



Avaya™ Interchange

Release 5.4/Intuity™ Interchange R5.3
Adding a Serenade System That Uses
Digital Networking

Issue 1
January 2002

© 2002, Avaya Inc.
All Rights Reserved, Printed in U.S.A.

Notice

Every effort was made to ensure that the information in this book was complete and accurate at the time of printing. However, information is subject to change.

Avaya Web Page

The World Wide Web home page for Avaya is <http://www.avaya.com>

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

If you *suspect that you are being victimized* by toll fraud and you need technical assistance or support, call the Technical Service Center's Toll Fraud Intervention Hotline at 1.800.643.2353.

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

Federal Communications Commission Statement

Part 15: Class A Statement. This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio-frequency energy and, if not installed and used in accordance with the instructions, could cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

Trademarks

All trademarks identified by ® and ™ are registered trademarks or trademarks respectively, of Avaya Inc. All other trademarks are the property of their respective owners.

European Union Declaration of Conformity

The "CE" mark affixed to the equipment means that the equipment conforms to the referenced European Union (EU) Directives listed below:

EMC Directive 89/336/EEC

Low-Voltage Directive 73/23/EEC

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 a Serenade System That Uses Digital Networking

This document describes how to add to your Interchange network a new Serenade® system that uses the Serenade Digital Networking 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 a Serenade Digital Networking Endpoint

To add a new Serenade messaging system to an existing Avaya or Intuity Interchange network using Serenade Digital Networking, do the following:

Task	Details of Task
Task 1: Ensure That the New System and Interchange Are Enabled for Serenade Digital Networking (see page 3)	Check the Feature Options and View Hardware on Interchange for digital ports. Run list slots to check for a LAN card on Serenade.

Task 2: Get Information About the System You Are Adding (see page 8)	Complete the Planning Worksheet included in this document. The data networking administrator for your Interchange system and the switch administrator and/or Serenade system administrator for the new system will need to give you the dial plan, IP address, and system mailbox.
Task 3: Determine How to Map the New System's Dial Plan (see page 18)	Complete the Dial Plan Mapping Worksheet in this document (Professional Services normally does this for you).
Task 4: Determine the Type of Subscriber Update for the New System (see page 28)	Understand how full, dynamic, and directory view updates work and choose the best one for your system.
Task 5: Check the Interchange Serial Number, If Any (see page 30)	Check the General Parameters screen.
Task 6: Create an Interchange Profile on the New System (see page 31)	Enter the Interchange as a Serenade network node into the new system. This task includes: <ul style="list-style-type: none">▪ Add Interchange as a New Location on the Serenade System.▪ Add a Numbering Plan for Interchange.
Task 7: Test the LAN Connection to Interchange (see page 43)	Complete the Ping command on the new system.
Task 8: Identify the New System to the Interchange System (see page 43)	Complete the Octel Machine Administration screen for the new system.
Task 9: Administer Remote Machine Parameters (see page 45)	Complete the Remote Machine Parameters screen for the new system. Also complete the Serenade Digital Machine Profile screen by using the Dial Plan Mapping Worksheet.
Task 10: Map the New System's Dial Plan for Interchange (see page 50)	Complete the Dial Plan Mapping screen for the new system by using the Dial Plan Mapping Worksheet.
Task 11: Administer Serenade Digital Sender Dial Plan (If Appropriate) (see page 53)	Complete the Serenade Digital Sender Dial Plan screen if you use steering digits on the Serenade system to identify Interchange.

Task 12: Administer Directory Views (see page 55)	Complete the Directory Views screen.
Task 13: Verify That the Endpoint Has Been Administered (see page 58)	Check for a new system entry on the Remote Machine List and the Remote Machine Dial Plan List.
Task 15: Add Remote Subscribers to Interchange (see page 64)	Run NameSend from the Serenade system to Interchange.
Task 16: Verify the NameSend Update (see page 69)	Run the Subscriber List by Machine Name on Interchange.
Task 17: Test the Connection (see page 70)	Perform a remote update on Serenade. Also, send messages to and from the test mailbox on the new system.
Task 18 (Optional): Manually Update the Serenade System (see page 71)	Run a Demand Remote Push to the Serenade system.
Task 19: Update Remote Systems for Subscribers on the New System (see page 72)	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: Ensure That the New System and Interchange Are Enabled for Serenade Digital Networking



NOTE:

Avaya Professional Services normally does this for you as part of its Design Assurance service.

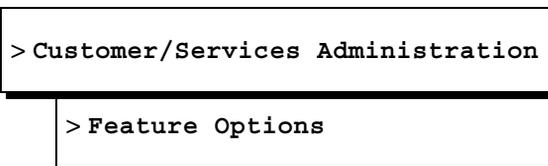
The following tasks must be done initially to ensure that the Interchange and Serenade systems are enabled for digital networking:

- [Check the Available Digital Ports and Nodes on Interchange \(see page 4\).](#)
- [Check for a LAN Card on the Serenade System \(see page 5\).](#)

Additionally, certain system parameters on Serenade must be enabled. Perform [Check the System Parameters of the New System \(see page 11\)](#) to verify these parameters. You perform this task as a part of [Task 2: Get Information About the System You Are Adding \(see page 8\)](#).

Check the Available Digital Ports and Nodes on Interchange

1. Start at the Interchange main menu and select



The system displays the Feature Options screen. ([Figure 1](#)).

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

Figure 1. Feature Options Screen

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

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

3. Press **F6** (Cancel).
4. At the Interchange main menu, select

```
> Customer/Services Administration
> System Verification
> View Installed Hardware
```

The system displays the View Installed Hardware window (Figure 2).

```
View Installed Hardware
Installed Hardware of mtce

2047 megabyte Hard Drive Installed at SCSI id 0
47 megabytes of memory installed.

Installed Hardware of netw

Networking Board      Equipped      Version Number
1                      no            N/A
2                      no            N/A
3                      no            N/A
```

Figure 2. View Installed Hardware Window

5. Check that SSP boards have been installed. If the boards are not installed, contact your Account Executive to arrange for their installation.

Check for a LAN Card on the Serenade System

To use Serenade Digital Networking to communicate with Interchange, Serenade must have a LAN card installed and enabled. To check that a LAN card is installed, use the following steps:

1. Log in to the Serenade system.

The system displays the @ prompt.

```
@
```

2. Type **u** and press **(ENTER)** to access the update program and dot prompt.

The system displays the . (dot) prompt.

```
@u
----- SYSTEM CONFIGURATION UPDATE -----
SAT 11/20/1999 00:44:58 Englew ID:28005 S/N:13023 PBX:23
At the dot (.), enter ? for HELP.
.
```

3. At the dot prompt, type **I slot** and press **ENTER**.

The system displays the Slots Table ([Figure 3](#)).

```
.L SLOT
Enter the SLOT NUMBER to LIST
LST:
SLOT  CARDTYPE  PORT  EXTENSION #  COS  MODE  OUTCALL  TEST  SYS
----  -
1     LIC4       1     390          254  AX    YES      YES   1
2     LIC4       2     391          254  AX    YES      YES   2
3     LIC4       3     392          254  AX    YES      YES   3
4     LIC4       4     394          254  AX    YES      YES   4

SLOT  CARDTYPE  PORT  EXTENSION #  COS  MODE  OUTCALL  TEST  SYS
----  -
2     DLC16     1     394          254  AX    YES      YES   5
      DLC16     2     395          254  AX    YES      YES   6

LSPTAB table:DEFAULT

SLOT  CARDTYPE  PORT  EXTENSION #  COS  MODE  OUTCALL  TEST  SYS
----  -
3     FAX4       1     253          253  FX    NO       NO    7
      FAX4       2     253          253  FX    NO       NO    8
      FAX4       3     253          253  FX    NO       NO    9
      FAX4       4     253          253  FX    NO       NO   10

SLOT  CARDTYPE
----  -
5     LAN
.
```

Figure 3. List Slots Table

4. Check the list for a LAN card. If no card is listed, contact your Account Executive to arrange for an installation.

Check for Feature Software and Patches

For a Serenade system to work in an Interchange network, a number of software patches must installed on the system. To check that these patches are already installed, do the following:

1. At the dot (.) prompt, type **e** and press **(ENTER)**.

The system exits the update program and displays the @ prompt.

