

*In our example, the mailbox ranges on the Planning Worksheet were **2000** to **2999**, **3000** to **3999**, **5000** to **5499**, and **5500** to **5999**. The 5000 to 5999 range is broken out into two ranges because the latter half of the range, **5500** to **5999**, has a different area code and local exchange prefix from that of **5000** to **5499**.*

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> ⚠ **CAUTION:**
> *Be sure that ranges do **not** include the extensions of automated attendants, bulletin boards, and other special mailboxes that should not accept messages. If these mailboxes are included, then messages sent to Enterprise Lists defined by remote machine will fail and will show up in your delivery status reports. More importantly, messages may actually be sent to mailboxes that should not receive E-list messages.*

7. Press (ENTER) or (TAB) if you need to add more ranges than those that are available on the initial screen.

8. After you have entered all appropriate address ranges, press (F5) (Details).

   The Machine Profile screen appears (Figure 11). It contains a display-only name for the **Remote Machine Name** field.

```
                            UPIM Machine Profile
      Remote Machine Name: Englewood          Default Community ID:    1

   Subscriber Updates Type: dynamic

 Voiced Names for Dynamic? n           Dynamic Sub Expiration Days:   90

                Use DNS? y          Port: 25

           Domain Name:  Englewood.co.acme.com                          .
nter the DNS name for this machine
```

Figure 11.   VPIM Machine Profile Screen

9. In the **Default Community ID** field, leave the default **1**.

   Additional communities can exist on AUDIX systems in the network. If you want to give permissions to subscribers on this system for specific AUDIX community IDs, use the Subscriber Parameter Administration screen.

10. In the **Subscriber Updates Type** field, leave the default **dynamic**. No other update type will work with a VPIM system.

   Each time a subscriber on this VPIM system sends a message to a remote subscriber, that remote subscriber is added to the Dynamic Directory List for the VPIM machine. Likewise, each time a remote subscriber sends a message to a subscriber on the VPIM system, that remote subscriber is added to the list.

   If, typically within the next 90 days (see Dynamic Sub Expiration Days), no other messages are sent from the VPIM machine to that remote subscriber , or vice versa, that remote subscriber is removed from the list. This update type helps save storage space on the new system and allows the administrator to track who has been communicating with the system.

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> **NOTE:**
> The Directory Views screen does not apply to VPIM systems.

11. In the **Voiced Names for Dynamic?** field, type **y** to include the remote subscribers voiced names (if added dynamically) to the update.

12. In the **Dynamic Sub Expiration Days** field, leave the default **90.**

    This entry is the number of days a dynamically added remote subscriber can be inactive, neither sending messages to nor receiving messages from the VPIM system, and remain in the VPIM system's Dynamic Directory List.

13. In the **USE DNS?** field, type **y** to have Interchange determine the address of the VPIM system through a DNS server. Interchange will connect to the DNS server using the DNS IP address or addresses you enter on the General Parameters screen.

    Type **n** to have Interchange connect to the VPIM system's static IP address instead.

    In the example, Interchange will go through a DNS.

    > **NOTE:**
    > If you type **y** here, Interchange will ignore the IP address you entered, if any, in the VPIM Machine Administration screen.

14. In the **Port** field, leave the default **25**. This entry is the industry standard port number for VPIM/MIME/SMTP communications.

15. In the **Domain Name** field, type the fully qualified domain name of the VPIM system. The name must include the server name.

    In the example, the domain name is **Englewood.co.acme.com**.

16. Press [F3] (Save).

Task 7: Map the New System's Dial Plan for Interchange

Interchange uses a single-length dial plan for its network. You will have to map the dial plan of the new system to the Interchange network address length.

To do this, you need the Dial Plan Mapping Worksheet from Professional Services or a worksheet you completed on your own. These are the area codes and central office prefixes that can be used in conjunction with the new system's dial plan, assuming that Direct Inward Dial (DID) trunks are available for external direct dialing of the new system's mailboxes.

To administer the remote machine dial plan, do the following:

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1. Start at the Interchange Main menu and select

> **Interchange Administration**

> **Remote Machine Administration**

> **Dial Plan Mapping**

The system displays the Dial Plan Mapping screen (Figure 12).

