



Avaya™ Interchange

Release 5.4/Intuity™ Interchange R5.3
Adding an Aria System That Uses Digital
Networking

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Notice

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Preventing Toll Fraud

Toll Fraud is the unauthorized use of your telecommunications system by an unauthorized party (for example, a person who is not a corporate employee, agent, subcontractor, or working on your company's behalf). Be aware that there is a risk of toll fraud associated with your system and that, if toll fraud occurs, it can result in substantial additional charges for your telecommunications services.

Avaya Fraud Intervention

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Providing Telecommunications Security

Telecommunications security of voice, data, and/or video communications is the prevention of any type of intrusion to, that is, either unauthorized or malicious access to or use of, your company's telecommunications equipment by some party.

Your company's "telecommunications equipment" includes both this Avaya product and any other voice/data/video equipment that could be accessed via this Avaya product (that is, "networked equipment").

An "outside party" is anyone who is not a corporate employee, agent, subcontractor, or a person working on your company's behalf. Whereas, a "malicious party" is anyone, including someone who may be otherwise authorized, who accesses your telecommunications equipment with either malicious or mischievous intent.

Such intrusions may be either to/through synchronous (time-multiplexed and/or circuit-based) or asynchronous (character-, message-, or packet-based) equipment or interfaces for reasons of:

- Utilization (of capabilities special to the accessed equipment)
- Theft (such as, of intellectual property, financial assets, or toll-facility access)
- Eavesdropping (privacy invasions to humans)
- Mischief (troubling, but apparently innocuous, tampering)
- Harm (such as harmful tampering, data loss or alteration, regardless of motive or intent)

Be aware that there could be a risk of unauthorized intrusions associated with your system and/or its networked equipment. Also realize that, if such an intrusion should occur, it could result in a variety of losses to your company, including but not limited to, human/data privacy, intellectual property, material assets, financial resources, labor costs, and/or legal costs).

Your Responsibility for Your Company's Telecommunications Security

The final responsibility for securing both this system and its networked equipment rests with you — an Avaya customer's system administrator, your telecommunications peers, and your managers. Base the fulfillment of your responsibility on acquired knowledge and resources from a variety of sources including but not limited to:

- Installation documents
- System administration documents
- Security documents

- Hardware-/software-based security tools
- Shared information between you and your peers
- Telecommunications security experts

To prevent intrusions to your telecommunications equipment, you and your peers should carefully program and configure your:

- Avaya-provided telecommunications systems and their interfaces
- Avaya-provided software applications, as well as their underlying hardware/software platforms and interfaces
- Any other equipment networked to your Avaya products

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For more information on standards compliance, contact your local distributor.

Comments

To comment on this document, send mail to:

Avaya Inc.
Information Development
Room D1-B53
1300 W. 120th Ave
Westminster, CO 80234

Fax to:

Attention Intuity Interchange Writing team. 303-538-9625

Send an e-mail message to:

infodev@avaya.com

Adding an Aria System That Uses Digital Networking

This document describes how to add to your Interchange network a new Aria® system that uses the Aria Digital protocol.

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 to both Intuity Interchange R5.3 and Avaya™ Interchange R5.4.
- In general, it is recommended that the dial plan of the Interchange maintain as much consistency as possible between the addresses 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.

Checklist for Adding an Aria Digital Endpoint

To add a new Aria digital messaging system to an existing Avaya or Intuity™ Interchange network, do the following:

Task	Details of Task
Task 1: Get Information About the System You Are Adding (see page 3)	Complete the Planning Worksheet included in this document. You or the Aria administrator get the system name, its mailbox IDs, IP address, serial number, and network setup from a number of Aria screens. The switch administrator for your Interchange system and possibly the switch administrator for the new system will need to give you the dial plan and exact phone numbers (prefixes) for the Aria mailboxes.

<p>Task 2: Determine How to Map the New System's Dial Plan (see page 6)</p>	<p>Complete the Dial Plan Mapping Worksheet in this document (Professional Services normally does this for you).</p>
<p>Task 3: Determine the Type of Subscriber Update for the New System (see page 16)</p>	<p>Understand how full, dynamic, and directory view updates work, and choose the best one for your system.</p>
<p>Task 4: On Aria, Check Feature Options and Release Number (see page 18)</p>	<p>Check the Display Software Features Installed screen on the Aria system.</p>
<p>Task 5: Verify the Aria System Is Enabled for Digital Networking (see page 19)</p>	<p>Check the IP Address and Net Mask Configuration and TCP/IP Parameter Configuration screens on the Aria System.</p>
<p>Task 6: Check the Interchange Serial Number, If Any (see page 21)</p>	<p>Check the General Parameters screen.</p>
<p>Task 7: Create an Interchange Profile on the New System (see page 22)</p>	<p>Enter the Interchange as an Aria digital network node into the Aria system.</p> <p> NOTE: Be sure to enter the <i>exact</i> name and IP address of Interchange.</p>
<p>Task 8: Ensure the NameSend Capability Is on for Subscribers (see page 32)</p>	<p>Check the Class of Service Profile screen on the Aria system.</p>
<p>Task 9: Check Aria for Valid Extensions (see page 35)</p>	<p>Check the Address Mapping Table for ranges of administered extensions.</p>
<p>Task 10: Test the LAN Connection to Interchange (see page 37)</p>	<p>Ping Interchange by using the Ping Utility.</p>
<p>Task 11: Identify the New System to the Interchange System (see page 38)</p>	<p>Complete the Octel Machine Administration screen for the new system.</p>
<p>Task 12: Administer Remote Machine Parameters (see page 40)</p>	<p>Complete the Remote Machine Parameters screen for the new system. Also complete the Aria Digital Machine Profile screen by using the Dial Plan Mapping Worksheet.</p>
<p>Task 13: Map the New System's Dial Plan for Interchange (see page 45)</p>	<p>Complete the Dial Plan Mapping screen for the new system by using the Dial Plan Mapping Worksheet.</p>
<p>Task 14: Administer Directory Views (see page 48)</p>	<p>Complete the Directory Views screen for the new system.</p>

Task 15: Verify That the Endpoint Has Been Administered (see page 51)	Check for a new system entry on the Remote Machine List and the Remote Machine Dial Plan List.
Task 16: Test LAN Connectivity (see page 52)	Run the Remote Connection Test and the Send and Receive Test PacketTest with the new system.
Task 17: Add Remote Subscribers to Interchange (see page 56)	Run NameSend from the Aria system to Interchange.
Task 18: Verify the NameSend Update (see page 58)	Run the Subscriber List by Machine Name on Interchange.
Task 19: Test the Connection (see page 58)	Send messages to and from the test mailbox on the new system.
Task 20 (Optional): Manually Update the Aria System (see page 59)	Run a Demand Remote Push to the Aria system.
Task 21: Update Remote Systems for Subscribers on the New System (see page 61)	Add information to Directory Views, if appropriate. Run get remote_update from Intuity AUDIX® systems. Run Demand Update Push from Interchange to Aria, Serenade®, and Octel 100 systems.

Task 1: Get Information About the System You Are Adding

Your Account Executive determines with you the needed information about the new system and completes a *Planning Worksheet for Aria Digital*. Retrieve these items and enter them in the [Planning Worksheet](#) that follows.

To complete the worksheet, you or your Aria administrator will need to get information while performing the following tasks:

1. [Determine the Prefixes of the New System Mailboxes and Test Mailboxes \(see page 4\)](#).
2. [Task 4: On Aria, Check Feature Options and Release Number \(see page 18\)](#).
3. [Task 5: Verify the Aria System Is Enabled for Digital Networking \(see page 19\)](#).

Additionally, you need to know how many digits are in the Interchange dial plan. Usually the dial plan consists of 7 or 10 digits, though the digits can be from 3 to 10.

Planning Worksheet

System Name: _____ **System IP Address** _____

Password: _____ **System Serial Number** _____

End Node Test Mailbox(es):** _____

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.

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

9.

10.

Determine the Prefixes of the New System Mailboxes and Test Mailboxes

1. 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. Enter the number in your [Planning Worksheet \(see page 4\)](#).

2. 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. Enter them in your [Planning Worksheet \(see page 4\)](#).

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 and other special mailboxes that are not intended to 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 might actually be sent to mailboxes that are not intended to receive E-list messages.*

You might also exclude bulletin board mailboxes, unless you use them to distribute Enterprise List messages.

3. Determine the **Area Code and/or Local Exchange Prefix(es)** that Interchange must use to send messages to mailboxes on the new system. Enter the prefixes in your [Planning Worksheet \(see page 4\)](#).

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** might normally be preceded by **303-55**. Therefore, 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. Therefore, 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.

The Interchange network dial plan can use a uniform address length that consists of from 3 to 10 digits. However, it is strongly recommended that Interchange use a 7-digit or 10-digit dial plan. The new system, on the other hand, will likely have a different dial plan, one that usually uses 4 or 5 digits. In most cases, therefore, you will have to map the dial plan of the new system to the Interchange network address length.

NOTE:

If the mailbox IDs on the new system have exactly the same number of digits as the address length used in the Interchange network dial plan, then you might not need to perform dial plan mapping. For example, if the Interchange dial plan calls for 10-digit addresses, and the mailbox IDs on the new system always use 10 digits, you do not need to map the dial plans. As another example, if the Interchange dial plan uses the 5-digit uniform dial plan of a private network, and the new system's mailbox IDs also use the same 5-digit uniform dial plan within the same private network, you do not need to map the dial plans.

CAUTION:

Since every Interchange address must be unique, there might be circumstances in which the new system's mailbox ID length matches the Interchange dial plan, but because the new system is not part of the same switch private network, the mailbox IDs might not be unique within the Interchange network. This situation is quite common, which is why it is normally recommended to use a 10-digit Interchange dial plan and dial plan mapping.

Use the following instructions and the [Dial Plan Mapping Worksheet \(see page 14\)](#), 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 critical rules:
 - The digit or digits you enter in the Map From column for each Mailbox ID range must be *unique*.
 - 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 IDs¹, 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 add it again 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. See [Figure 4 on page 10](#), which illustrates the alternative to Map From Length 0 in anticipation of future changes.

2. Check your [Planning Worksheet \(see page 4\)](#) for the mailbox ID (extension) ranges of the new system. Review the examples that follow and fill out the [Dial Plan Mapping Worksheet \(see page 14\)](#), 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 \(see page 4\)](#).

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 \(When Prefixes Replace Initial Mailbox Digits\) \(see page 12\)](#).

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)

Keep in mind that Interchange allows you to use a **Map From Length** of up to **9**. In some circumstances with the previous example, you might choose to use a **Map From Length** of **1, 2, 3, or even 4** with the range **2000 to 5999**.

In a likely scenario with range **2000 to 5999**, you might anticipate the need to change the Dial Plan Mapping later, so you choose **1** for the **Map From Length**, *not 0*. In this case, the map would appear as follows ([Figure 2](#)).

Remote Machine Name: Englew		Mailbox ID Length: 4	
		Map From Length: 1	
MAILBOX ID:		NETWORK ADDRESS DIAL PLAN MAPPING	
Start	End	Map From	Map To
2000	5999	2	3035552
		3	3035553
		4	3035554
		5	3035555

Figure 2. Sample Dial Plan Map with a Single Range (1 Map From Length)

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

In [Figure 3](#), there are broken MAILBOX ID ranges. In this case, ranges 4000 to 4999 and 5500 to 5799 might 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 [Figure 4](#). 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.