2. At the @ prompt, type **l f** and press **(ENTER)**.

The system displays the system features.

```
@l f
-----SYSTEM SOFTWARE RELEASE S.4.0.0-2 (04/30/01) -----
SAT 11/20/1999 00:44:58 Englew ID:28005 S/N:13023 PBX:23

MODEL TYPE: VMX 200L
SERIAL NUMBER: 13023
FEATURE PACKAGES:
SW-40001 SW-40003 SW-40004 SW-40007 SW-40008 SW-40009 SW-40015 SW-40019
SW-40020 SW-40021 SW-40022 SW-40023 SW-40024 SW-40026 SW-40027 SW-40028
SW-40029 SW-40030 SW-40031 SW-40032 SW-40033 SW-40034 SW-40047 SW-40049
SW-40050 SW-40051 SW-40052 SW-40053 SW-40055 SW-40060

-----
Ports      ANALOG      AUTHORIZED  USED      UNUSED     INSTALLED
-----
Analog     --           4           0          4
Fax        --           8           0          8
DSP        16           0           16         0
PIC        24           11          13         12
```

Figure 4. List of Features

3. Note the software release, serial number, and system name at the top of the list. Enter these on the [Planning Worksheet \(see page 10\)](#).
4. Check the list of feature software for the following feature packages:
 - **SWx0004**
 - **SWx0049**
 - **SWx0052**

where **x** is the release number (2, 3, or 4) of the Serenade system.

5. At the @ prompt, type **patch stat** and press **(ENTER)**.

The system displays a list of patches.

```
@patch stat

Patch#      Date Applied      Target      File name
-----
1           04/30/01 14:04:09  CPU        memory, disk  PATS400.001
4           04/30/01 14:05:09  CPU        memory, disk  PATS400.004
5           04/30/01 14:05:15  CPU        memory, disk  PATS400.005
6           04/30/01 14:06:10  CPU        memory, disk  PATS400.006
7           04/30/01 14:07:09  CPU        memory, disk  PATS400.007
8           04/30/01 14:08:33  CPU        memory, disk  PATS400.008
9           04/30/01 14:08:54  CPU        memory, disk  PATS400.009
10          01/27/01 09:13:12  CPU        memory, disk  PATS400.010
11          04/30/01 14:04:09  CPU        memory, disk  PATS400.011
12          04/30/01 14:04:09  CPU        memory, disk  PATS400.012
13          04/30/01 14:04:09  CPU        memory, disk  PATS400.013
15          02/17/01 09:14:00  CPU        memory, disk  PATS400.015
16          04/30/01 14:04:09  CPU        memory, disk  PATS400.016
31          04/30/01 14:04:09  CPU        memory, disk  PATS400.031
49          04/30/01 14:04:09  CPU        memory, disk  PATS400.049

CPU Patches Not Yet Applied

* none *
```

Figure 5. List of Patches

6. Check the list of patches in the appropriate column in the following table and ensure that those patches are listed on the screen. If any patches are missing, contact your Account Executive to have the patches downloaded to your system.

Release 2.0.X	Release 3.0.0	Release 3.0.1	Release 4.0
PATS20X.137	PATS300.024	PATS301.005	
PATS20X.140	PATS300.025		
PATS20X.153	PATS300.026		

Task 2: 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 Serenade Digital Networking*. Retrieve these items and enter them in the [Planning Worksheet](#) that follows.

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

1. [Check the System Parameters of the New System \(see page 11\).](#)

2. [Check the Serenade Dial Plan \(see page 14\).](#)
3. [Get the System Mailbox Number \(see page 16\).](#)
4. [Determine the Test Mailboxes and Prefixes of the New System Mailboxes \(see page 17\).](#)

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

Serenade System Name _____ Gateway IP Address _____

—

System Mailbox ID _____ Is the system fax capable? _

End Node Test Mailbox(es)*: _____

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

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

Area Code
and/or Local
Exchange Prefix
(if any)

Starting
Extension

Ending
Extension

- | | | | |
|----|-------|-------|-------|
| 1. | _____ | _____ | _____ |
| 2. | _____ | _____ | _____ |
| 3. | _____ | _____ | _____ |
| 4. | _____ | _____ | _____ |
| 5. | _____ | _____ | _____ |
| 6. | _____ | _____ | _____ |
| 7. | _____ | _____ | _____ |
| 8. | _____ | _____ | _____ |

9. _____

10. _____

Check the System Parameters of the New System

Use the following steps to get the name and IP address of the Serenade system and to ensure the Serenade system is enabled for the Interchange network. The administrator of the Serenade system can do this for you.

Complete the steps that follow on the Serenade system itself.

1. Log in to the Serenade system.

The system displays the @ prompt.

```
@
```

2. Type **u** and press **(ENTER)** to access the update program and dot prompt.

The system displays the . (dot) prompt.

```
@u
```

```
----- SYSTEM CONFIGURATION UPDATE -----
```

```
SAT 11/20/1999 00:44:58 Englew ID:28005 S/N:13023 PBX:23
```

```
At the dot (.), enter ? for HELP.
```

```
.
```

3. Type **l sys** and press **(ENTER)** to display the LST prompt.

The system displays the LST prompt.

```
@u
```

```
----- SYSTEM CONFIGURATION UPDATE -----
```

```
SAT 11/20/1999 00:44:58 Englew ID:28005 S/N:13023 PBX:23
```

```
At the dot (.), enter ? for HELP.
```

```
.L SYS
```

```
LST:
```

4. Press **(ENTER)** to display the complete list of system parameters.

The system displays system parameters for the Serenade system ([Figure 6](#)).

```

@u

-----  SYSTEM CONFIGURATION UPDATE  -----

SAT 11/20/1999 00:44:58 Englew      ID:28005   S/N:13023  PBX:23

At the dot (.), enter ? for HELP.
.L SYS
  LST:

1   FIRSTHEA           L/M   INSTALLATION NAME
2   301749             L/M   SYSTEM ID NUMBER
3   ATT                L/M   PBX TYPE
    SYSTEM-75          L/M   PBX MODEL
4   48                 L     VOICE PORTS USED
    4                  L     FAX PORTS USED
7   3                  L     REPROMPT LIMIT
8   4                  L/M   BACKUP/GO AHEAD TIME (BLOCKS)
9   750                L/M   FLASH TIME (MSEC.)
12  255                L     INSTALL QUESTION NUMBER
13  FE                 L/M   TRANSFER INITIATE CODE
    FDF                 L/M   RE-CONNECT CODE AFTER NO ANSWER
    FDF                 L/M   RE-CONNECT CODE AFTER BUSY
    NONE                L/M   RE-CONNECT CODE AFTER FAST BUSY
    NONE                L/M   TRANSFER COMPLETE CODE
16  FE                 L/M   ALTERNATE TRANSFER INITIATE CODE
    FDF                 L/M   ALTERNATE RE-CONNECT CODE AFTER NO ANSWER
    FDF                 L/M   ALTERNATE RE-CONNECT CODE AFTER BUSY
    NONE                L/M   ALTERNATE RE-CONNECT CODE AFTER FAST BUSY
    NONE                L/M   ALTERNATE TRANSFER COMPLETE CODE
19  NO                 L/M   MAILBOX NUMBERS MATCH USER EXTENSIONS
22  8                  L/M   DEFAULT MESSAGE WAITING START HOUR
23  18                 L/M   DEFAULT MESSAGE WAITING END   HOUR
    
```

Figure 6. System Parameter Table

5. Check for the following parameters in the list:

Parameter Index	Parameter Name	Correct Value for Digital Networking with Interchange
4	Fax Ports Used	0 or higher. If this value is 0 , Serenade is <i>not</i> enabled for Fax. Enter n in the Planning Worksheet (see page 10) .
225	DNET: Digital Networking Enabled	YES.
233	LAN: Name Server IP Address	Serenade's IP address.

Parameter Index	Parameter Name	Correct Value for Digital Networking with Interchange
234	LAN: Gateway IP Address	The Gateway IP address for Serenade. Write this address in the Planning Worksheet (see page 10) .
253	DNET: Switch to Analog Standby	NO , this is a digital connection.
257	DNET: Enable ASCII Name Verification	YES . This parameter enables Serenade to verify ASCII names when sending messages.
276	NameSend: Delivery Mode	1 . 1 enables immediate NameSend updates.
277	NameSend: Maximum Names to Send in a Session	0 . 0 means unlimited.
278	NameSend: Enable by Default for New Users	YES . This parameter allows Serenade to enable a subscriber automatically for NameSend when the subscriber is added.
280	NameSend: Enable Automatic Name Propagation	YES , which allows new names to be automatically distributed by NameSend.