Figure 12.   Dial Plan Mapping Screen

2. In the **Remote Machine Name** field, type the name of the new system, and press ENTER. If you do not remember the exact name, press F2 (Choices) to display a list of valid remote machines. In the example, you would type **Englewood**.

   The system displays information in the **Mailbox ID Length** and **MAILBOX ID Start** and **End** fields. You had entered this information previously in the Remote Machine Parameters screen.

3. In the **Map From Length** field, type the number of digits, within each mailbox ID, for which Interchange will substitute digits. Check the list of **MAILBOX ID**s. If you have a single range (for example, **30000** to **60000**) or multiple ranges that use the same prefix, enter **0** in the **Map From Length** field. In this case, you can leave the **Map From** column for the range blank.

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If you have more than one range (usually to accommodate different area codes or DID prefixes), and the first digit of the **start** and **End** fields for each range are unique, enter **1** in the **Map From Length** field. Enter **1** also if the last digit of the **Map From** prefix has to replace the first digit of the **MAILBOX IDS**.

If any ranges share first digits but have different prefixes, then you may need to enter **2** or higher in the **Map From Length** field.

> ## ⚠ CAUTION:
> *Be careful about using **0** in the **Map From Length** field. If you change your dial plan later (for example, if you add more extensions that have a different DID prefix) and need to add Mailbox ID ranges for this system, you will have to remove the system from the Interchange network and add it again with the new dial plan. This task could entail a significant amount of work.*
>
> *Therefore, if you anticipate the need to change the dial plan for this endpoint in the future, you might want to use a "Map From Length" of **1** or more.*

4. In the first **Map From** field, type the digit (or digits) that match the first digit (or digits) of the first **MAILBOX ID Start** and **End** range. This field must be blank if the **Map From Length** field is **0**. Otherwise, the number of digits you enter must match the number of digits specified in the **Map From Length** field.

   In our example, the first field contains **20**, because the mailbox ID range starts with 20, and these first two digits will be replaced with the last two digits of the **Map To** digit string.

5. In the first **Map To** field, type the area code and DID prefix of the mailbox IDs. Check your Planning Worksheet for these numbers. The last digits in this field must match the digits in the **Map From** field.

   In our example, we entered **30355520**, with the last two digits, **20,** as substitutes for the first two digits **20** of the mailbox range, thereby creating mailbox IDs of 10 digits. For example, the first mailbox would have an Interchange network address of **303-555-2000**, and the last mailbox in this range would have an address of **303-555-2099**.

   > ### ⇒ NOTE:
   > If the **Map From** field is blank, the **Map To** digits will simply be added to the mailbox IDs to total 10 digits.

6. Repeat Steps 4 and 5 for each MAILBOX ID range.

   > ### ⇒ NOTE:
   > There can be more than one DID prefix for the new system. Again, check your Planning Worksheet or consult your switch administrator

for the new system.

In the example (see for a full illustration), the range **5500** to **5999** has the area code **720** and the local exchange prefix of **551**, which is different than the prefix for the range **5000** to **5499**.

7. Press F3 (Save).

⚠ CAUTION:

Do not use F7 Options without contacting the Remote Support Center. These options can delete or replace entire ranges of subscribers if used incorrectly.

Task 8: Add Remote Subscribers to Interchange

Add remote subscribers to Interchange so that Interchange can pass on messages to those subscribers.

The following options for adding subscribers are available:

- Bulk Subscriber Administration by FTP File (recommended)
- Universal Self-Registration Agent (recommended)
- Sending Messages Through Interchange
- Adding Subscribers Through the Subscriber Parameters Administration screen
- Bulk Subscriber Administration by Range

Some VPIM systems will automatically send the spoken name of subscribers when the subscribers on those systems send messages through the Interchange network. When this is not the case, Avaya recommends subscriber self-registration. For self-registration, you notify each subscriber to send their voiced name to Interchange, which registers the subscribers' mailboxes and captures the voice recordings of their names so the names can be sent across the network with VPIM messages.

Avaya also recommends using FTP to upload the names of subscribers on the new system so that other subscribers within the network can address messages using the names of the new subscribers.

Avaya does *not* recommend the use of bulk administration to add subscribers because this method reserves disk space for every extension or mailbox ID included in the bulk administration, even if no subscribers have been administered within the range.