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 3. 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 4](#), 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**.

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 4. Sample Dial Plan Map with Multiple Ranges (1 Map From Length)

Sample Dial Plan Mapping (Ranges That Require Different Prefixes)

In [Figure 5](#), 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 5. Sample Dial Plan Map with Multiple Prefixes (1 Map From Length)

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	
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

You can't do this!! See Figure 6 instead.

Instead, you must break out every MAILBOX ID range so that the first two digits in each range are unique (see [Figure 6](#)). This requirement includes ranges that have unique initial digits (**2000** to **2999** and **3000** to **3999** in the example). The **Map To** digits include 8 digits that specify area code, the

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

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 and to ensure unique addresses across the Interchange network.

The **Map From Length** can be **0** to **9** digits, and how many digits you map can vary greatly depending on how readily the new system's mailbox ranges fit into the existing Interchange network. However, as in the preceding samples, this number will often be based on considerations such as the following:

- One range (for example, **0000** to **9999** — in this case, you might 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, you might 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, you might 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, you might type **1**).

 **CAUTION:**

*If you use Map From Length 0, you **cannot** change this value 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 [Dial Plan Mapping Worksheet \(see page 14\)](#).
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 the example in [Figure 6](#), 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 the example in [Figure 6](#), the first field contains **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 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.

Task 3: Determine the Type of Subscriber Update for the New System

To keep the remote subscriber list for the new system up to date with subscribers within the Interchange network, you must select one of four options for the new system:

Full updates

Full updates include, in the new system's remote subscriber list, every subscriber on every system in the Interchange network. This option ensures that subscribers on the new system can address by name every subscriber in the network. However, this option can require a large amount of disk space on the new system. Also, remote subscribers who do not send or receive messages will be stored unnecessarily.

If you select this option, Interchange performs a full update when you first administer the new system and run a Demand Remote Push to the new system. Subsequent updates include changes to subscriber lists of remote systems, where subscribers have been added or removed. Subsequent updates occur in either of the following circumstances:

- When you perform a Demand Remote Push for the Aria system
- When Interchange receives a subscriber change from a remote system

 **CAUTION:**

If you begin with full updates and later change to dynamic subscriber updates, Interchange will remove all subscribers from the remote subscriber directory and begin to repopulate the directory with dynamic updates.

Dynamic updates

This update option is strongly recommended. With this option, each time a subscriber on the new system sends a message to a remote subscriber, that remote subscriber is added to the Dynamic Directory List for the new system. Likewise, each time a remote subscriber sends a message to a subscriber on the new system, that remote subscriber is added to the list.

If, typically within the next 90 days (see Dynamic Sub Expiration Days on the Remote Machine Profile screen), no other messages are sent from the new system to that remote subscriber, or vice versa, that remote subscriber is removed from the list. This removal helps save storage space on the new system.

Directory View updates only

With this option, the new system's remote subscriber list will include subscribers within ranges of extensions on systems you specify. A Directory View list for a system is static, and as with full updates, this option can use a lot of disk space. Additionally, with this option, subscribers who fall outside the ranges and systems you specify will not be addressable by name from the new system.

If you select this option, Interchange performs a directory view update when you first administer the new system and run a Demand Remote Push to the new system. Subsequent updates include changes to subscriber lists of remote systems, where subscribers have been added or removed. Subsequent updates occur in either of the following:

- When you perform a Demand Remote Push for this system
- When Interchange receives a subscriber change from a remote system.

Combination of Dynamic and Directory View updates

You can use Dynamic Subscriber Updates and Directory Views in combination. In this case, dynamic updates occur as described above, but the Directory Views option also identifies specific ranges of extensions on specific remote systems to ensure that remote subscribers on those systems can be addressed by name on the new system.

This type of setup is useful when you are converting high-traffic point-to-point systems to the Interchange network and/or when it is important that all or a subset of remote subscribers on a specific system is addressable by name for subscribers on the new system.

None

With this option, Interchange will not update the subscriber names list for the new system. This might be a useful option during testing or early during the addition of the new system to discourage subscribers on the system from sending messages through Interchange.

Task 4: On Aria, Check Feature Options and Release Number

1. From the main menu, select the following options:

```
> Menu 13 - System Maintenance
> 7 - Display Software Features Installed
```

The system displays the Software Features Installed screen ([Figure 8](#)).

```
25 JUL 01 01:04:35PM Machine Name Inc. 14023
VPMOD Serial # ..... 13023 Software Rel. .... Aria 03.10.09-1
Network Serial # ..... 13023 System Type ..... 250

 8 - Bulletin Mailbox Y 9 - CSA
Y 10 - InterMail Y 12 - PowerCall Agent Access
Y 15 - Follow-Me-Forward Y 16 - Call Detail Recording
17 - Database Retrieval 22 - Forms Mailbox
23 - Monitor Mailbox Y 32 - General Line Types
Y 33 - Set Emulation Y 34 - RS232 Integrations
Y 35 - In-band Integrations 36 - ROLM Limited
37 - Siemens Limited 38 - 72 Port Option
Y 40 - Information Processing 42 - Hotel/Motel
43 - DTMF Forms Mailbox Y 44 - Networking
Y 45 - Enhanced Call Processing Y 46 - Ability to Reset Passwords
Y 48 - Information Center Mailboxes Y 49 - AMIS Analog Networking
Y 51 - Octel Index I 52 - Octel Index II
55 - Conference Mailbox Y 56 - Fax Processing
57 - Announcement Mailbox 58 - ACP Integrations
59 - ACP MTA 60 - Skip Password
62 - Centralized Network Management 65 - ANI Integrations
Y 66 - Fax Delivery Mailbox 67 - Global Message Redundancy
-Continued-
```

Figure 8. Software Features Installed screen (Page 1)

2. Check the **Network Serial #** field for the serial number of the Aria system. Write this number into your [Planning Worksheet \(see page 4\)](#).
3. Check the **Software Rel.** field for the release number of Aria software. If **Aria 2.03** or later does not appear, call to have the Aria system upgraded.

NOTE:

Though Aria 3.0 is a later version of software, you must upgrade to an even later release to work with Interchange.

4. Check that the following are marked with Y.

- 44 - Networking
- 56 - Fax Processing
- 66 - Fax Delivery Mailbox

5. Press **(ENTER)** to display Page 2 of the screen ([Figure 9](#)).

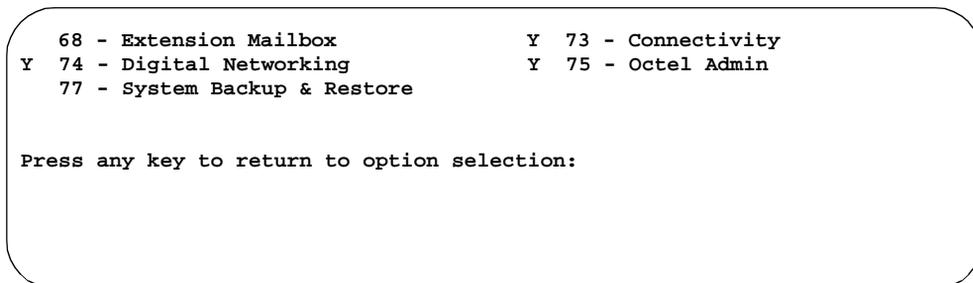


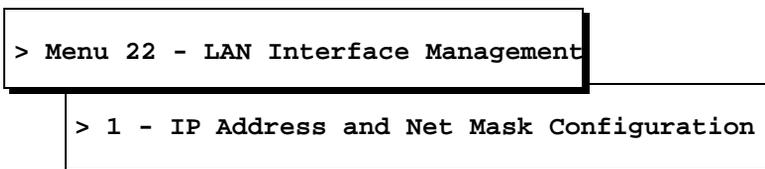
Figure 9. Software Features Installed screen (Page 2)

6. Check that the following are marked with Y.
- 74 - Digital Networking
 - 73 - Connectivity
7. Press **(ENTER)** twice to return to the main menu.

Task 5: Verify the Aria System Is Enabled for Digital Networking

To ensure that the new Aria system is already enabled for digital networking, do the following:

1. From the main menu, select the following options.



The system displays the IP Address and Net Mask Configuration screen ([Figure 10](#)).

```
Menu 22 - LAN Interface Management                               Englewood
- IP Address and Net Mask Configuration -
This Server's Ethernet Address: 00:D0:14:20:19:04
                                ACTIVE (DISPLAY ONLY)         STORED (FOR NEXT UPLOAD)
This Server's IP Address:      147.5.45.23                    147.5.45.23
IP Net Mask:                   356.255.248.0                  356.255.248.0
```

Figure 10. IP Address and Net Mask Configuration Screen

2. Check that the **This Server's IP Address** field is complete.
3. Check that the **IP Net Mask** field is complete.
4. If either field is not complete, do the following:
 - a. Get the appropriate IP address and IP Net Mask from the LAN administrator for the Aria system and enter them in the **STORED (FOR NEXT UPLOAD)** column.
 - b. Reboot the Aria system.

If the fields are complete, press **(ENTER)** to return to Menu 22 - LAN Interface Management.

5. Select the following option:

```
> 2 - TCP/IP Parameters
```

The system displays the TCP/IP Parameter Configuration screen ([Figure 11](#)).

```
Menu 22 - LAN Interface Management                               Englewood
- TCP/IP Parameter Configuration -
This Server's Ethernet Address: ..... 00:C0:94:20:2B:D1
This Server's IP Address: ..... 147.5.45.23
IP Net Mask: ..... 356.255.248.0

Broadcast Address: ..... 0.0.0.0
Gateway IP Address: ..... 339.44.148.354
```

Figure 11. TCP/IP Parameter Configuration Screen

6. In the **Broadcast Address** field, leave the default.
7. Check that the **Gateway IP Address** field is complete.
8. If the **Gateway IP Address** field is not complete, do the following:
 - a. Get the appropriate Gateway IP address from the LAN administrator for the Aria system and type it in this field.

⇒ NOTE:

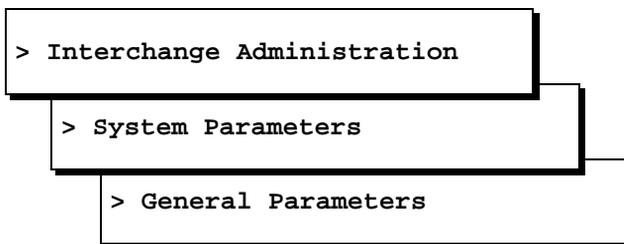
If the Aria system and Interchange will communicate over the Internet, this address must be a registered IP address.

- b. If the fields are complete, press **(ENTER)** twice to return to the main menu.

Task 6: Check the Interchange Serial Number, If Any

Since Interchange needs an Octel serial number to communicate with the Aria system, you need to determine the serial number to make sure it matches the serial number you enter for Interchange in the Aria.