Parameter Index	Parameter Name	Correct Value for Digital Networking with Interchange
281	GWL: Gateway Link Installed	YES. A gateway link is required for the TCP/IP network connection. This parameter requires Parameter 284 and 285 to be enabled first.
284	GWL: Generic Error Mailbox	YES. This mailbox must exist before Serenade will allow a gateway link in parameter 281. If this is NO , you must establish the mailbox and then type YES for parameter 281.
285	GWL: Gateway Down Error Mailbox	YES. This mailbox must exist before Serenade will allow a gateway link in parameter 281. If this is NO , you must establish the mailbox and then type YES for parameter 281.

6. If some parameters are incorrect, you must change the parameters. If you must change parameter 225 to **YES**, you must reboot the Serenade system before you continue.

Check the Serenade Dial Plan

To check the Serenade dial plan and network update capabilities, do the following:

1. At the dot prompt in Serenade's update program, type **I firs** and press **ENTER**.

The system displays the First Digit Table ([Figure 7](#)).

```
.l firs
FIRST   MAILBOX
DIGIT   LENGTH
-----
0       3
1
2       4
3       4
4
5       4
6
7
8       4
9
.
```

Figure 7. First Digit Table

2. Note the numbers in the **FIRST DIGIT** column that are followed by an entry in the **MAILBOX LENGTH**. These are the potential mailbox ranges. For example, **FIRST DIGIT 2**, with **MAILBOX LENGTH 4**, defines a mailbox range of 2000 to 2999.
3. At the dot prompt in Serenade's update program, type **I user a** and press **(ENTER)** to list mailbox users according to a class of service (COS) attribute. The system displays the **Enter COS ATTRIBUTE NUMBER** prompt.

```
.l user a
Enter COS ATTRIBUTE NUMBER
LST:
```

4. At the **LST** prompt, type a common mailbox attribute and press **(ENTER)**. The attribute is one that the system's users will have, typically attribute **17** (send network messages immediately) and/or attribute **18** (send network messages only at night). In the example, the attribute is **17**. The system displays the users with the appropriate COS attribute ([Figure 8](#)).

```
.! user a
Enter COS ATTRIBUTE NUMBER
LST:17
USERS TABLE:
MAILBOX      EXTENSION      COS      SECURITY      NAME
2500         2500            0        Y             DANBERGER
2501         2501            0        Y             JACKYAMAGUCHI
2502         2502            0        N             JASONVENKATISH
2503         2503            0        Y             PATMCGRAW
2504         2504            0        Y             BARBARAKARP
```

Figure 8. Users Table

- Note which ranges the subscribers are listed in and match these ranges against the ranges from the First Digit Table. Enter these ranges (up to 10) in the **Starting** and **Ending Extensions** fields of your [Planning Worksheet](#) (see page 10).



CAUTION:

*Be sure that ranges do **not** include the extensions of automated attendants, bulletin boards, 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.*

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

Get the System Mailbox Number

To get the System Mailbox number for the Serenade system, do the following:

- At the dot prompt in Serenade's update program, type **I sys** and press **(ENTER)**.

The system displays the **LST:** prompt.

```
.! sys
Enter system parameter index.
LST:
```

- Type **248** and press **(ENTER)** to display the system mailbox number.

The system displays the system mailbox parameter ([Figure 9](#)).

```
.1 sys
Enter system parameter index.
LST:
248 8099 L/M OCTELNET: SYSTEM MAILBOX
```

Figure 9. System Parameters Table, System Mailbox

3. Note the extension number (**8099** in the preceding example) and write it in your [Planning Worksheet \(see page 10\)](#).

Determine the Test Mailboxes and Prefixes of the New System Mailboxes

To complete the remaining parts of the [Planning Worksheet \(see page 10\)](#), do the following:

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 \(see page 10\)](#).
2. 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 \(see page 10\)](#).

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 3: 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 \(see page 26\)](#), 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 13 on page 22](#), which illustrates the alternative to Map From Length 0 in anticipation of future changes.

2. Check your [Planning Worksheet \(see page 10\)](#) for the mailbox ID (extension) ranges of the new system. Review the examples that follow and fill out the [Dial Plan Mapping Worksheet \(see page 26\)](#), 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 10](#), 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 \(see page 10\)](#).

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 \(When Prefixes Replace Initial Mailbox Digits\) \(see page 24\)](#).

Remote Machine Name: Englew		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 10. 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 11](#)).

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 11. 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 12](#), 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 13](#). 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: Englew		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 12. 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 13](#), 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: Englew		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 13. Sample Dial Plan Map with Multiple Ranges (1 Map From Length)

Sample Dial Plan Mapping (Ranges That Require Different Prefixes)

In [Figure 14](#), 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: Englew		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 14. 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: Englew		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 cannot do this!! See Figure 15 instead.

Instead, you must break out every MAILBOX ID range so that the first two digits in each range are unique (see [Figure 15](#)). 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: Englew		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 16. 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 \(see page 26\)](#).
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 15](#), 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 15](#), 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 4: 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 to the Serenade 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.

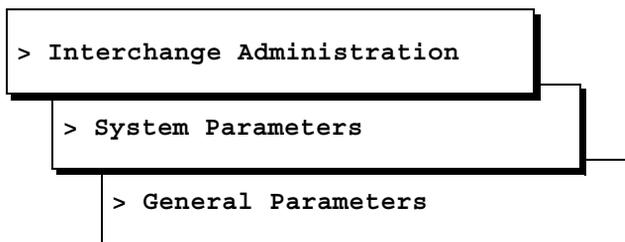
None

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 5: Check the Interchange Serial Number, If Any

Since Interchange needs an Octel Networking serial number to communicate with the Serenade system, you need to determine the serial number to make sure it matches the serial number you enter for Interchange in the Serenade. To check the Interchange serial number, use the following steps:

1. Start at the Interchange main menu and select



The system displays the General Parameters screen ([Figure 17](#)).

```
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 17. 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 Serenade when you identify the Interchange to Serenade. Also, this number, which must be between 80000 and 81000, has to be unique to any other Interchange systems in the Serenade network.

3. Press **F3** (Save).
4. Press **F6** (Cancel) to return to the System Parameters menu.

Task 6: Create an Interchange Profile on the New System

To add a Serenade system to your Interchange network, you must identify the Interchange system to the Serenade networking software. To Interchange to Serenade, you complete the following steps *on the Serenade system*:

1. [Add Interchange as a New Location on the Serenade System \(see page 31\)](#).
2. [Add a Numbering Plan for Interchange \(see page 39\)](#).

The key information you need is:

- The Interchange name, IP address, and serial number. The new system uses this information to send messages to Interchange.

In the example in the previous tasks, the name would be **central**, the phone number would be **148.1.77.77**, and the serial number would be **80003**. You get the IP address from the Interchange TCP/IP Administration window available from the Networking Administration menu.

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

In the example, the Interchange address length is **10** digits and equals the area code and 7-digit local phone number. You can find this parameter on the General Parameters screen.

Add Interchange as a New Location on the Serenade System

To add Interchange as a new location (network node) on the Serenade system, do the following:

1. At the dot prompt, type **a loc** and press **ENTER**.

The system displays Location Name instructions with the **ADD:** prompt.

```
.a loc
Enter new LOCATION NAME. (1-6 chars) Enter empty line when done.
ADD:
```

2. Type the name of Interchange (6 digits or less) and press **ENTER**. In the example, **Centra** is the name.

The system displays System instructions with the **ADD:** prompt.

```
.a loc
  Enter new LOCATION NAME. (1-6 chars)  Enter empty line when done.
ADD:Centra
  Does Centra have a SYSTEM? (Y/N, empty line = Y)
ADD:y
```

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

The system displays Protocol instructions with the **ADD:** prompt.

```
.a loc
  Enter new LOCATION NAME. (1-6 chars)  Enter empty line when done.
ADD:Centra
  Does Centra have a SYSTEM? (Y/N, empty line = Y)
ADD:y
  Enter the PROTOCOL to use with Centra: (1, 2, 3, 4, 5, empty line = 3)
ADD:
```

4. Type **5** and press **(ENTER)**.

The system displays Serial Number instructions with the **ADD:** prompt.