Adding Subscribers Through Self-Registration

For self-registration, do the following:

1. Enter the self-registration phone number in the **Self-Registration Agent ID** field on the <u>General Parameters Screen (see Page 19)</u>, as indicated in the task <u>Task 4: Define the Interchange Domain and VPIM DNS, If Any (see Page 19)</u>.

2. Use a broadcast message, recorded by the administrator of the new messaging system, to notify subscribers of self-registration.

   Instructions should tell each subscriber to:

   a. Log in to the messaging system.

   b. Record only his or her name in a message.

   c. Send the message to the self-registration phone number.

If subscribers fail to self-register, they will fail to receive messages from other messaging systems. However, if subscribers on the new system later send messages through the Interchange network, Interchange can identify them and register those subscribers for the new system. In this latter case, Interchange will not send the voiced names.

Adding Subscribers Through FTP

To use FTP to load subscriber lists to Interchange, do the following:

1. Create an ASCII file with a text-only tool such as NotePad.

2. Give the file a name in the format **name.add** (in the example, the file name would be **Englewood.add**).

3. Using the following format, type subscriber names into the file:

   machine_name|*mailbox_ID*|*lastname,firstname*|*community_ID*

   mailbox ID is the actual mailbox ID as it appears on the new messaging system. **community_ID** can be blank or **1**, unless the new messaging system uses more than one community ID.

   Our example might have an entry such as:

   Englewood|22444|jones,bob|1

   > ⚠ **CAUTION:**
   > *Be sure there are no blank spaces after the comma or at the beginning or end of each entry. Also, the names are case sensitive.*

4. Press ⌐ENTER¬ or the equivalent of a carriage return on your keyboard.

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5. Repeat step 3 for every subscriber currently administered on the new messaging system.

6. Save the file.

7. Upload the file to Interchange with the following steps. You can use an FTP tool you are familiar with.

    a. In the tool, enter the IP address of the Interchange.

    b. Enter the user ID *icftp* and password for the Interchange *iclog/icftp* directory.

    c. Select the *amis_sub* subdirectory and move the ftp file to the directory.

    When the file is uploaded, exit from your FTP tool and continue with Step 8.

8. Start at the Interchange main menu and select

> > **Interchange Administration**
>
> > > **Remote Machine Administration**
> >
> > > > **Dial Plan Mapping**

The system displays the Dial Plan Mapping screen (Figure 12).

9. Press F7 (Options).

The system displays the Options menu.

```
                  Options
      Add subscribers from file
      Add subscribers from range
      Delete subscribers from file
      Delete subscribers from range
      Change subscriber from file
```

10. Press TAB to select **Add subscribers from file**, and press ENTER.

The system displays the Confirm window (Figure 13).