- 1. Start at the Interchange main menu and select



The system displays the General Parameters screen. ([Figure 12](#)).

```

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      UPIM 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 12. General Parameters Screen

2. In the **Octel Analog Networking Serial Number** field, check the number. If there is no number, type **80000**. This number must match the serial number you enter in Aria when you identify the Interchange to Aria. Also, this number, which must be between 80000 and 81000, must be unique to any other Interchange systems in the Aria's network.
3. Press **F3** (Save).
4. Press **F6** (Cancel) to return to the System Parameters menu.

Task 7: Create an Interchange Profile on the New System

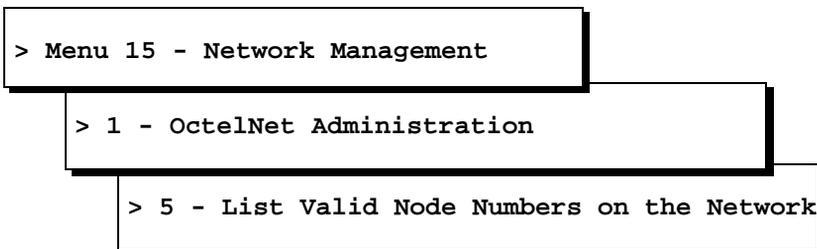
To add an Aria system to your Interchange network, you must identify the Interchange system to the Aria networking software. To complete this task, you do the following on the Aria system:

1. [Check for Available Node Numbers.](#)
2. [Define the Interchange Node Profile on Aria.](#)
3. [Define the Interchange Node Profile Weekday Schedule.](#)
4. [Define the Interchange Node Profile Weekend Schedule.](#)
5. [Define the Interchange Node Profile Address Prefixes.](#)

Check for Available Node Numbers

This procedure describes how to check the Aria system for available node numbers. However, if your Interchange network already has Aria endpoints, you should check those endpoints for the Interchange node number. Then, if the same node number is available on the new system, use it again. This reuse is a future timesaver because you might have the need for additional ARIA/Interchange software scripts. In this case, if the node number used by Aria systems is the same, you can also reuse the software scripts for all Aria systems.

1. From the main menu, select the following options.



The system displays the Valid Node Numbers and Message Queues Select screen ([Figure 13](#)).

```

- OctelNet Administration -                               14023
- Valid Node Numbers and Message Queues -

Select Node: 0

Select Message Queue: 0 - Non-Urgent/Standard Subscriber
    
```

Figure 13. Valid Node Numbers and Message Queues Select Screen

2. In the **Select Node** field, type **0**, and press **(ENTER)**.
3. In the **Select Message Queue** field, type **0**, and press **(ENTER)**.

The system displays the Valid Node Numbers and Message Queues List screen ([Figure 14](#)).

```

- OctelNet Administration -                               14023
- Valid Node Numbers and Message Queues -

Node #      Node Name      A/D  Number of  Total  The oldest message to
-----
0  Your VPMOD System
2  Englewood2      A:
4  Santa Fe        A:
5  Colo Springs    A:

End of List; A/D = Analog/Digital; Pri = Priority; (*) = Future Delivery Time.
Enter 'P' to print the list, or any other key to return to the Network Menu.
    
```

Figure 14. Valid Node Numbers and Message Queues List Screen

4. Check the list of numbers in the **Node #** column, and note the numbers available in the sequence. In the example, the next available node numbers are **6** or higher.
5. Press **(CONTROL)+[C]** to return to Menu 15.1, OctelNet Administration.

Define the Interchange Node Profile on Aria

1. From Menu 15.1, OctelNet Administration, select the following option:

```
> 5 - Node Profile
```

2. The system displays the first field of the Node Profile screen ([Figure 15](#)).

```
          - OctelNet Administration -                14023  
          - Node Profile -  
Node Number: 88
```

Figure 15. Node Profile Selection Screen

3. In the **Node Number** field, type the node number for Interchange and press **ENTER**. In the example, the Interchange node number is **88**. This is the same node number used by a different Aria system.

The system redisplay the Node Profile screen ([Figure 16](#)), with defaults in many of the fields.

```
          - OctelNet Administration -                14023  
          - Node Profile -  
Node Number: 88  
Transmission Type: 0 - Normal  
Number of Digits in a Mailbox: 10  
NameNet Type: 0 - COS-based  
NameSend: 3 - Send And Receive  
Phone Number: 970551111  
Dialing Sequence: 9pn  
Access Type: 0 - Direct Dial  
Max Simultaneous Analog Transmissions: 1  
  
Node Name: central  
Node Type: 2 - OctelNet Digital  
Serial Number: 80000  
Site ID:  
  
Ext:  
Authorization Code:  
Country: 1 - North American  
Threshold: 0 msgs, 0 mins  
  
IP Address: 148.1.77.77  
Name Transmission Allowed: N  
ASCII Name Check: 1 - Check All Msgs  
  
Fallback: 0 - None  
Play Node Name: N  
Node Response Allowed: N  
  
System Manager Name:  
System Manager Phone Number:  
Mailbox Number:  
Ext:  
  
Node Profile updated. Press any key to continue:
```

Figure 16. Node Profile Screen (First Page)

4. In the **Node Name** field, type the name of the Interchange system. In the example, the Interchange name is **central**.
5. In the **Node Type** field, type **2** for OctelNet Digital Networking.

6. In the **Number of Digits in a Mailbox** field, type the digit length, from **3** to **10**, of the Interchange network dial plan, usually **7** or **10**. In the example, the Interchange network mailboxes have **10** digits.
7. In the **Serial Number** field, type **80000**, unless there are other Interchange systems in the network that already have Aria serial numbers. Check with administrators of any other Interchanges that communicate with your Interchange. The serial number must be between **80000** and **81000** and must match the serial number entered in the Interchange General Parameters screen in [Task 6: Check the Interchange Serial Number, If Any \(see page 21\)](#). In the example, the serial number is **80003**.
8. In the **NameNet Type** field, type **0** for the COS-based type. This entry requires that subscribers on the Aria system have a specific class of service that allows their names to appear in the Interchange subscriber database.
9. In the **NameSend** field, type **3** for Send And Receive. This entry allows voiced names to be sent to Interchange and from Interchange.
10. (Optional) In the **Phone Number** field, type the analog phone number of Interchange. This number is for the Aria administrator's reference only. In the example, the phone number is **9705551111**. The Interchange phone number would be found at the AMIS Analog Parameters screen on Interchange, which you access from the Interchange Administration and System Parameters menus.
11. (Optional) In the **Dialing Sequence** field, type the dialing sequence, to include with the phone number in [Step 10](#). In the example, **9** is the trunk access code, the **p** stands for a 3-second pause, and the **n** stands for the phone number.
12. In the **IP Address** field, type the IP address of Interchange. In the example, the IP address is **148.1.77.77**.
13. In the **Name Transmission** field, type **N**. **Y** in this field can cause remote subscribers to hear duplicate names on messages sent from the Aria system.
14. In the **Play Node Name** field, type **N**. **Y** in this field can cause remote subscribers to hear duplicate names on messages sent from the Aria system.
15. In the **ASCII Name Check** field, type **1** for Check All Messages. This value tells the Aria system to check that the names attached to messages to the Aria system are correct.
16. Press to save your entries and proceed to the next Node Profile screen.

The system displays the first scheduling screen of the Node Profile ([Figure 17](#)).

Define the Interchange Node Profile Weekday Schedule

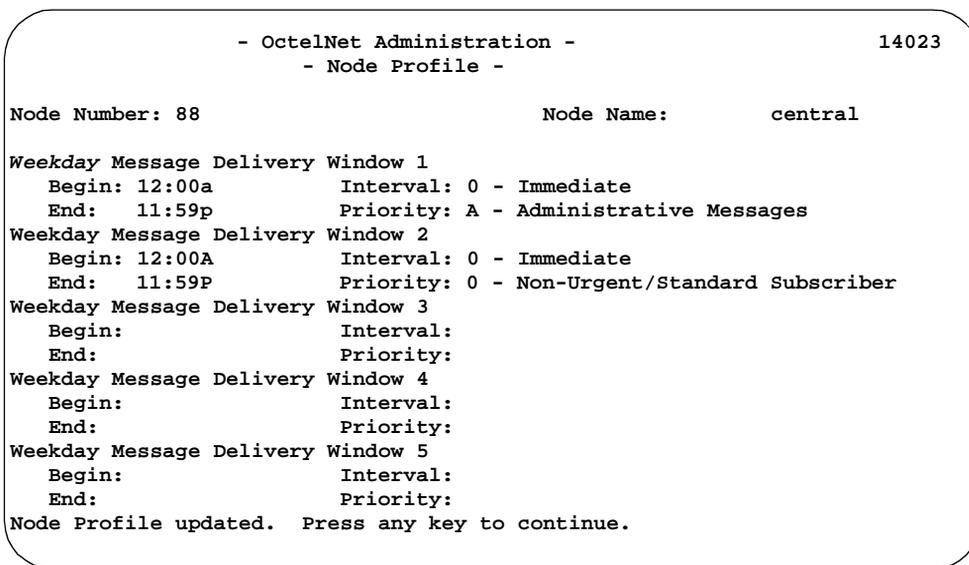


Figure 17. Node Profile Screen (Weekday Schedule Page)

To define the Weekday Schedule for the Interchange Node, do the following:

1. In the **Begin** and **End** fields for Window 1 (see [Figure 17](#)), type the range of time for Aria to send messages to Interchange. In the example, which shows the recommended range of **12:00a** to **11:59p**, delivery can be 24 hours a day.
2. In the **Interval** field for Window 1, type **0** for Immediate. This value means that Aria will pass messages to Interchange as soon as they are recorded and queued up. Other intervals possible are:
 - 1 — 15 minutes
 - 2 — 30 minutes
 - 3 — 45 minutes
 - 4 — 1 hour
 - 5 — 90 minutes
 - 6 — 2 hours
 - 7 — 4 hours
3. In the **Priority** field for Window 1, type **A** for Administrative Messages. Administrative messages are system-level messages like subscriber updates. Other priority types possible are:
 - 1 — Urgent messages from standard subscribers

- **2** — Non-urgent messages from priority subscribers
 - **3** — Urgent messages from priority subscribers
4. In the **Begin** and **End** fields for Window 2, type the range of time for Aria to send messages to Interchange.
 5. In the **Interval** field for Window 2, type **0** for Immediate.
 6. In the **Priority** field for Window 2, type **0** for Non-Urgent/Standard Subscriber Messages. These messages are regular subscriber messages with normal priority.
 7. Leave the remaining fields blank and press **[ENTER]**.

The system displays the Weekend Schedule Page of the Node Profile screen ([Figure 18](#)).

Define the Interchange Node Profile Weekend Schedule