```
.a loc
  Enter new LOCATION NAME. (1-6 chars)  Enter empty line when done.
ADD:Centra
  Does Centra have a SYSTEM? (Y/N, empty line = Y)
ADD:y
  Enter the PROTOCOL to use with Centra: (1, 2, 3, 5, empty line = 3)
ADD:5
  Enter the OCTELNET SERIAL NUMBER for Centra
  (empty line = NONE)
ADD:
```

5. Type the Interchange serial number for Octel Digital Networking and press **(ENTER)**. This number is usually **80000** and must match the serial number entered on Interchange on the General Parameters screen (see [Task 5: Check the Interchange Serial Number, If Any \(see page 30\)](#)). In the example, the serial number is **80003**.

The system displays Sender's Name instructions with the **ADD:** prompt.

```
.a loc
  Enter new LOCATION NAME. (1-6 chars)  Enter empty line when done.
ADD:Centra
  Does Centra have a SYSTEM? (Y/N, empty line = Y)
ADD:y
  Enter the PROTOCOL to use with Centra: (1, 2, 3, 5, empty line = 3)
ADD:5
  Enter the OCTELNET SERIAL NUMBER for Centra
  (empty line = NONE)
ADD:80003
  Should the SENDER'S NAME be EMBEDDED in messages when sending
  to Centra? (Y/N, empty line = Y)
ADD:
```

6. Type **n** and press **(ENTER)**. If you typed **y**, message recipients in the Interchange network would hear the Serenade sender's name twice, since Interchange automatically includes the sender's name as well.

The system displays Route Name instructions with the **1 :** prompt.

```
.a loc
  Enter new LOCATION NAME. (1-6 chars)  Enter empty line when done.
ADD:Centra
  Does Centra have a SYSTEM? (Y/N, empty line = Y)
ADD:y
  Enter the PROTOCOL to use with Centra: (1, 2, 3, 5, empty line = 3)
ADD:5
  Enter the OCTELNET SERIAL NUMBER for Centra
  (empty line = NONE)
ADD:80003
  Should the SENDER'S NAME be EMBEDDED in messages when sending
  to Centra? (U/N, empty line = Y)
ADD:n
  Enter ROUTE NAMES for up to three ROUTE CHOICES to Centra.
1 :
```

7. Leave the field blank and press **(ENTER)**. The route is not necessary because the connection is digital.

The system displays Network Schedule instructions and the **ADD :** prompt.

```
.a loc
  Enter new LOCATION NAME. (1-6 chars)  Enter empty line when done.
ADD:Centra
  Does Centra have a SYSTEM? (Y/N, empty line = Y)
ADD:y
  Enter the PROTOCOL to use with Centra: (1, 2, 3, 5, empty line = 3)
ADD:5
  Enter the OCTELNET SERIAL NUMBER for Centra
  (empty line = NONE)
ADD:80003
  Should the SENDER'S NAME be EMBEDDED in messages when sending
  to Centra? (U/N, empty line = Y)
ADD:n
  Enter ROUTE NAMES for up to three ROUTE CHOICES to Centra.
1 :
  Enter the Network Schedule to be used for Centra
  (1-10 digits, N-NONE, empty line = NONE)
ADD:
```

8. Type **none** and press **(ENTER)** to have Serenade send messages to remote Interchange subscribers immediately after the senders send the messages. You can create a Network Schedule and assign it here, but generally the best practice is to send messages immediately.

The system displays Public Network Number instructions and the **ADD :** prompt.

```
.a loc
  Enter new LOCATION NAME. (1-6 chars)  Enter empty line when done.
ADD:Centra
  Does Centra have a SYSTEM? (Y/N, empty line = Y)
ADD:y
  Enter the PROTOCOL to use with Centra: (1, 2, 3, 5, empty line = 3)
ADD:5
  Enter the OCTELNET SERIAL NUMBER for Centra
  (empty line = NONE)
ADD:80003
  Should the SENDER'S NAME be EMBEDDED in messages when sending
  to Centra? (U/N, empty line = Y)
ADD:n
  Enter ROUTE NAMES for up to three ROUTE CHOICES to Centra.
1 :
  Enter the Network Schedule to be used for Centra
  (1-10 digits, N-NONE, empty line = NONE)
ADD:none
  Enter PUBLIC NETWORK NUMBER (PNN) to call Centra
  (May include: 0-9,*,#, D=DELAY, E=EXPECT DIAL TONE, or Cn.
  1-7 chars. empty line = NONE, N = NONE)
ADD:
```

9. Leave the field blank and press **ENTER**. Serenade will connect to Interchange by using the TCP/IP LAN connection.

The system displays Tie Network Number instructions and the **ADD:** prompt.

```
.a loc
  Enter new LOCATION NAME. (1-6 chars)  Enter empty line when done.
ADD:Centra
  Does Centra have a SYSTEM? (Y/N, empty line = Y)
ADD:y
  Enter the PROTOCOL to use with Centra: (1, 2, 3, 5, empty line = 3)
ADD:5
  Enter the OCTELNET SERIAL NUMBER for Centra
  (empty line = NONE)
ADD:80003
  Should the SENDER'S NAME be EMBEDDED in messages when sending
  to Centra? (U/N, empty line = Y)
ADD:n
  Enter ROUTE NAMES for up to three ROUTE CHOICES to Centra.
1 :
  Enter the Network Schedule to be used for Centra
  (1-10 digits, N-NONE, empty line = NONE)
ADD:none
  Enter PUBLIC NETWORK NUMBER (PNN) to call Centra
  (May include: 0-9,*,#, D=DELAY, E=EXPECT DIAL TONE, or Cn.
  1-7 chars. empty line = NONE, N = NONE)
ADD:
  Enter TIE NETWORK NUMBER (TNN) to call Centra
  (May include: 0-9,*,#, D=DELAY, E=EXPECT DIAL TONE, or Cn.
  1-7 chars. empty line = NONE, N = NONE)
ADD:
```

10. Leave this field blank and press **ENTER**.

The system displays Digital Network Access instructions and the **ADD:** prompt.

```
.a loc
  Enter new LOCATION NAME. (1-6 chars)  Enter empty line when done.
ADD:Centra
  Does Centra have a SYSTEM? (Y/N, empty line = Y)
ADD:y
  Enter the PROTOCOL to use with Centra: (1, 2, 3, 5, empty line = 3)
ADD:5
  Enter the OCTELNET SERIAL NUMBER for Centra
  (empty line = NONE)
ADD:80003
  Should the SENDER'S NAME be EMBEDDED in messages when sending
  to Centra? (U/N, empty line = Y)
ADD:n
  Enter ROUTE NAMES for up to three ROUTE CHOICES to Centra.
1 :
  Enter the Network Schedule to be used for Centra
  (1-10 digits, N-NONE, empty line = NONE)
ADD:none
  Enter PUBLIC NETWORK NUMBER (PNN) to call Centra
  (May include: 0-9,*,#, D=DELAY, E=EXPECT DIAL TONE, or Cn.
  1-7 chars. empty line = NONE, N = NONE)
ADD:
  Enter TIE NETWORK NUMBER (TNN) to call Centra
  (May include: 0-9,*,#, D=DELAY, E=EXPECT DIAL TONE, or Cn.
  1-7 chars. empty line = NONE, N = NONE)
ADD:
  Is Centra accessible over the DIGIAL NETWORK? (Y/N, empty line = N)
ADD:
```

11. Type **y** and press **ENTER**.

The system displays the message Digital Location Name instructions and the **ADD:** prompt.