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```
┌──────────────── Confirm ────────────────┐
│                                          │
│      Okay to add subscribers from file?  │
│                                          │
│                                          │
│                                          │
│                                          │
│      Press (CONTINUE) to confirm         │
│                                          │
│         or  (CANCEL)  to abort           │
│                                          │
└──────────────────────────────────────────┘
```
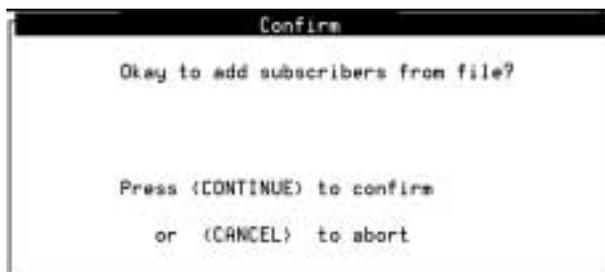
Figure 13.   Confirm Window

11. Press F3 (Continue).

     The system will add all subscriber names. Additionally, Interchange
     changes the name of file *filename.add* to *filename.add.done* and adds a file
     called *filename.add.log.* In the example, the files would be called
     Englewood.add.done *and* **Englewood.add.log***.*

12. Press F6 **(**Cancel) to return to the Interchange Administration menu.

13. Access the Interchange FTP directory with your FTP tool again.

14. Download to your computer from Interchange the file *filename.add.log.*

15. Open the *filename.add.log* file in an ASCII text editor such as NotePad to
     see if there were any problems with adding subscribers.

16. From the Interchange main menu, select

     > **Interchange Administration**

        > **Subscriber Administration**
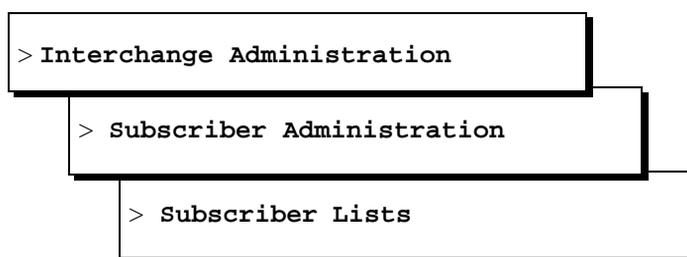
           > **Subscriber Lists**

     The system displays the Subscriber Lists menu (Figure 14).
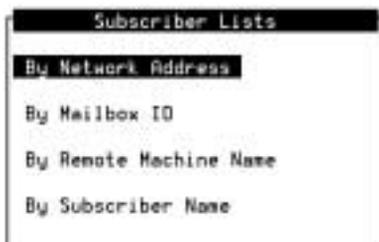
Figure 14.　Subscriber Lists Menu

17. Select **By Remote Machine Name**.

    The Subscriber List By Remote Machine Name appears.

18. Check the number of subscribers to see if it matches the number of subscribers administered on the VPIM system.

19. Press F6 **(**Cancel) to return to the Interchange Administration menu.

Task 9: Verify the Endpoint Has Been Administered

Use the Remote Machine List and Remote Machine Dial Plan List to verify you have appropriately added the new messaging system.

To access the Remote Machine List, do the following:

1. Start at the Interchange Administration menu and select
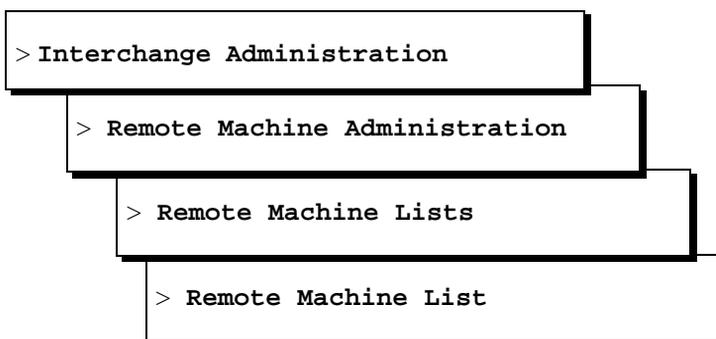
The system displays the Remote Machines List (Figure 15).

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```
                        Remote Machine List

          Machine Name           Connection   Rate  Chan Subscribers
      ---------------------------  ----------  ------ ---- -----------
      A1                          AMIS                              1
      A18                         AMIS                              1
      A11                         AMIS                              1
      A12                         AMIS                              1
      A13                         AMIS                              1
      A14                         AMIS                              1
      A2                          AMIS                              1
      A3                          AMIS                              1
      A4                          OCTEL ANALOG                      1
      A5                          AMIS                              1
      A6                          AMIS                              1
      A7                          AMIS                              1
      A8                          TCP/IP                            1
      Englewood                   VPIM                              1
```

Figure 15.   Remote Machine List

2. In the **Machine Name** column, look for the name of the new system.
   The name would be **Englewood** in the example.

3. Verify that the **Connection** column for your new system says **VPIM**.

4. Press F6 (Cancel) to return to the Remote Machine List menu

5. At the Remote Machine List menu, select

> **Remote Machine Dial Plan List**

The system displays the Remote Machine Dial Plan List ().

Figure 16.　Remote Machine Dial Plan List Screen

6. In the **Machine Name** column, locate the name of the new system.

7. Verify that the data in every column is correct.

8. Press F6 (Cancel) to exit the Remote Machine Dial Plan List.

Task 10: Create an Interchange Profile on the New System

After you have completed your administration of Interchange so that Interchange recognizes the new system, you must administer the new system so that it recognizes Interchange.

The key information you will need is:

■ The fully-qualified domain name and IP address of Interchange. The new system uses this information to send messages to Interchange.