```

- OctelNet Administration -                               14023
- Node Profile -

Node Number: 88                                         Node Name:      central

Weekend/Holiday Message Delivery Window 1
  Begin: 12:00A           Interval: 0 - Immediate
  End:   11:59P           Priority: 0 - Non-Urgent/Standard Subscriber
Weekend/Holiday Message Delivery Window 2
  Begin:                   Interval:
  End:                     Priority:
Weekend/Holiday Message Delivery Window 3
  Begin:                   Interval:
  End:                     Priority:
Weekend/Holiday Message Delivery Window 4
  Begin:                   Interval:
  End:                     Priority:
Weekend/Holiday Message Delivery Window 5
  Begin:                   Interval:
  End:                     Priority:
Node Profile updated.  Press any key to continue:
```

Figure 18. Node Profile Screen (Weekend Schedule Page)

To define the Weekend Schedule for the Interchange Node, do the following:

1. In the **Begin** and **End** fields for Window 1 (see [Figure 18](#)), type the range of time for Aria to send messages to Interchange. Follow the time with **a** for am and **p** for pm.
2. In the **Interval** field for Window 1, type **0** for Immediate.
3. In the **Priority** field for Window 1, type **A** for Administrative Messages.

4. In the **Begin** and **End** fields for Window 2, type the range of time for Aria to send messages to Interchange.
5. In the **Interval** field for Window 2, type **0** for Immediate.
6. In the **Priority** field for Window 2, type **0** for Non-Urgent/Standard Subscriber Messages.
7. Leave the remaining fields blank, and press **(ENTER)**.

The system displays the Prefix page of the Node Profile screen ([Figure 19](#)).

Define the Interchange Node Profile Address Prefixes

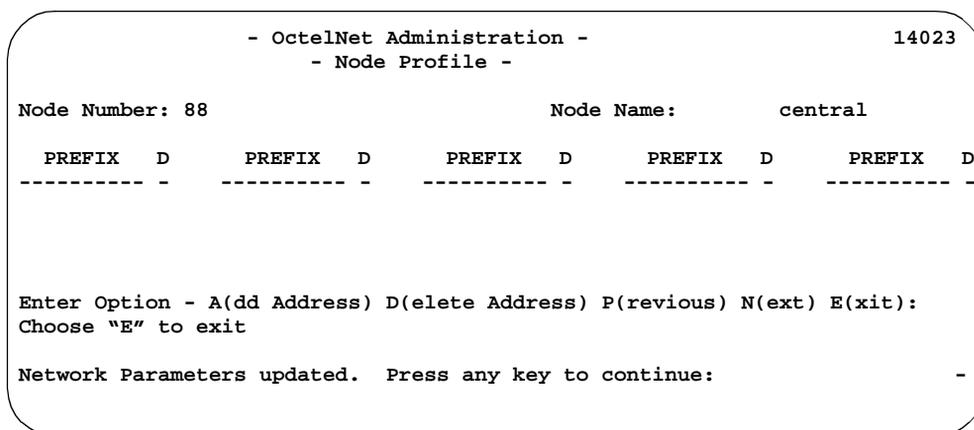


Figure 19. Node Profile Screen (Blank Prefix Page)

On the Prefix page of the Node Profile screen, you identify the initial digit or digits (prefixes) the local Aria subscribers might enter for remote subscriber addresses in the Interchange network. In addition to the prefixes, you also identify the number of digits that follow the prefix to create a complete Interchange network address.

CAUTION:

The combination of prefixes and number of digits you enter for Interchange must be unique to any other systems to which the Aria system is networked. Otherwise, if two remote systems have the same local mailbox IDs and you enter the same prefixes, then when local subscribers address messages, there might be two or more possible destinations for their messages.

In the following example ([Figure 20](#)), Interchange has a 7-digit dial plan and three systems in its network, in addition to the Aria you are adding. One system has mailbox IDs that start with 538. Therefore, subscribers are addressed as 538XXXX. In the second system, subscribers are addressed as 607XXXX. And in the third system, subscribers are addressed as 444XXXX.

 **CAUTION:**

This example assumes there is no remote Aria system, also with 7-digit mailboxes starting with 538, 607, or 444, networked to the local Aria system in a point-to-point configuration .

PREFIX	D								
444	4								
538	4								
607	4								

Figure 20. Sample Prefix Page (3-digit Prefixes)

As another example ([Figure 21](#)), if Interchange has a 7-digit network dial plan, you might assign a series of 1-digit prefixes that cover any address that starts with 1 through 9. You would then specify that 6 digits follow. In this way, you can avoid identifying the prefixes of every remote system in the Interchange network.

Essentially, a single-digit prefix 5 followed by 6 digits means that Aria would send messages with any address between 5000000 to 5999999 to the Interchange network. Therefore, if you were to have two remote systems, one whose mailboxes are in the range 538XXXX and another whose mailboxes have the prefix 555XXXX, Aria would send messages to both systems because of the PREFIX entry 5. Additionally, for a remote system with mailboxes in the range 444XXXX, Aria would send messages to the system because of the PREFIX entry 4.

 **CAUTION:**

This example assumes there is no remote Aria system, also with 7-digit mailboxes, networked directly to the local Aria system in a point-to-point configuration.

PREFIX	D								
1	6								
2	6								
3	6								
4	6								
5	6								
6	6								
7	6								
8	6								
9	6								

Figure 21. Sample Prefix Page (Single-Digit Prefixes)

1. In the **Enter Option** field (see [Figure 19](#)), type **A** to add an address and press **(ENTER)**.

The system redisplay the Prefix page ([Figure 22](#)).

```

- OctelNet Administration -                               14023
- Node Profile -

Node Number: 88                                         Node Name:      central

  PREFIX  D      PREFIX  D      PREFIX  D      PREFIX  D      PREFIX  D
  ----- -      ----- -      ----- -      ----- -      ----- -
1         9
2         9
3         9
4         9
5         9
6         9
7         9
8         9
9         9

Enter prefix to be added:                               Number of additional digits:
    
```

Figure 22. Node Profile Screen (Completed Prefix Page)

2. In the **Enter prefix to be added** field (for the first field of the **PREFIX** column), type the first prefix of an Interchange network address and press **(ENTER)**.

In the example in [Figure 22](#), the prefix is 1.

3. In the **Number of additional digits** field (for the first field of the **D** column), type the number of remaining digits that must be added to the prefix to create a complete Interchange network address. Press **(ENTER)**.

In the example, **9** more digits must be added because the Interchange dial plan calls for 10 digits. Thus, Aria will send any message addressed with a **1** followed by 9 more digits to Interchange.

4. Repeat [Step 2](#) and [Step 3](#) for each prefix to which Aria might send messages.

In the example in [Figure 22](#), all possible initial digits, 1 through 9, are listed, always followed by 9 more digits. This means that Aria will send any message with a 10-digit address, 1000000000 to 9999999999, to Interchange.

5. Press **(ENTER)**.
6. In the **Enter Option** field, type **E** and press **(ENTER)**.

The system displays the following message: Network Parameters updated. Press any key to continue:

7. Press **(ENTER)** until you return to the main menu.
8. Repeat [Task 5: Verify the Aria System Is Enabled for Digital Networking \(see page 19\)](#) to verify that the Interchange node has been defined. In the example, you would see Node 88 now defined for Interchange.

```
OctelNet Administration -                               14023
- Valid Node Numbers and Message Queues -

Node #      Node Name      A/D  Number of  Total  The oldest message to
-----  -----  ---  Messages  Minutes  be delivered in queue
0  Your VPMOD System
2  Colo Springs      A:
4  Lubbock          A:
5  Santa Fe         A:
88 central          D:

End of List; A/D = Analog/Digital; Pri = Priority; (*) = Future Delivery Time.
Enter 'P' to print the list, or any other key to return to the Network Menu.
```

9. Press **(ENTER)** to return to the main menu.

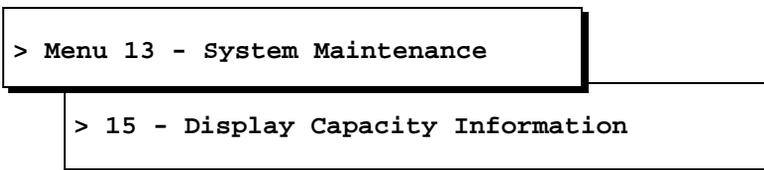
Task 8: Ensure the NameSend Capability Is on for Subscribers

Though it is possible to use Interchange's Demand Remote Update capability to capture subscriber names from the new system, Avaya recommends using the NameSend capability of Aria to update Interchange with Aria subscriber names.

This recommendation requires that subscribers have the NameSend capability turned on within their Class of Service.

To determine the appropriate Class of Service, first check the number of voice messaging subscribers the Aria system has. To check the number of subscribers, do the following:

1. From the Aria main menu, select the following options:



The system displays the System Capacity Information screen ([Figure 23](#)).

Menu 13 - System Maintenance		
System Capacity Information		
	Authorized	Used
	-----	----
Mailboxes:		
Voice Messaging	250	442
Application	N/A	59
	Total Mailboxes Used:	201
Licenses:		
Fax	250	1
Client Access	0	0

Figure 23. System Capacity Information Screen

2. Check the number of Used Mailboxes and write this number down. This number helps determine the class or classes of service appropriate to check and/or modify. It also helps you determine if the NameSend was successful to Interchange.
3. Press **(ENTER)** to return to the main menu.

4. From the Aria main menu, select the following option:

```
> Menu 7 - Class of Service Profile
```

The system displays the **Class of Service** field within the Class of Service Profile screen ([Figure 24](#)).

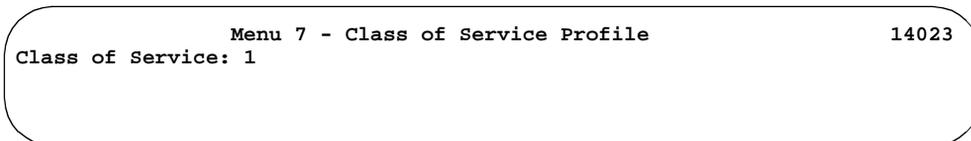


Figure 24. Class of Service Profile Selection Screen

5. In the **Class of Service** field, type the class of service number for subscribers who will have voice/fax messaging capability to the Interchange network.

In the example, the class of service for normal subscriber operations is **1**.

NOTE:

If you do not know which class of service is appropriate to change, identify it by checking the **Number of Mailboxes** field. The Class of Service that is appropriate will have a number of mailboxes that is approximately equal to the number of subscribers on the Aria system. However, you might have to assign the NameSend capability to more than one Class of Service to capture all subscribers.

6. Press **(ENTER)**.

The system displays all fields for the Class of Service Profile screen ([Figure 25](#)).

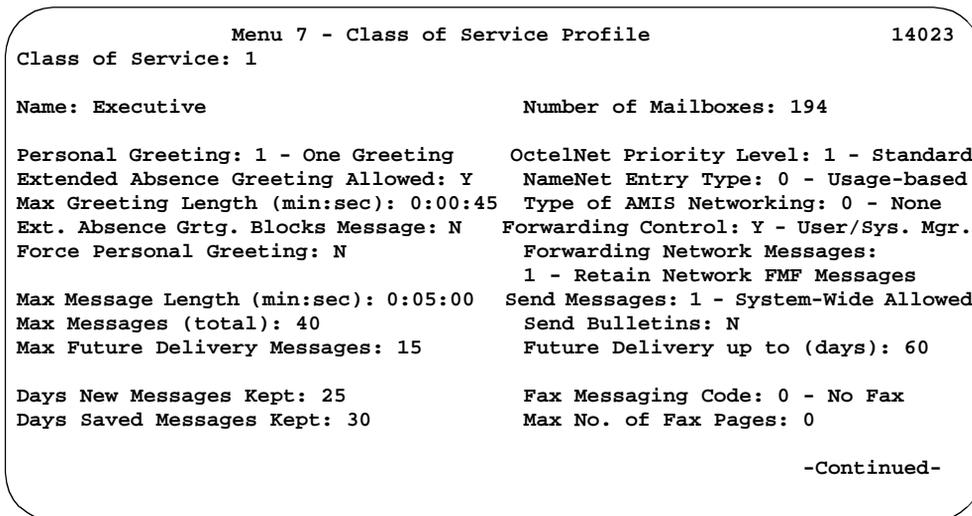


Figure 25. Class of Service Profile Screen (Page 1)

7. Press **(TAB)** until Page 2 of the Class of Service Profile screen appears.

The system displays Page 2 of the Class of Service Profile screen ([Figure 26](#)).

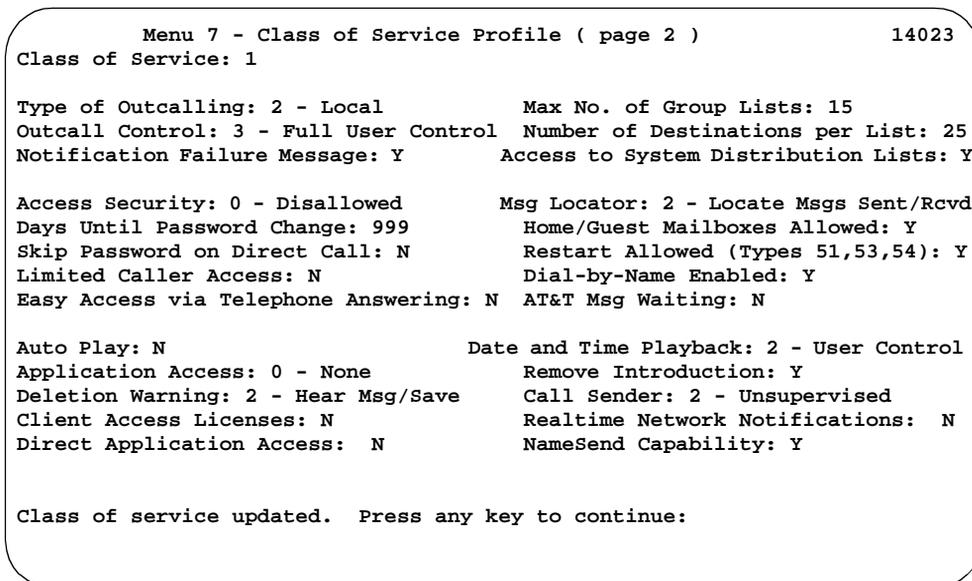


Figure 26. Class of Service Profile Screen (Page 2)

8. Check that the NameSend Capability field has a Y. If not, type Y in the field.

9. Press **(ENTER)** until you return to the main menu.

Task 9: Check Aria for Valid Extensions

To determine how to set up the NameSend utility for the Aria system, you must first determine the patterns of valid extensions for Aria mailboxes.

For example, if the Aria system has mailbox ranges of 2000 to 2999, 3000 to 3999, 5000 to 5499, and 5500 to 5999, we could theoretically perform a NameSend to Interchange for ranges 2000 to 3999 and 5000 to 5999. However, if there are major breaks in the series (for example, there are only four valid extensions in the range 2500 to 2699), the NameSend for that range could fail and, therefore, cause NameSend for the range specified, 2000 to 3999, to fail.

In this case, you will want to isolate those ranges with few valid extensions when you set up the NameSend utility for Interchange. Thus, your NameSend ranges in the example might have 2000 to 2499, 2500 to 2599, 2600 to 2699, and 5000 to 5999. In this way, NameSend will be completed successfully.

To determine the patterns of valid ranges, do the following:

1. From the main menu, select the following options:

```
> Menu 20 - Service Operations
> 9 - SMT Debug Utilities
```

The system displays the Command Line prompt ([Figure 32](#)).

```
> dump
D> amt
```

Figure 27. SMT Debug Utilities Command Line

2. At the command line prompt, type **dump** and press **(ENTER)**.

The **D>** prompt appears.

3. Type **amt** and press **(ENTER)**.

The system displays the Address Mapping Table ([Figure 28](#)).

Total 467 entries in AMT			
0	0108:0006EBB8	300FFFFFFFFFFFFF	03 06 00BB 0000
1	0108:0006E87E	CA1FFFFFFFFFFFFF	03 0A 0083 0000
2	0108:0006E942	CB0FFFFFFFFFFFFF	03 04 0091 0000
3	0108:0006E950	CC0FFFFFFFFFFFFF	03 09 0091 0000
4	0108:0006EDF6	1003FFFFFFFFFFFF	04 06 00E2 0000
5	0108:0006EDDA	1004FFFFFFFFFFFF	04 06 00E1 0000
6	0108:0006EB80	1100FFFFFFFFFFFF	04 01 00B8 0000
7	0108:0006EB8E	1101FFFFFFFFFFFF	04 01 00B9 0000
8	0108:0006EB9C	1102FFFFFFFFFFFF	04 01 00BA 0000
9	0108:000701A6	1111FFFFFFFFFFFF	04 07 0162 0000
10	0108:0006F8E6	2FFFFFFFFFFFFF	04 42 4001 0000
11	0108:000701EC	3FFFFFFFFFFFFF	04 42 4001 0000
12	0108:00070208	4FFFFFFFFFFFFF	04 42 4003 0000
13	0108:0006FC12	5050FFFFFFFFFFFF	04 01 0168 0000
14	0108:0006FD46	55FFFFFFFFFFFF	04 42 4004 0000
15	0108:0006FD54	56FFFFFFFFFFFF	04 42 4004 0000
16	0108:0006E870	6411FFFFFFFFFFFF	04 01 0082 0000
17	0108:0006EA22	2016FFFFFFFFFFFF	04 01 00A0 0000
18	0108:0006F360	2019FFFFFFFFFFFF	04 01 0145 0000
19	0108:0006EB64	2020FFFFFFFFFFFF	04 01 00B6 0000
20	0108:0006F15A	2022FFFFFFFFFFFF	04 01 0120 0000
21	0108:0006F168	2023FFFFFFFFFFFF	04 01 0121 0000
22	0108:0006F184	2024FFFFFFFFFFFF	04 01 0123 0000
23	0108:0006EB02	2025FFFFFFFFFFFF	04 01 00AF 0000

Figure 28. Address Mapping Table

4. Scroll down the 16-digit third column (many Fs appear in each entry) to look for a long series of entries whose first digits are valid extensions.

In the example (Figure 28), since the mailbox ID ranges begin with 2000, we can see that the start of the subscriber mailboxes starts with item 17:

```
17      0108:0006EA22  2016FFFFFFFFFFFF 04 01 00A0 0000
```

5. Continue to scroll down to look for significant breaks in the series (a break of more than 20 extensions is significant). Write down these breaks in ranges.
6. Continue to scroll through the columns until the series of valid extension numbers stops.

In the example (Figure 29), the extension numbers end at 5991.