```
.a loc
  Enter new LOCATION NAME. (1-6 chars)  Enter empty line when done.
ADD:Centra
  Does Centra have a SYSTEM? (Y/N, empty line = Y)
ADD:y
  Enter the PROTOCOL to use with Centra: (1, 2, 3, 5, empty line = 3)
ADD:5
  Enter the OCTELNET SERIAL NUMBER for Centra
  (empty line = NONE)
ADD:80003
  Should the SENDER'S NAME be EMBEDDED in messages when sending
  to Centra? (U/N, empty line = Y)
ADD:n
  Enter ROUTE NAMES for up to three ROUTE CHOICES to Centra.
1 :
  Enter the Network Schedule to be used for Centra
  (1-10 digits, N-NONE, empty line = NONE)
ADD:none
  Enter PUBLIC NETWORK NUMBER (PNN) to call Centra
  (May include: 0-9,*,#, D=DELAY, E=EXPECT DIAL TONE, or Cn.
  1-7 chars. empty line = NONE, N = NONE)
ADD:
  Enter TIE NETWORK NUMBER (TNN) to call Centra
  (May include: 0-9,*,#, D=DELAY, E=EXPECT DIAL TONE, or Cn.
  1-7 chars. empty line = NONE, N = NONE)
ADD:
  Is Centra accessible over the DIGIAL NETWORK? (Y/N, empty line = N)
ADD:y
  Enter the DIGITAL LOCATION NAME for PBXICG on the DIGITAL NETWORK
  (empty line = NONE)
ADD:
```

12. Leave this field blank and press **(ENTER)**.

The system displays the IP Address instructions and the **ADD:** prompt.

```
.a loc
  Enter new LOCATION NAME. (1-6 chars)  Enter empty line when done.
ADD:Centra
  Does Centra have a SYSTEM? (Y/N, empty line = Y)
ADD:y
  Enter the PROTOCOL to use with Centra: (1, 2, 3, 5, empty line = 3)
ADD:5
  Enter the OCTELNET SERIAL NUMBER for Centra
  (empty line = NONE)
ADD:80003
  Should the SENDER'S NAME be EMBEDDED in messages when sending
  to Centra? (U/N, empty line = Y)
ADD:n
  Enter ROUTE NAMES for up to three ROUTE CHOICES to Centra.
1 :
  Enter the Network Schedule to be used for Centra
  (1-10 digits, N-NONE, empty line = NONE)
ADD:none
  Enter PUBLIC NETWORK NUMBER (PNN) to call Centra
  (May include: 0-9,*,#, D=DELAY, E=EXPECT DIAL TONE, or Cn.
  1-7 chars. empty line = NONE, N = NONE)
ADD:
  Enter TIE NETWORK NUMBER (TNN) to call Centra
  (May include: 0-9,*,#, D=DELAY, E=EXPECT DIAL TONE, or Cn.
  1-7 chars. empty line = NONE, N = NONE)
ADD:
  Is Centra accessible over the DIGIAL NETWORK? (Y/N, empty line = N)
ADD:y
  Enter the DIGITAL LOCATION NAME for PBXICG on the DIGITAL NETWORK
  (empty line = NONE)
ADD:
  Enter the IP ADDRESS for PBXICG on the DIGITAL NETWORK
  (empty line = NONE)
ADD:
```

13. Type the IP address of Interchange and press **(ENTER)**. You get this address from the Interchange TCP/IP Administration window available from the Networking Administration menu.

```
.a loc
  Enter new LOCATION NAME. (1-6 chars)  Enter empty line when done.
ADD:Centra
  Does Centra have a SYSTEM? (Y/N, empty line = Y)
ADD:y
  Enter the PROTOCOL to use with Centra: (1, 2, 3, 5, empty line = 3)
ADD:5
  Enter the OCTELNET SERIAL NUMBER for Centra
  (empty line = NONE)
ADD:80003
  Should the SENDER'S NAME be EMBEDDED in messages when sending
  to Centra? (U/N, empty line = Y)
ADD:n
  Enter ROUTE NAMES for up to three ROUTE CHOICES to Centra.
  1 :INTCHG
  2 :
  Enter the Network Schedule to be used for Centra
  (1-10 digits, N-NONE, empty line = NONE)
ADD:none
  Enter PUBLIC NETWORK NUMBER (PNN) to call Centra
  (May include: 0-9,*,#, D=DELAY, E=EXPECT DIAL TONE, or Cn.
  1-7 chars. empty line = NONE, N = NONE)
ADD:9705551111
  Enter TIE NETWORK NUMBER (TNN) to call Centra
  (May include: 0-9,*,#, D=DELAY, E=EXPECT DIAL TONE, or Cn.
  1-7 chars. empty line = NONE, N = NONE)
ADD:
  Is Centra accessible over the DIGIAL NETWORK? (Y/N, empty line = N)
ADD:
  Enter the DIGITAL LOCATION NAME for PBXICG on the DIGITAL NETWORK
  (empty line = NONE)
ADD:
  Enter the IP ADDRESS for PBXICG on the DIGITAL NETWORK
  (empty line = NONE)
ADD:148.1.77.77
  Should NAMESEND be ENABLED to Centra ? (Y/N, empty line = N)
ADD:
```

- 14. Type **y** to enable NameSend to send names to Interchange. Press **ENTER**.
The system displays the High-Speed Digital Link prompt.

```
.a loc
  Enter new LOCATION NAME. (1-6 chars)  Enter empty line when done.
ADD:Centra
  Does Centra have a SYSTEM? (Y/N, empty line = Y)
ADD:y
  Enter the PROTOCOL to use with Centra: (1, 2, 3, 5, empty line = 3)
ADD:5
  Enter the OCTELNET SERIAL NUMBER for Centra
  (empty line = NONE)
ADD:80003
  Should the SENDER'S NAME be EMBEDDED in messages when sending
  to Centra? (U/N, empty line = Y)
ADD:n
  Enter ROUTE NAMES for up to three ROUTE CHOICES to Centra.
  1 :INTCHG
  2 :
  Enter the Network Schedule to be used for Centra
  (1-10 digits, N-NONE, empty line = NONE)
ADD:none
  Enter PUBLIC NETWORK NUMBER (PNN) to call Centra
  (May include: 0-9,*,#, D=DELAY, E=EXPECT DIAL TONE, or Cn.
  1-7 chars. empty line = NONE, N = NONE)
ADD:9705551111
  Enter TIE NETWORK NUMBER (TNN) to call Centra
  (May include: 0-9,*,#, D=DELAY, E=EXPECT DIAL TONE, or Cn.
  1-7 chars. empty line = NONE, N = NONE)
ADD:
  Is Centra accessible over the DIGIAL NETWORK? (Y/N, empty line = N)
ADD:
  Enter the DIGITAL LOCATION NAME for PBXICG on the DIGITAL NETWORK
  (empty line = NONE)
ADD:
  Enter the IP ADDRESS for PBXICG on the DIGITAL NETWORK
  (empty line = NONE)
ADD:148.1.77.77
  Should NAMESEND be ENABLED to Centra ? (Y/N, empty line = N)
ADD:
  Is there a HIGH SPEED DIGITAL LINK to Centra that will be kept
  CONNECTED AT ALL TIMES ? (Y/N, empty line = N)
ADD:
```

15. Type **n** and press **(ENTER)**. This is a LAN connection, not a high-speed link.

The system displays the message *location-name saved* and the **ADD:** prompt.

16. Press **(ENTER)** to return to the dot prompt.

Add a Numbering Plan for Interchange

The numbering plan defines addresses that Serenade uses to send messages to Interchange and the mailbox IDs that Serenade actually passes on to Interchange.

To define the Numbering Plan for Interchange, do the following:

1. At the dot prompt, type **l num** and press **(ENTER)**.

The system displays the **LST** prompt.

2. Leave the field blank and press **(ENTER)**.

The Numbering Plan Table ([Figure 18](#)) appears for Serenade and all other systems that are networked to Serenade. Displaying the table at this point is not necessary, but the displayed table creates a good reference for the addition of a numbering plan.