In our example in the previous tasks, the name would be **central.co.acme.com**. The Interchange IP address would be found at the Local Machine Administration screen, which you access from the Networking Administration menu.

■ The Interchange network address length, usually 7 or 10 digits.

In our example, the Interchange address length is 10 digits and equals the area code and 7-digit local phone number.

■ The Interchange network address ranges of other messaging systems in the network.

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Depending on the specific VPIM system, the address ranges that are needed might extend just to the area code or the area code + local exchange prefix. In other cases, you might need all digits of the address ranges.

⚠ CAUTION:

The VPIM system must pass to Interchange only those addressing digits used in the Interchange network. When using telephones, subscribers on the VPIM system might have to dial additional digits to address messages to remote subscribers on the Interchange network. These digits might be required for reasons such as:

- *The VPIM system can identify the addressee as a remote subscriber.*

- *The VPIM system can identify the remote system where the remote subscriber mailbox resides (in this case, Interchange).*

*Do **not** administer the VPIM system to pass any other digits to Interchange. Instead, administer the VPIM system so it strips off these additional addressing digits when it passes the messages to Interchange. Only addresses within the ranges specified for remote Interchange endpoints (specified on the Dial Plan Mapping screen) are to be sent to Interchange.*

Refer to the documentation accompanying your VPIM system for the specific procedures on adding a remote messaging system.

Task 11: Test the Connection

To test the connection between Interchange and the new messaging system, do the following:

1. Log in to a test voice mailbox of the new messaging system. Either you or the system administrator of the new messaging system can do this. For the test mailbox, check the **End Node Test Mailboxes** identified in your .

2. Self-register the voice mailbox with Interchange by doing the following:

   a. Create a test message that contains only the name of the mailbox.

   b. Send the message to the Self-Registration address you created in .

3. Log in to a voice mailbox on a *different* messaging system in the Interchange network.

4. Create a test message (for example, "This is a test message from Bob. Please message me back.")

5. Address and send the message to the test mailbox on the new messaging system. The address has to include the whole Interchange network address, which includes the Map To digits, as defined in Task 7: Map the New System's Dial Plan for Interchange (see Page 26), and the remaining digits of the specific mailbox.

6. In the test mailbox on the new system, listen to the test message sent in Step 5. Also in the test mailbox, send a reply back to the mailbox on the other system.

7. Listen to the reply in the mailbox you logged in to in Step 3.

Task 12: Update Remote Systems for Subscribers on the New System

Once you have added the new system to the Interchange network, the other remote systems in the network need to recognize the subscribers on the new system for name addressing. The method you use to update a remote system for the new system's subscribers depends on the type of system it is and how you have administered the Subscriber Update Type for that system.

➡ NOTE:
If, over a short period of time, you are adding more than one system to your Interchange network, you might want to wait until all systems have been added before manually updating the existing systems in your network.

Update Type	Remote System Type	What to Do
Full	Intuity AUDIX TCP/IP/DCP/ RS-232	If you have the **full** Subscriber Update Type turned on for an Intuity AUDIX remote system, perform Manually Update an Intuity AUDIX System (see Page 38) (do this during off-hours for RS-232 systems).
	Aria and Serenade	If you have the **full** Subscriber Update Type turned on for an Aria or Serenade remote system, perform the steps in Manually Update an Aria or Serenade (see Page 40) for the remote system. These steps are identical for all Aria and Serenade systems. If the remote system uses Octel Analog Networking, this step should be performed during off-hours.
	VPIM/AMIS/ Octel 100	Full updates are not supported

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Dynamic	All systems	No action is required if the remote system already uses dynamic updates.
		Subscribers on the new system become known to subscribers on the existing remote system as subscribers from the new system send messages to subscribers on the remote system or vice-versa. This method, of course, means that subscribers on the remote system cannot address a subscriber by name on the new system until a message has been sent to or from that subscriber.
Directory Views	Intuity AUDIX TCP/IP, DCP, RS-232	If you have directory views turned on for an Intuity AUDIX remote system, add the new system to the Directory Views screen for the Intuity AUDIX. Then, perform Manually Update an Intuity AUDIX System (see Page 38) (do this during off-hours for RS-232 systems).
	Aria and Serenade	If you have directory views turned on for an Aria or Serenade remote system, add the new system to the Directory Views screen for the remote system. Then, perform the steps in Manually Update an Aria or Serenade (see Page 40) for the remote system. These steps are identical for all Aria and Serenade systems. If the remote system uses Octel Analog Networking, this step should be performed during off-hours.
	VPIM/AMIS/Octel 100	Directory Views are not supported.