```
156     0108:0006EBAA  5991FFFFFFFFFFFF 04 07 00BB 0000
```

142	0108:0006F46A	5879FFFFFFFFFFFF	04	01	0158	0000
143	0108:0006EFE0	5882FFFFFFFFFFFF	04	01	0105	0000
144	0108:0006EF8C	5883FFFFFFFFFFFF	04	01	00FF	0000
145	0108:0006F3EC	5885FFFFFFFFFFFF	04	01	014F	0000
146	0108:0006F280	5915FFFFFFFFFFFF	04	01	0135	0000
147	0108:0006EBF0	5919FFFFFFFFFFFF	04	01	00BF	0000
148	0108:0006F106	5922FFFFFFFFFFFF	04	01	011A	0000
149	0108:0006F23A	5923FFFFFFFFFFFF	04	01	0130	0000
150	0108:0006F018	5924FFFFFFFFFFFF	04	01	0109	0000
151	0108:0006F122	5955FFFFFFFFFFFF	04	01	011C	0000
152	0108:0006EB2C	5961FFFFFFFFFFFF	04	01	00B2	0000
153	0108:0006F05E	5963FFFFFFFFFFFF	04	01	010E	0000
154	0108:0006EAAE	5977FFFFFFFFFFFF	04	01	00AA	0000
155	0108:000701D0	5980FFFFFFFFFFFF	04	01	0164	0000
156	0108:0006EBAA	5991FFFFFFFFFFFF	04	07	00B8	0000
157	0108:0006EE20	9500FFFFFFFFFFFF	04	07	00E5	0000
158	0108:0006EE12	9501FFFFFFFFFFFF	04	07	00E4	0000
159	0108:0006EE04	9502FFFFFFFFFFFF	04	07	00E3	0000
160	0108:0006EDE8	9503FFFFFFFFFFFF	04	07	00E2	0000
161	0108:0006EDCC	9504FFFFFFFFFFFF	04	07	00E1	0000
162	0108:0006EDBE	9505FFFFFFFFFFFF	04	07	00E0	0000
163	0108:0006EDB0	9506FFFFFFFFFFFF	04	07	00DF	0000
164	0108:0006EDA2	9507FFFFFFFFFFFF	04	07	00DE	0000
165	0108:0006ED94	9508FFFFFFFFFFFF	04	07	00DD	0000
166	0108:0006EEF2	9510FFFFFFFFFFFF	04	07	00F4	0000
167	0108:0006EEE4	9511FFFFFFFFFFFF	04	07	00F3	0000

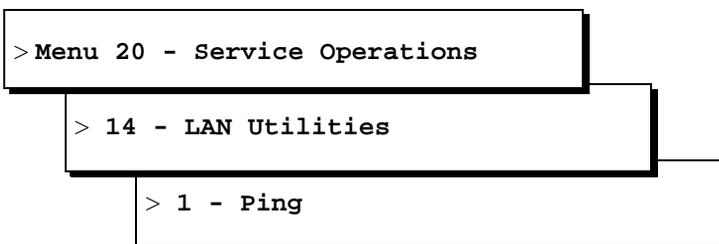
Figure 29. Address Mapping Table

- Press **(CONTROL)+[C]** to exit the Address Mapping Table.
 The system displays Menu 20 - Service Operations.
- Press **(ENTER)** to return to the main menu.

Task 10: Test the LAN Connection to Interchange

To test the LAN connection from the Aria system to Interchange, do the following:

- From the Aria main menu, select the following options:



The system displays the Ping Utility screen ([Figure 30](#))

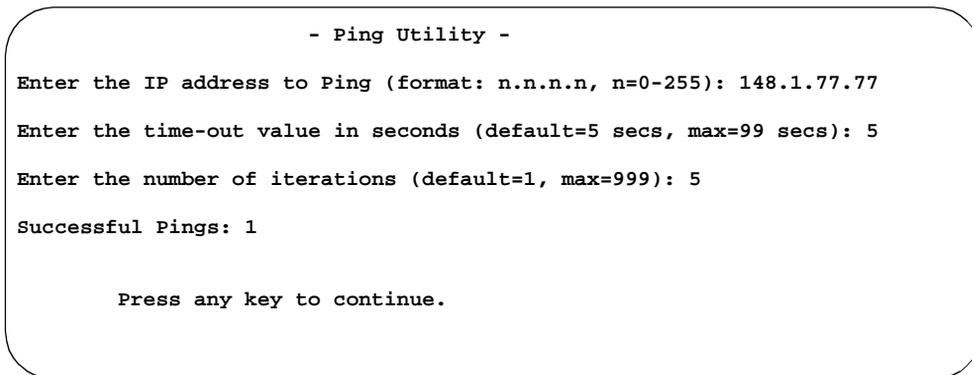


Figure 30. Ping Utility Screen

2. In the **Enter the IP address to Ping** field, type the IP address of Interchange.

In the example, the IP address is **148.1.77.77**.

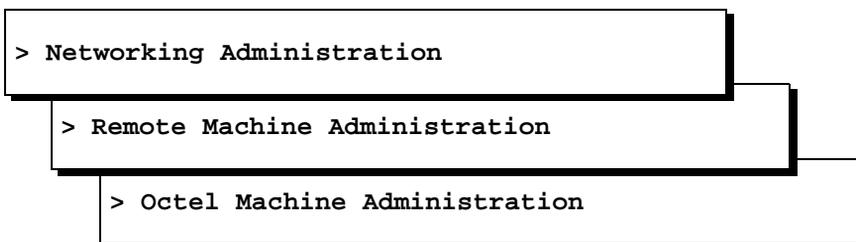
3. Leave the defaults in the remaining fields and press **(ENTER)**.

The system displays the number of successful pings. If there are no problems, this number matches the number of iterations in the **Enter the number of iterations** field.

4. Press **(ENTER)** three times to return to the main menu.
5. Log in to Interchange and continue with [Task 11: Identify the New System to the Interchange System \(see page 38\)](#).

Task 11: Identify the New System to the Interchange System

1. Start at the Avaya Interchange main menu and select



The system displays the Octel Machine Administration screen ([Figure 31](#)).

Octel Machine Administration	
Machine Name: <u>Englewood</u>	Connection Type: <u>DIGITAL</u>
Dial Str: <u>147.5.45.23</u>	
Machine Type: <u>ARIA DIGITAL</u>	Send FAX Messages ? : <u>Y</u>

Figure 31. Aria Digital Machine Administration Screen

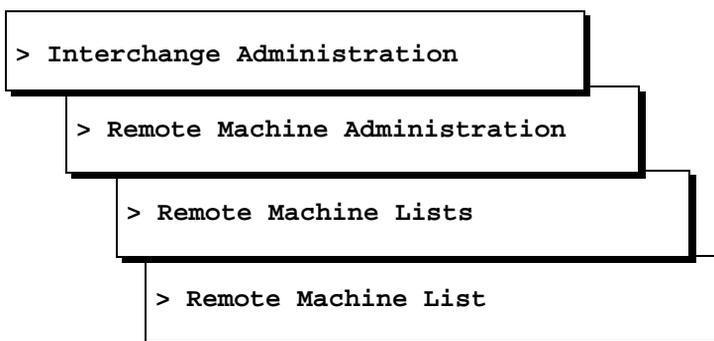
- In the **Machine Name** field, enter a name for the new system. Check with the administrator of the new system for the exact name. In the example, the name is **Englewood**, which is the location of the system.

The name must be unique within your Interchange network and must match exactly the name entered in to the Aria system.

Use **F2** (Choices) to view the existing Aria digital system 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 that 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 AMIS systems and those systems that use Serenade Digital, AUDIX Digital, and Octel Analog Networking protocols. The path to access this screen is as follows:



- In the **Connection Type** field, enter **DIGITAL**.
- In the **Dial Str** field, enter the IP address of the new system. You can find this address by checking the server IP address field when performing [Task 5: Verify the Aria System Is Enabled for Digital Networking \(see page 19\)](#).

In the example, the address is **147.5.45.23**.

5. In the **Machine Type** field, type **ARIA DIGITAL**.
6. In the **Send Fax Messages** field, type **y** if the system is enabled for fax. If the system is not enabled for fax, type **n**.
7. When you finish entering information for the new system, press **F8** (Chg-Keys).
8. Press **F2** (Add).

After you press this 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 12: 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 \(see page 14\)](#) 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 32](#)).

Remote Machine Parameters

Remote Machine Name: Englewood Machine Type: ARIA DIGITAL
 INTUITY Interchange? n Mailbox ID Length: 4 Default Language: us-eng
 Failed Msg. Notification Priority? n Msg ID? n Send Message for Warning? n
 Default NameNet Type: u Organization: _____
 Org Unit: _____ Node ID: 3389
 Comments: _____

ADDRESS RANGE: (Mailbox ID)	Start	End
	2000	2999
	3000	3999
	5000	5499
	5500	5999

NOTE

Press <DETAILS> to
 administer additional
 machine parameters

Figure 32. Remote Machine Parameters Screen

- In the **Remote Machine Name** field, type the name of the new system you added in [Task 11: Identify the New System to the Interchange System \(see page 38\)](#), 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 **ARIA DIGITAL**.

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

- 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 on another 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.
 - **Send Message for Warning? n or y**

y indicates that the original message is sent back to a subscriber after he or she has sent a message from the Aria system to a subscriber on a remote system that has the Extended Absence Greeting (EAG) warning activated. The return of this message is in addition to the message indicating the actual EAG warning condition. This capability is convenient for users who resend messages to someone else who is available.

- **Default NameNet Type: U**

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 none.

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 [Task 13: Map the New System's Dial Plan for Interchange \(see page 45\)](#).*

*In the example ([Figure 32](#)), the mailbox ranges reflect the ranges entered on the Planning Worksheet as **2000 to 2999, 3000 to 3999, 5000 to 5499, and 5500 to 5999**. The 5000 to 5999 range was broken out into two ranges to simply illustrate and emphasize the fact that the*

latter half of the range, **5500 to 5999**, has a different area code and local exchange prefix from that of **5000 to 5499**. You could actually enter the 5000 to 5999 range as a single range on the Remote Parameters screen and then later break down the range on the Dial Plan Mapping screen to deal with the differing prefixes within the range.

⚠ CAUTION:

Be sure that ranges do **not** include the extensions of automated attendants and other special mailboxes that are not intended to 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 might actually be sent to mailboxes that are not intended to receive E-list messages.

You might also exclude bulletin board mailboxes, unless you use them to distribute Enterprise 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 system displays the Machine Profile screen ([Figure 33](#)). It contains a display-only name for the **Remote Machine Name** field.

Aria Digital Machine Profile			
Remote Machine Name:	Englewood	Default Community ID:	1
Subscriber Updates Type:	dynamic	UPDATES In?	y
		UPDATES Out?	y
Voiced Names for Dynamic?	y	ASCII Name Confirmation?	y
Serial Number:	13023	Dynamic Sub Expiration Days:	90
System Mailbox ID:	0000		

Figure 33. Aria Digital Machine Profile Screen

9. In the **Default Community ID** field, leave the default **1**.
 Additional communities might 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, type the type of update you want for the new system:

dynamic This is the *recommended* ongoing setting because this setting helps save storage space on the Aria system.

For the dynamic updates type, each time a subscriber on this system sends a message to a remote subscriber, that remote subscriber is added to the Dynamic Directory List for the Aria system. Likewise, each time a remote subscriber sends a message to a subscriber on the Aria 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 Aria system to that remote subscriber, or vice versa, that remote subscriber is removed from the list.

 **NOTE:**

If you choose dynamic, you can still use the Directory Views screen to create directory views of specific systems and mailbox ranges on those systems.

full Type **full** if you want to perform an initial demand push of all remote subscribers to this new system. A full demand push to the Aria system downloads all registered Interchange subscribers from all networked systems.

By selecting this option, you automatically create, for the new system, a directory view (see the definition that follows) for all subscribers on every node in the Interchange network. When you access the Directory View screen ([Figure 35](#)), you will see every system in your Interchange network listed.

 **CAUTION:**

Be sure the new system has enough storage space before using this option.

directory view Use this setting to point to the Directory View screen to update the subscriber directory for specific systems and ranges. Since this selection is a static list, the subscriber directory includes only those subscribers included in the Directory view.

none With this option, Interchange will not update the subscriber names list for the new system.

11. In the **UPDATES: In?** field, type **y** to allow Interchange to accept updates from the new system.
12. In the **UPDATES: Out?** field, type **y** to allow Interchange to send updates to the new system.

13. In the **Voiced Names for Dynamic?** field, type **y** to allow Interchange to send recorded voice names to the new system during dynamic updates, if any. Type **n** if the subscriber update type is *not* dynamic.
14. In the **ASCII Name Confirmation?** field, type **n** because Interchange will rely on Aria's NameSend capability to keep names up to date. Type **y** to allow Interchange to verify subscriber names on the new system by using connections that the new system has already established when it sends messages and updates to Interchange. This action helps reduce total time on, and cost of, network communications between systems.
15. In the **Octel Serial Number** field, type the serial number of the new system. Get this number from your [Planning Worksheet \(see page 4\)](#) or while performing [Task 4: On Aria, Check Feature Options and Release Number \(see page 18\)](#).
16. In the **Dynamic Sub Expiration Days** field, leave the default **90**. However, this number should match the entry in the Aging Out Period (days) field on the Aria system's Menu 15.3.1 - NameNet Directory Parameters. The default on the Aria system is 30 days.

This number is the number of days a dynamically added remote subscriber stays in the new system's Dynamic Directory List without anyone sending messages from the new system to that remote subscriber or without that remote subscriber sending messages to the new system.
17. In the **System Mailbox ID** field, leave the default of **0000**. This field is used for the Auto-Copy feature of the Aria system.
18. Press **F3** (Save).

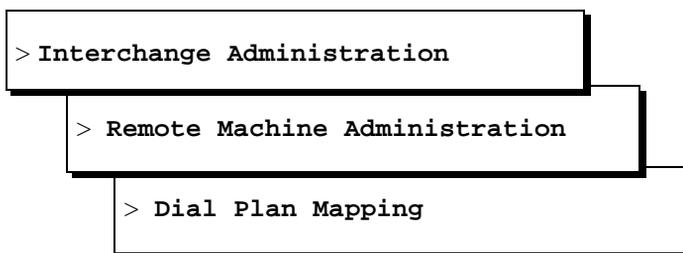
Task 13: Map the New System's Dial Plan for Interchange

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 mapping, you need the Dial Plan Mapping Worksheet from Professional Services or a worksheet that you completed on your own. These worksheets list the area codes and central office prefixes that can be used in conjunction with the new system's dial plan to create Interchange network addresses, usually addresses that match external direct dialing of the new system's mailboxes.

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

1. Start at the Interchange main menu and select



The system displays the Dial Plan Mapping screen ([Figure 34](#)).

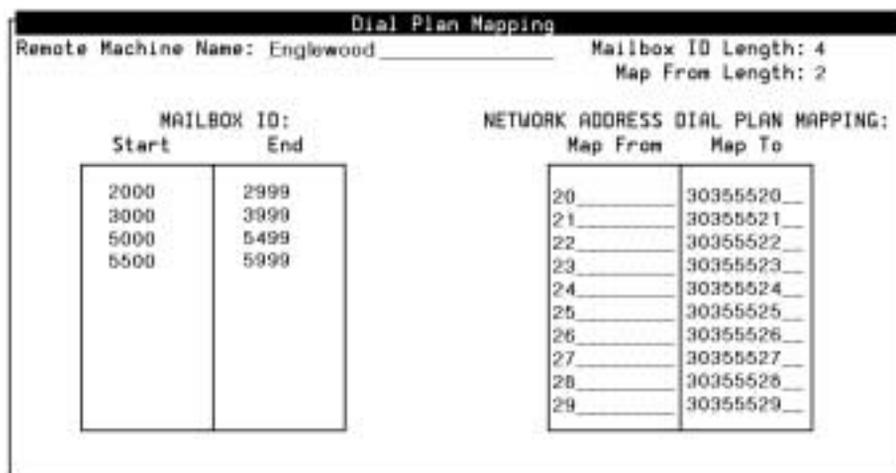


Figure 34. Dial Plan Mapping Screen

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**.

After you press **(ENTER)**, 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 IDs**. 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.

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. Also enter **1** 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 might 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. See [Figure 4 on page 10](#), which illustrates the alternative to **Map From Length 0** in anticipation of future changes.*

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 the 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 the example, the field contains **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 [Step 4](#) and [Step 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 with your switch administrator for the new system.

In the example (see [Figure 6 on page 12](#) 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).

Task 14: Administer Directory Views

The Directory View screen allows you to define, for the new system, the other remote systems for which Interchange will provide updates to the new system. You can specify a range of mailbox IDs from which to accept update information.

⇒ NOTE:

If you selected **full** as the Subscriber Update Type on the Machine Profile screen ([Figure 33 on page 43](#)), you do not need to administer Directory Views. Interchange will automatically include *all* remote systems in the Interchange network in the new system's Directory Views. If you selected **directory views** as the Subscriber Update Type, you must administer Directory Views. If you selected **dynamic** as the Subscriber Update Type, you do not need to administer Directory Views.

To administer directory views, do the following:

1. Start at the Avaya Interchange main menu and select