```
.l num
LST:
NETWORK          INITIAL          NETWORK          NUMBER          NUMBER OF
LOCATION           DIGITS           MAILBOX         OF DIGITS       DIGITS TO STRIP
NAME             EXPECTED         LENGTH          TO STRIP        FROM SELF
-----
SELF            303551          4               6               0
.
```

Figure 18. Numbering Plan Table

3. At the dot prompt, type **a num** and press **(ENTER)**.

The system displays the **ADD:** field.

4. Type the Interchange data for all the columns as a single character string, with commas interspersed, as illustrated in [Figure 19](#). Press **(ENTER)**.

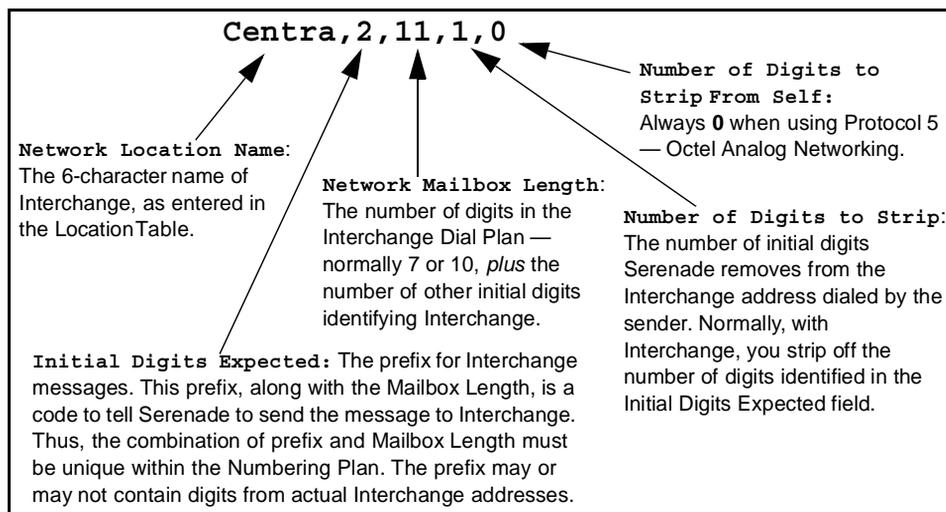


Figure 19. Add Numbering Plan Description

The system displays the **ADD:** prompt again.

Note in [Figure 19](#) that Serenade subscribers will send messages over Interchange by first dialing **2** to tell Serenade that the messages go to Interchange and then by dialing the 10-digit Interchange address.

Serenade then strips off the first digit **2**, as specified in the Number of Digits to Strip column. However, see [Creating Interchange Addresses That Do Not Need Steering Digits \(see page 42\)](#).

- 5. Press (ENTER) to redisplay the dot prompt.
- 6. At the dot prompt, type **l num** and press (ENTER).

The system displays the **LST** prompt.

- 7. Type Interchange name and press (ENTER).

The Numbering Plan Table ([Figure 20](#)) appears for Interchange.

.l num				
LST:				
NETWORK	INITIAL	NETWORK	NUMBER	NUMBER OF
LOCATION	DIGITS	MAILBOX	OF DIGITS	DIGITS TO STRIP
NAME	EXPECTED	LENGTH	TO STRIP	FROM SELF
-----	-----	-----	-----	-----
CENTRA	2	11	1	0
ADD:				

Figure 20. Sample Numbering Table for Interchange

- 8. Check that the data appears in the columns correctly and press (ENTER).
The system displays the dot prompt.

NOTE:
The initial digit or digits expected (**2** in the preceding example) that Serenade strips from addresses when sending messages to Interchange are sometimes called **steering digits**. Interchange must reattach these digits to the return addresses of remote subscribers who send messages to Serenade. In this way, Serenade knows that the remote subscribers are part of the Interchange network. See [Task 11: Administer Serenade Digital Sender Dial Plan \(If Appropriate\) \(see page 53\)](#).

- 9. At the dot prompt, type **e** and press (ENTER).
The system exits the update program.

```
.e
EXITING UPDATE.

WAIT... DONE.

SAVE configuration to a DISKETTE? ( Y/N , empty line = N ).
:xDn

WED 10/24/2001 09:33:12 FIRSTHEA ID:301749 S/N:301749 PBX:23

----- CONFIGURATION UPDATE COMPLETED -----
@
```

Figure 21. Exit Screen for Update Program

Creating Interchange Addresses That Do Not Need Steering Digits

It is possible to establish a numbering plan that does not strip off digits. In this way, the addresses that Serenade subscribers enter when sending messages to Interchange subscribers can be the Interchange addresses with *no* additional digits. In order for this plan to be possible, there can be no point-to-point systems networked to Serenade that use the same combination of initial digits and network mailbox length.

In the following example (Figure 22), all possible initial digits, 1 through 9, are listed, always a part of a 10-digit network mailbox length. As a result, Serenade will send any message with a 10-digit address, 1000000000 to 9999999999, to Interchange. To create such a plan with multiple entries for a location, you simply repeat Step 4 in [Add a Numbering Plan for Interchange](#) for each initial digit.

```
.l num
LST:
NETWORK LOCATION NAME
INITIAL DIGITS EXPECTED
NETWORK MAILBOX LENGTH
NUMBER OF DIGITS TO STRIP
NUMBER OF DIGITS FROM SELF
```

NETWORK LOCATION NAME	INITIAL DIGITS EXPECTED	NETWORK MAILBOX LENGTH	NUMBER OF DIGITS TO STRIP	NUMBER OF DIGITS FROM SELF
CENTRA	1	10	0	0
CENTRA	2	10	0	0
CENTRA	3	10	0	0
CENTRA	4	10	0	0
CENTRA	5	10	0	0
CENTRA	6	10	0	0
CENTRA	7	10	0	0
CENTRA	8	10	0	0
CENTRA	9	10	0	0

```
ADD:
```

Figure 22. Sample Numbering Table for Interchange (No Steering Digits)

Task 7: Test the LAN Connection to Interchange

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

1. At the @ prompt, type the ping command, **cmd slot_number ping Interchange_IPAddress**. Press **ENTER**. In the example, the Interchange IP address is **148.1.77.77** and the slot number of the LAN card is **12**.

The system pings Interchange and displays the results ([Figure 23](#)).

```
@cmd 12 ping 148.1.77.77
PING 148.1.77.77: 56 data bytes

----148.1.77.77 PING Statistics----
1 packets transmitted, 1 packets received, 0% packet loss
round-trip (ms) min/avg/max = 110/110/110
@
```

Figure 23. Ping Results

2. Check that packets were transmitted and that there is 0% packet loss.

Task 8: Identify the New System to the Interchange System

1. Start at the Interchange main menu and select