Manually Update an Intuity AUDIX System

> ![arrow] **NOTE:**
> You perform this task on the Intuity AUDIX endpoint itself, not on Interchange. This task applies only to Intuity AUDIX systems that have full or directory views for their subscriber update types.

To update an Intuity AUDIX system in the network with subscribers in the system you just added, use the following steps:

1. Starting from the Intuity AUDIX main menu, select:

```
>AUDIX Administration
```

   The system displays a blank AUDIX screen.

2. Enter **list measurements feature day** at the `enter command:` prompt.

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The system displays the Feature Daily Traffic screen.

3. Write down the current number of remote users.

4. Press F6 (CANCEL).

The cursor returns to the command line.

5. Enter **get remote_updates** *remote_machine_name* at the **enter command:** prompt, where *remote_machine_name* is the name of Interchange.

In our example, Interchange's name is **central**.

The system displays the Remote Update Request screen (Figure 17).

```
 fort collins          Active            Alarms:  mwA                    Logins: 4
get remote_updates central                                          Page 1 of 1
                          REMOTE UPDATE REQUEST


Request Full Update from Machine:  central

          Status of Last Update:  completed

          Last Completed Update:  01/10/01 19:54

    Press [Enter]  for Full Update Request
          [Cancel] to Abort




enter command: get remote_updates central
```

Figure 17.   Intuity AUDIX Remote Update Request Screen

6. Press ENTER to begin the remote update, or press CANCEL (F6).

The system begins the remote update.

➡ NOTE:
The update may take some time, possibly hours, depending on the number of users on the remote system.

7. When the remote update is complete, enter **list remote extensions** *remote_machine_name* at the **enter command:** prompt, where *remote_machine_name* is Interchange's name.

The system displays the List Remote Extensions screen.

8. Check to see that the remote users of Interchange's new system are listed.

9. Enter **list measurements feature day** at the `enter command:` prompt.

   The system displays the Feature Daily Traffic screen.

10. Verify the new number of remote users.

11. Enter **display administration-log** at the `enter command:` prompt.

    The system displays the Administration Log screen.

12. Verify that no conflicts or problems occurred with the remote update.

13. Press (CANCEL) (F1).

    The cursor returns to the command line, and the system displays the message `Command Successfully Completed`.

14. Enter **exit** at the `enter command:` prompt to leave AUDIX Administration.

Manually Update an Aria or Serenade

➤ NOTE:
The following procedure can require a great deal of time to complete since the communication is over an analog connection. As a result, full and Directory View updates are generally not recommended for systems using Octel Analog Networking.

To update Aria and Serenade systems with the subscribers in the system you just added, perform a demand remote push on Interchange. To perform a demand remote push, do the following:

1. Start at the Interchange main menu and select

> **Interchange Administration**

   > **Remote Machine Administration**

      > **Demand Remote Push**

   The system displays the Demand Remote Push screen (Figure 18).

```
┌──────────── Demand Remote Push ────────────┐
│                                             │
│   Remote Machine Name: Englewood_____  │
│                                             │
│                                             │
└─────────────────────────────────────────────┘
```

Figure 18.   Demand Remote Push Screen

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2. Enter a remote machine name, or press F2 (Choices) to display a list of valid remote machines.

3. Press F3 (Continue).

4. The system will display the following Demand Remote Push screen (Figure 18-1).

Figure 18-1.   Demand Remote Push Screen

5. Press F3 (Continue).

➡️ NOTE:
You can press F5 (Abort) to stop the demand remote push or F6 (Cancel) to return to the previous and re-enter an extension range.

The system displays the following message:

`Push triggered`

The system will now update the Aria or Serenade remote system with any ASCII or voiced names which have been added on Interchange from the new system.

6. Press F6 (Cancel) until you return to the Interchange Administration menu

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