```
> Interchange Administration
```

```
> Remote Machine Administration
```

```
> Directory Views
```

The system displays the Directory View screen ([Figure 35](#)).

Directory View			
Machine Name: <u>Englewood</u>			
Remote Machine Name	Network Address Start	Network Address End	Voiced Name?
Fort Collins	9705562000	9705566999	y
Denver	3035550000	3035559999	y
Manhattan	2125550000	2125557999	y
Manhattan	6465558000	6465558999	y

Figure 35. Directory View Screen

- In the **Machine Name** field, type the name of the new system and then press (ENTER).

The system displays the current directory view information, if information exists, for this machine. If you selected **full** as the Subscriber Update Type for this system on the Machine Profile screen (Figure 33 on page 43), Interchange will display all remote systems in the Interchange network.

- Press (F3) (Continue).
- In the **Remote Machine Name** column, type the name of another system in the Interchange network. Interchange updates the subscriber list for the new system with subscribers from this remote system.

In the example, **Fort Collins**, **Denver**, and **Manhattan** are systems whose subscribers Interchange will dynamically include in, or remove from, the new system's remote subscriber directory.

- In the **Network Address: Start** and **End** fields, type the first and last subscriber addresses to form a range of addresses on the remote system. These addresses must match addresses as defined in the Dial Plan Mapping screen for this remote system.

In the example, the Manhattan system, as defined in its Dial Plan Mapping screen, has two mailbox ranges, one of **0000** to **7999**, with **Map To** entries of **2125550** through **2125557**. The other mailbox range for Manhattan is **8000** to **8999**, with a **Map To** entry of **6465558**. (This second range is the result of adding a different set of extensions in Manhattan, for which a different DID prefix had to be used.) As a result, the ranges of addresses for the Directory View are **2125552000** to **2125557999** and **6465558000** to **6465558999**.

6. In the **Voiced Name?** field, leave the default **y** to have each subscriber's voiced name stored in the remote subscriber directory.
7. Press **F3** (Save).
8. Press **F4** (Reselect) to enter another remote machine and repeat this procedure, or press **F6** (Cancel) to exit the screen and return to the Remote Machine Administration menu.

Adding All Machines

If you have many systems in the Interchange network, and you want to add most or almost all remote systems to the new system's directory view, you can add all machines and then delete those that you do not want be included.

⇒ NOTE:

Adding all machines to Directory Views is the equivalent of defining a full subscriber update type for the new system.

To add all machines listed in a directory view, do the following:

1. From the Directory View screen, press **F7** (Options).

The system displays the Options menu ([Figure 36](#)).

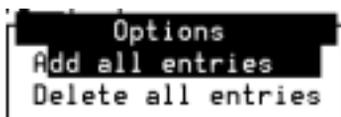


Figure 36. Options Menu

2. Select **Add all entries**.

The system displays the Confirm window ([Figure 37](#)).

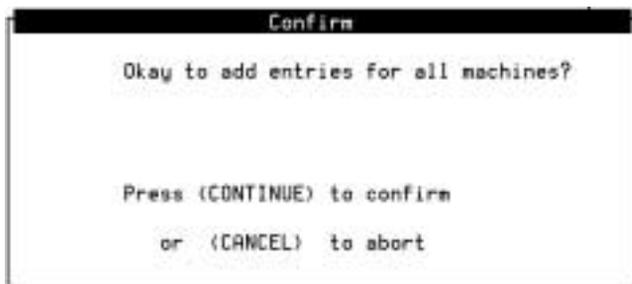


Figure 37. Confirm Window

3. Press **F3** (Continue) to add all machines or **F6** (Cancel) to return to the Directory View screen.

4. Press **F6** (Cancel) until you return to the Avaya Interchange main menu.

Task 15: Verify That the Endpoint Has Been Administered

Use the Remote Machine List and Remote Machine Dial Plan List to verify that 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

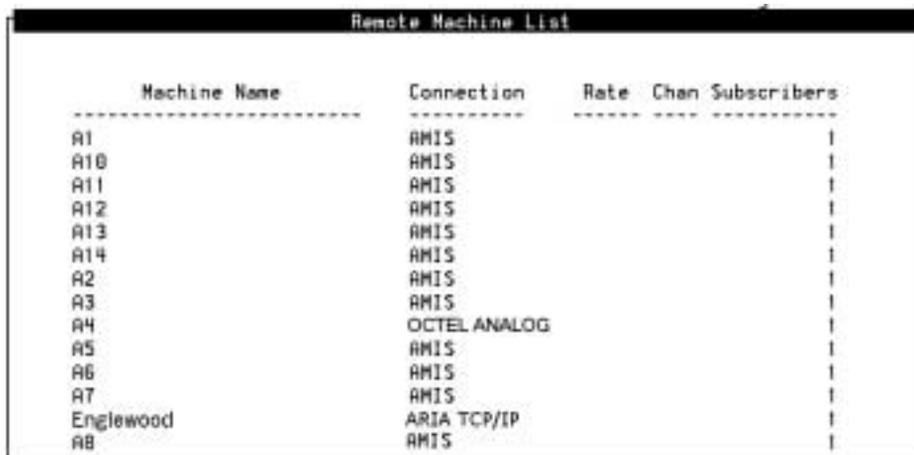
```
> Interchange Administration
```

```
> Remote Machine Administration
```

```
> Remote Machine Lists
```

```
> Remote Machine List
```

The system displays the Remote Machines List ([Figure 38](#)).



Machine Name	Connection	Rate	Chan	Subscribers
A1	AMIS			1
A10	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
Englewood	ARIA TCP/IP			1
A8	AMIS			1

Figure 38. 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 **ARIA TCP/IP**.

4. Press **F6** (Cancel) to return to the Remote Machine List menu
5. From the Remote Machine List menu, select

> Remote Machine Dial Plan List

The system displays the Remote Machine Dial Plan List ([Figure 39](#)).

Remote Machine Dial Plan List					
Machine Name	Type	---- Mailbox ID ----		- Extension Mapping -	
		Start	End	From	To
A1	AMIS	6148682778	6148682778		
A10	AMIS	6148682787	6148682787		
A11	AMIS	6148682788	6148682788		
A12	AMIS	6148682789	6148682789		
A13	AMIS	6148682790	6148682790		
Englewood	ARIA DIGITAL	2000	2099	20	30355520
Englewood	ARIA DIGITAL	2100	2199	21	30355521

Figure 39. 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 16: Test LAN Connectivity

1. Starting at the Interchange main menu, select

> Customer/Services Administration

> Diagnostics

> Networking Diagnostics

The system displays the Networking Diagnostics window ([Figure 40](#)).

Networking Diagnostics					
CHANNEL	TYPE	RATE	STATUS	MACHINE	ACTIVITY
1	DCP		DOWN		
2	DCP		DOWN		
3	RS-232 ASYNC		IDLE		
4	RS-232 ASYNC		IDLE		
5	TCP/IP		IDLE		
6	TCP/IP		IDLE		
7	TCP/IP		IDLE		
8	TCP/IP		IDLE		
9	TCP/IP		NOT EQUIPPED		
10	TCP/IP		NOT EQUIPPED		
11	TCP/IP		NOT EQUIPPED		
12	TCP/IP		NOT EQUIPPED		

Figure 40. Networking Diagnostics Window

2. Press **F8** (Chg-Keys).
3. Press **F4** (Diagnose).

The system displays the Networking Diagnostics menu ([Figure 41](#)).

Diagnostics	
>	Remote Connection Test
	Channel Internal Loop Around Test
	Modem Loop Around Test
	Network Loop Around Test
	Networking Board Reset

Figure 41. Networking Diagnostics Menu

4. Select

>	Remote Connection Test
---	------------------------

The system displays the Remote Connection Test window ([Figure 42](#)).

Remote Connection Test	
Machine Name:	Englewood
Channel No. :	___

Figure 42. Remote Connection Test Window

5. In the **Machine Name** field, enter the name of the new system.
6. Press **(ENTER)**. Leave the **Channel No.** field blank. This field is used only for RS232 Intuity AUDIX connections.

The system displays the message **working...** and attempts to connect with the remote machine.

When the process is complete, the system displays the Test Results window ([Figure 43](#)).

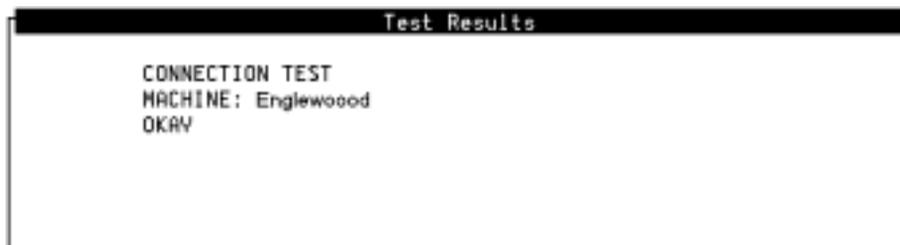


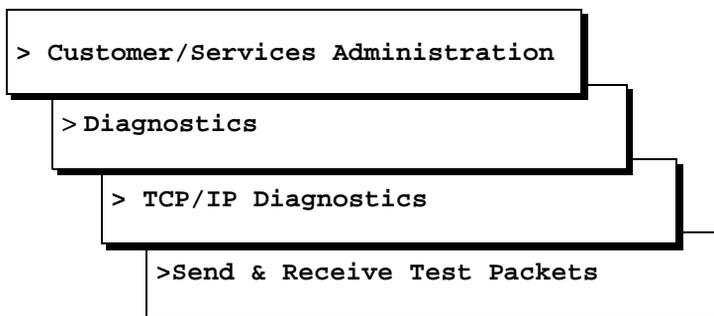
Figure 43. Test Results Screen for a Remote Connection Test

7. If the screen contains a message that states that the test was completed successfully, continue with [Step 8](#).
If the screen contains a message that states that the test failed, press **(F6)** (Cancel) to exit the screen and return to the Networking Diagnostics menu ([Figure 41](#)).
8. Press **(F6)** (Cancel) to exit the screen and return to the Networking Diagnostics window ([Figure 40](#)).

Testing the TCP/IP Software

To test the TCP/IP connection between Interchange and the new system, do the following:

1. Starting at the Interchange main menu, select



The system displays the Send & Receive Test Packets From window ([Figure 44](#)).

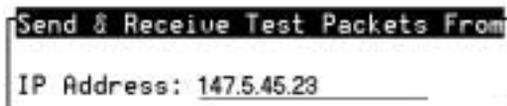


Figure 44. Send & Receive Test Packets Window

2. Enter the Internet Protocol (IP) address of the new system.

In the example, the new system's address is **147.5.45.23**.

3. Press **F3** (Save).

The system displays the message **working...** in the upper right corner of the screen. While the cursor flashes, the system is performing the test.

When finished, the system displays the Test Packets Results window (Figure 45). This screen shows the results of sending 10 test packets from the Interchange system to the new system.

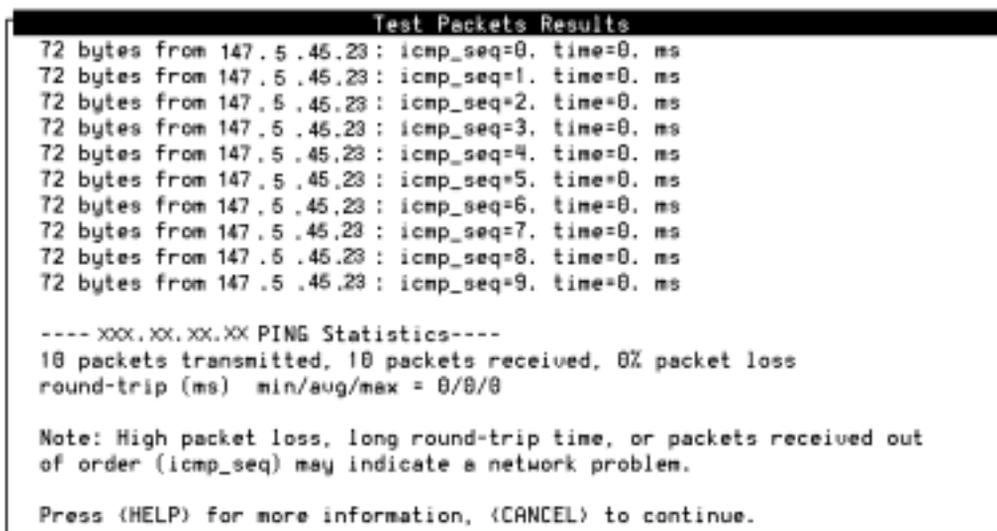


Figure 45. Sample Test Packets Results Window

Results

Examine the packet loss field in the PING Statistics displayed on the Test Packets Results screen. The value for this field will be either 0% or 100%, as described in the following list.

- If a 0% packet loss is reported, the test is successful.

- If a 100% packet loss is reported, the test failed. Check with your LAN administrator to ensure that you used the correct IP address for the system. Reboot the system and repeat this test. If the test still fails, contact your remote services center.
- If a 30-90% packet loss is reported, there might be a problem with network congestion or improper routing. Check with your LAN administrator.

Examine the **icmp_seq** order. Packets normally appear in the order 0 to 9. If they are out of order, there might be a problem with network congestion or improper routing.

Task 17: Add Remote Subscribers to Interchange

Use the NameSend capability to add remote subscribers to Interchange so that Interchange can pass on messages to those subscribers.

To run a demand remote update, do the following:

1. Start at the Aria main menu and select