```
> Networking Administration
> Remote Machine Administration
> Octel Machine Administration
```

The system displays the Octel Machine Administration screen ([Figure 24](#)).

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

Figure 24. Serenade Digital Machine Administration Screen

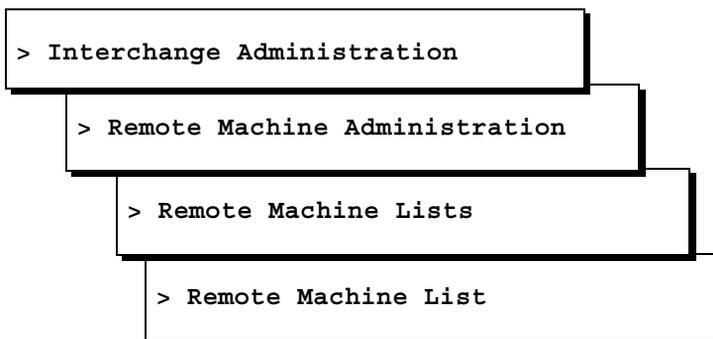
2. In the **Machine Name** field, enter a name for the new system. Check with the administrator of the new system for the exact name. In the example, the name **Englew** is the 6-digit Serenade name that represents the location of the system.

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

Use **F2** (Choices) to view the existing Serenade 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:



3. In the **Connection Type** field, enter **DIGITAL**.
4. 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 1: Ensure That the New System and Interchange Are Enabled for Serenade Digital Networking \(see page 3\)](#).

In the example, the dial string is **147.5.45.23**.

5. In the **Machine Type** field, type **SERENADE 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 the key, the system adds the information and returns you to the **Machine Name** field. You see the following message on your screen:

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

Task 9: 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 \(see page 26\)](#) 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 25](#)).

Remote Machine Parameters	
Remote Machine Name: Englew	Machine Type: SERENADE DIGITAL
AVAYA Interchange? n	Mailbox ID Length: 4
Failed Msg. Notification Priority? n	Msg ID? n
Send Message for Warning? y	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 25. Remote Machine Parameters Screen

2. In the **Remote Machine Name** field, type the name of the new system you added in [Task 8: Identify the New System to the Interchange System \(see page 43\)](#) 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 **Englew**.

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

3. In the **Avaya** or **Intuity Interchange?** field, leave the default **n** (no). The new remote system is not an Interchange.
4. In the **Mailbox ID Length** field, type the length of the mailbox IDs of the new system. If a sample mailbox ID (or extension) is **2345**, the length is **4**.

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

5. Leave the defaults in the following fields:
 - **Default Language: us-eng**
There are no other languages currently supported.
 - **Failed Msg. Notification Priority? n**
y means that a subscriber on this system who sends a message to a subscriber 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

y indicates that the **original** message is sent back to a subscriber after he or she has sent a message from the Serenade 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.

- **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 10: Map the New System's Dial Plan for Interchange \(see page 50\)](#).*

*In the example ([Figure 25](#)), 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, bulletin boards, 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.

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 26](#)). It contains display-only defaults for the **Remote Machine Name**.

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

Figure 26. Serenade Digital Machine Profile Screen

9. In the **Default Community ID** field, leave the default of **1**.
Additional communities can exist on AUDIX systems in the network. If you want to give permissions to subscribers on this system for specific AUDIX community IDs, use the Subscriber Parameter Administration screen.

10. In the **Subscriber Updates Type** field, 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 Serenade 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 Serenade system. Likewise, each time a remote subscriber sends a message to a subscriber on the Serenade 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 Serenade 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 Serenade 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 30](#)), 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 Serenade'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 capability helps reduce total time on, and cost of, network communications between systems.
15. In the **Dynamic Sub Expiration Days** field, leave the default **90**.

This value 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.

16. In the **System Mailbox ID** field, type the mailbox ID of the new system's system mailbox. The system mailbox allows the Serenade system to accept messages in circumstances under which it normally would not. For example, the system mailbox allows the Serenade system to accept a message addressed to more than 10 subscribers.

You get the number when you perform the task, [Get the System Mailbox Number \(see page 16\)](#). Check your Planning Worksheet. If you do not have the mailbox ID, leave the default **0000**.

17. Press **F3** (Save).

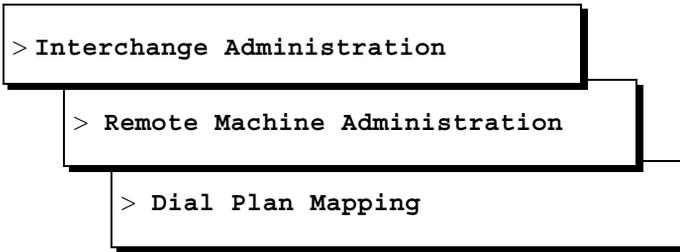
Task 10: Map the New System's Dial Plan for Interchange

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 27](#)).

Dial Plan Mapping			
Remote Machine Name: Englew_____		Mailbox ID Length: 4	
		Map From Length: 2	
MAILBOX ID:		NETWORK ADDRESS DIAL PLAN MAPPING:	
Start	End	Map From	Map To
2000	2999	20_____	30355520__
3000	3999	21_____	30355521__
5000	5499	22_____	30355522__
5500	5999	23_____	30355523__
		24_____	30355524__
		25_____	30355525__
		26_____	30355526__
		27_____	30355527__
		28_____	30355528__
		29_____	30355529__

Figure 27. 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 13 on page 22](#), 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 15 on page 24](#) 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 11: Administer Serenade Digital Sender Dial Plan (If Appropriate)

⇒ NOTE:

This task is normally not required, and therefore, is rarely used.

If the Numbering Plan for Interchange (see [Add a Numbering Plan for Interchange \(see page 39\)](#)) includes extra digits that Serenade uses to identify Interchange but that Serenade then strips off, you need to identify those digits to Interchange in the Serenade Digital Sender Dial Plan. Interchange adds these digits to addresses of subscribers who send messages to Serenade. In this way, Serenade can identify that the message came through Interchange and allow proper message confirmations and returns.

⇒ NOTE:

A name for these extra digits is “steering digits.”

To administer the Serenade Digital Sender Dial Plan, use the following steps:

1. At the Remote Machine Administration menu, select

```
>Serenade Digital Sender Dial Plan
```

The system displays the Serenade Digital Sender Dial Plan screen ([Figure 29](#)).

Serenade Digital Sender Dial Plan

Remote Machine Name: Englew

Sender's Network

Address Digits	Insert
	2

Figure 28. Serenade Digital Sender Dial Plan Screen (Same Steering Digits)

Serenade Digital Sender Dial Plan

Remote Machine Name: Englew

Sender's Network

Address Digits	Insert
970556	2
303555	3
212555	4
646555	5

Figure 29. Serenade Digital Sender Dial Plan Screen (Different Steering Digits)

2. Type the name of the new system and press **(ENTER)**.

The system displays the current dial plan mapping information, if this information exists, for the system.

3. Complete the first **Sender's Network Address Digits** field in one of the following ways:
 - If the digit or digits that Interchange must insert are identical for all addresses and nodes in the Interchange network (see [Figure 28](#)), leave the field blank.

- If the digits Interchange must insert are not identical for all addresses and nodes, type the initial digits of the addresses on a remote system in the Interchange network. Type enough digits so that the address is unique to the remote system but will include many or all subscribers on that system.

In the example ([Figure 29](#)), **970556** is the area code and local exchange prefix for a remote system in Fort Collins. This set of initial address digits would be unique in the example Interchange network.

4. In the **Insert** field, type the initial digit or digits (steering digits) that identify Interchange to Serenade. Interchange adds these digits to the address of any sender of a message to the Serenade whose address begins with the associated address digits.

In the example ([Figure 29](#)), Interchange adds the digit **2** to the beginning of any sender's address that starts with **970556**. In the example ([Figure 28](#)), Interchange also adds the digit **2** to all addresses for all remote nodes.

5. If the digits Interchange must insert are not identical for all addresses and nodes, repeat [Step 3](#) and [Step 3](#) for each remote system whose subscribers will send messages to the new Interchange.

If the digits Interchange must insert are identical for all addresses, go to [Step 6](#).

6. Press **F3** (Save).
7. Press **F6** (Cancel) to exit the screen and return to the Remote Machine Administration menu.

Task 12: Administer Directory Views

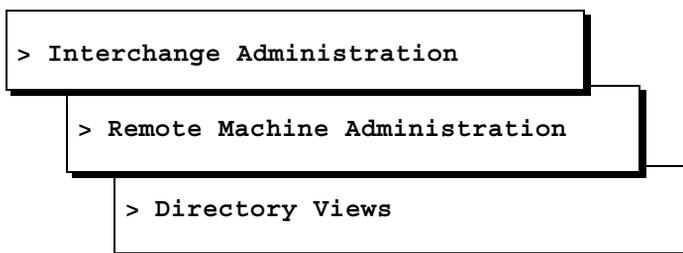
The Directory View screen allows you to define, for the new system, the other remote systems for which Interchange will provide updates to the new system. You can specify a range of mailbox IDs from which to accept update information.

NOTE:

If you selected **full** as the Subscriber Update Type on the Machine Profile screen ([Figure 26 on page 48](#)), 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



The system displays the Directory View screen ([Figure 30](#)).

Directory View			
Machine Name: <u>Englew</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 30. Directory View Screen

2. 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 26 on page 48](#)), Interchange will display all remote systems in the Interchange network.

3. Press (F3) (Continue).
4. 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.

5. 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 of **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 to 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. On the Directory View screen, press **F7** (Options).

The system displays the Options menu ([Figure 31](#)).

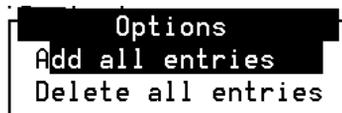


Figure 31. Options Menu

2. Select **Add all entries**.

The system displays the Confirm window ([Figure 32](#)).

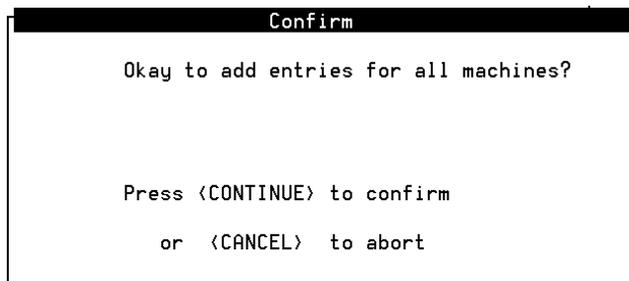


Figure 32. Confirm Window

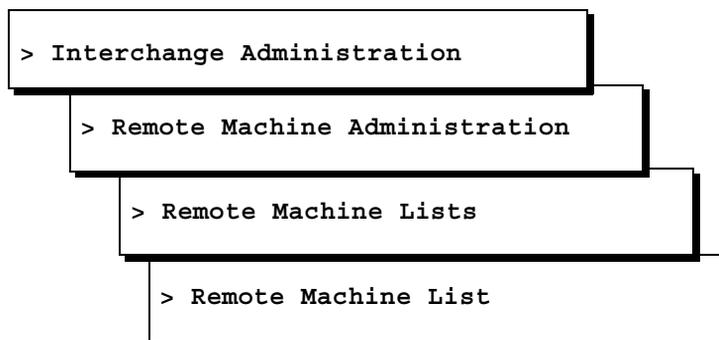
3. Press **F3** (Continue) to add all machines or **F6** (Cancel) to return to the Directory View screen.
4. Press **F6** (Cancel) until you return to the Avaya Interchange main menu.

Task 13: 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



The system displays the Remote Machines List ([Figure 33](#)).

Remote Machine List			
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
A8	TCP/IP		1
Englew	SERENADE TCP/IP		147

Figure 33. 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 **SERENADE 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 34](#)).

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		
Englew	SERENADE DIGI	2000	2999	20	30355520
Englew	SERENADE DIGI	3000	3999	21	30355521

Figure 34. 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 14: Test LAN Connectivity

1. Start at the Interchange main menu select