```
> 13 - Maintenance
> 16 - NameSend Utility
```

The system displays the **Enter Starting Mailbox number** field of the NameSend Utility screen ([Figure 46](#)).

```
Menu 13 - System Maintenance
NameSend Utility

Enter Starting Mailbox number:2016

Enter Ending Mailbox number:2999

Node(s): 88

Enter a node to which Namenet information will be sent.
Do not enter anything if you chose to send to all nodes.
Enter node:
Proceed to queue NameSend messages (Y/N)? Y
```

Figure 46. NameSend Utility Screen

2. In the **Enter Starting Mailbox number** field, type the first administered mailbox number of the first range of mailboxes you want to send, and press **(ENTER)**.

This number must be an administered mailbox, which would be the first number you identified in [Task 8: Ensure the NameSend Capability Is on for Subscribers \(see page 32\)](#). In the example, **2016** is the first mailbox ID, though the administered range starts with 2000.

The system displays the **Enter Ending Mailbox number** field.

3. In the **Enter Ending Mailbox number** field, type the last number of the first range of mailboxes you want to send, and press **(ENTER)**.

In the example, since the first range is 2000 to 2999, the number is **2999**.

⇒ NOTE:

Even if you are sending only one mailbox, the ending mailbox number is also required. For example, if you are sending mailbox 2016, you would type **2016** in both the **Enter Starting** and **Ending Mailbox Number** fields.

The system displays the **Enter node** field.

4. In the **Enter node** field, type the node number of Interchange and press **(ENTER)**.

In the example, the Interchange node is **88**.

The system displays the **Proceed to queue NameSend messages** field.

5. In the **Proceed to queue NameSend messages** field, type **Y** and press **(ENTER)** to send the names of the range of mailboxes to Interchange.

When the system has sent the last administered mailbox ID, the system displays the following message (in the example message that follows, **2945** was the last valid mailbox in the range):

```
Processing mailbox 2945 ... Complete.
```

```
Press any key to continue
```

6. Press **(ENTER)**.

The system displays Menu 13 — Maintenance.

⇒ NOTE:

If NameSend fails, the failure might be the result of the range of mailboxes having a large number of unadministered mailboxes. In this case, double-check your ranges by using [Task 8: Ensure the NameSend Capability Is on for Subscribers \(see page 32\)](#).

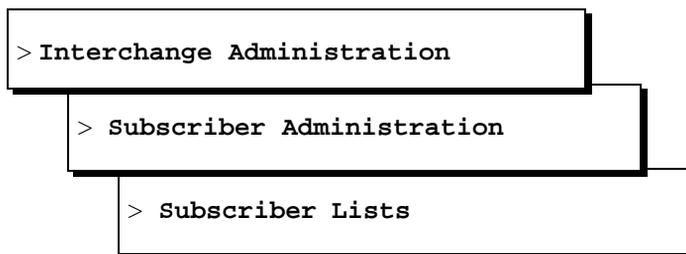
7. Repeat [Step 1](#) through [Step 5](#) for each range of mailboxes.

8. When all desired ranges have been sent, press **(ENTER)** to return to the main menu.

Task 18: Verify the NameSend Update

To check that Interchange captured the list of subscribers on the new system, do the following:

1. From the Interchange main menu, select



The system displays the Subscriber Lists menu ([Figure 46-1](#)).



Figure 46-1. Subscriber Lists Menu

2. Select **By Remote Machine Name**.

The system displays the Subscriber List By Remote Machine Name.

3. Check the number of subscribers to see if the number matches the number of subscribers administered on the Aria system. If you ran a demand remote pull, also check to see that voiced names appear for subscribers.
4. Press **(F6)** (Cancel) to return to the Interchange Administration menu.

Task 19: Test the Connection

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

1. Log in to a voice mailbox on a *different* messaging system in the Interchange network.
2. Create a test message (for example, "This is a test message from Bob. Please message me back.").
3. Address and send the message to the test mailbox on the new messaging system. The address includes the whole Interchange network address, which includes the Map To digits, as defined in [Task 13: Map the New System's Dial Plan for Interchange \(see page 45\)](#), and the remaining digits of the specific mailbox.
4. Log in to the 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 [Planning Worksheet \(see page 4\)](#).
5. In the test mailbox on the new system, listen to the test message sent in [Step 3](#). Also, in the test mailbox, send a reply to the test message back to the mailbox on the other system.
6. Listen to the reply in the mailbox you logged in to in [Step 1](#).
7. Listen to the reply in the mailbox you logged in to in [Step 1](#).

Task 20 (Optional): Manually Update the Aria System

If you want to have all Interchange remote subscribers (if full updates are specified) or the subscribers you defined in Directory Views (if any) immediately available on the new system for addressing by name, perform a demand remote push on the Aria system using the following steps.

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 47](#)).

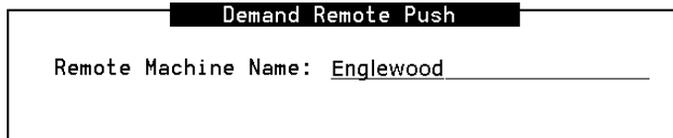


Figure 47. Demand Remote Push Screen

2. Type the system name, or press **F2** (Choices) to display a list of valid remote machines.
3. Press **F3** (Continue).

The system displays the following Demand Remote Push screen ([Figure 48](#)).



Figure 48. Demand Remote Push Screen

Interchange will now update the Aria system with any ASCII or voiced names on the Interchange network.

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.

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

Task 21: 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 what type of system the remote system is and how you have administered the Subscriber Update Type for that system (see [Table 1](#)).

⇒ 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.

Table 1. Remote Node Update Options

Update Type	Remote System Type	Steps to Update a Remote System
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 for that remote system Manually Update an Intuity AUDIX System (see page 62) (do this during off hours for RS-232 systems).
	Aria, Serenade, and Octel 100	If you have the full Subscriber Update Type turned on for an Aria, Serenade, or Octel 100 remote system, perform for that remote system the same steps as in Task 20 (Optional): Manually Update the Aria System (see page 59) . If the remote system uses Octel Analog Networking, complete this task during off hours.
	VPIM/AMIS	Full updates are not supported.
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.

Table 1. Remote Node Update Options

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 for that remote system the same steps as in Manually Update an Intuity AUDIX System (see page 62) (do this during off hours for RS-232 systems).
	Aria, Serenade, and Octel 100	If you have directory views turned on for an Aria, Serenade, or Octel 100 remote system, add the new system to the Directory Views screen for the remote system. Then, perform for that remote system the same steps as in Task 20 (Optional): Manually Update the Aria System (see page 59) . These steps are identical for all Aria, Serenade, and Octel 100 systems. If the remote system uses Octel Analog Networking, complete this task during off hours.
	VPIM/AMIS	Directory Views are not supported.

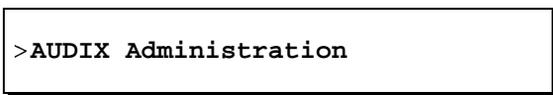
Manually Update an Intuity AUDIX System

⇒ 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. For Aria, Serenade, and Octel 100 remote nodes that use full or directory view updates, see [Task 20 \(Optional\): Manually Update the Aria System \(see page 59\)](#) for instructions.

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



The system displays a blank AUDIX screen.

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

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 the example, the name of Interchange is **central**.

The system displays the Remote Update Request screen ([Figure 2](#)).

```

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 2. Intuity AUDIX Remote Update Request Screen

6. Press **(ENTER)** to begin the remote update or press **(F6)** (Cancel).

The system begins the remote update.

⇒ NOTE:

The update might 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 the name for Interchange.

The system displays the List Remote Extensions screen.

8. Check 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 **(F1)** (Cancel).
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.