```
> Customer/Services Administration
```

```
> Diagnostics
```

```
> Networking Diagnostics
```

The system displays the Networking Diagnostics window ([Figure 35](#)).

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 35. Networking Diagnostics Window

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

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

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

Figure 36. Networking Diagnostics Menu

4. Select

> Remote Connection Test

The system displays the Remote Connection Test window ([Figure 37](#)).

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

Figure 37. 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 38](#)).

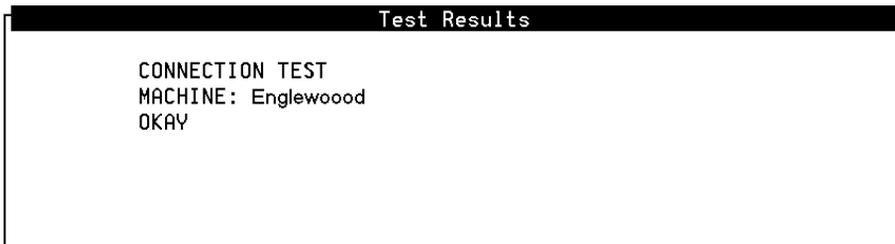


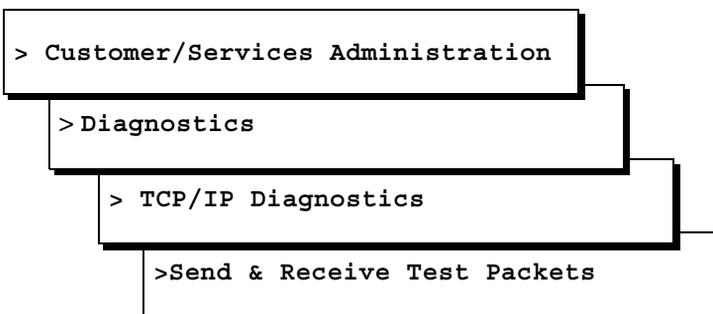
Figure 38. Test Results Window for a Remote Connection Test

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 36](#)).
8. Press **(F6)** (Cancel) to exit the screen and return to the Networking Diagnostics window ([Figure 35](#)).

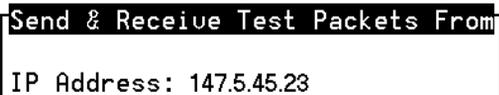
Testing the TCP/IP Software

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

1. Start at the Interchange main menu and select



The system displays the Send & Receive Test Packets From window ([Figure 39](#)).



Send & Receive Test Packets From
IP Address: 147.5.45.23

Figure 39. Send & Receive Test Packets Window

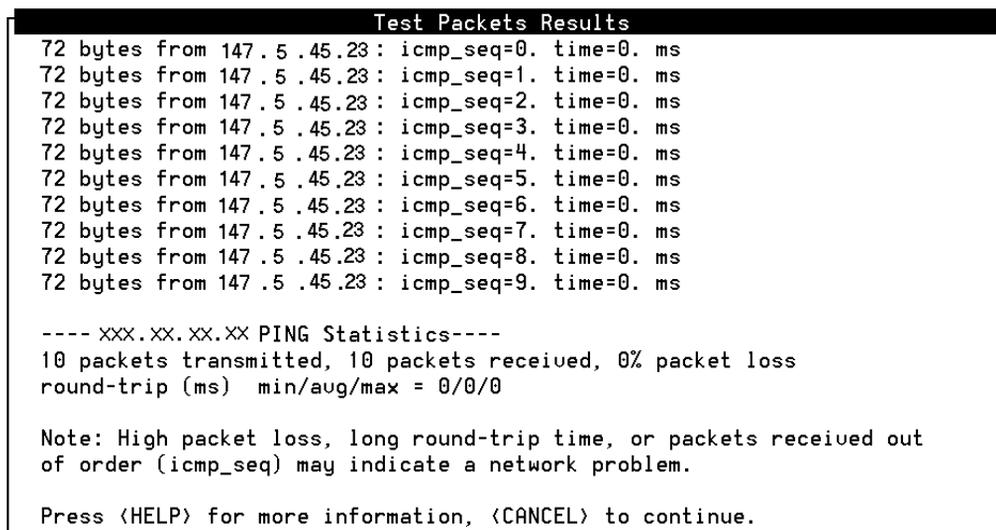
2. Enter the Internet Protocol (IP) address of the new system.

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 40). This screen shows the results of sending 10 test packets from the Interchange system to the new system.



```
Test Packets Results
72 bytes from 147.5.45.23 : icmp_seq=0. time=0. ms
72 bytes from 147.5.45.23 : icmp_seq=1. time=0. ms
72 bytes from 147.5.45.23 : icmp_seq=2. time=0. ms
72 bytes from 147.5.45.23 : icmp_seq=3. time=0. ms
72 bytes from 147.5.45.23 : icmp_seq=4. time=0. ms
72 bytes from 147.5.45.23 : icmp_seq=5. time=0. ms
72 bytes from 147.5.45.23 : icmp_seq=6. time=0. ms
72 bytes from 147.5.45.23 : icmp_seq=7. time=0. ms
72 bytes from 147.5.45.23 : icmp_seq=8. time=0. ms
72 bytes from 147.5.45.23 : icmp_seq=9. time=0. ms

---- xxx.xx.xx.xx PING Statistics----
10 packets transmitted, 10 packets received, 0% packet loss
round-trip (ms)  min/avg/max = 0/0/0

Note: High packet loss, long round-trip time, or packets received out
of order (icmp_seq) may indicate a network problem.

Press <HELP> for more information, <CANCEL> to continue.
```

Figure 40. 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 15: 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 remote update, do the following:

1. At the @ prompt, type **namesend** and press **(ENTER)**.

The system displays the NameSend Option menu.

```
@namesend
Q - QUEUE
M - MAILBOX
S - STATUS
SELECT DESIRED OPTION (? = HELP, EMPTY LINE = EXIT) .
:m
```

2. Type **m** (for Mailbox) and press **(ENTER)**.

The system displays the Mailbox Options menu.

```
@namesend
Q - QUEUE
M - MAILBOX
S - STATUS
SELECT DESIRED OPTION (? = HELP, EMPTY LINE = EXIT) .
:m
L - LIST
E - ENABLE
D - DISABLE
SELECT DESIRED MAILBOX OPTION (? = HELP, EMPTY LINE = EXIT) .
:e
```

3. Type **e** (for Enable) and press **(ENTER)**.

The system display the mailbox range prompt.

```
@namesend

Q - QUEUE
M - MAILBOX
S - STATUS
SELECT DESIRED OPTION (? = HELP, EMPTY LINE = EXIT) .
:m

L - LIST
E - ENABLE
D - DISABLE
SELECT DESIRED MAILBOX OPTION (? = HELP, EMPTY LINE = EXIT) .
:e
Enter mailbox or range of mailboxes (EMPTY LINE = ALL) .
:
```

4. Type the range of extensions for which you want to send names to Interchange, and press **ENTER**. In the example, the range is **2000** to **5999**.

The system displays the Verbose prompt.

```
@namesend

Q - QUEUE
M - MAILBOX
S - STATUS
SELECT DESIRED OPTION (? = HELP, EMPTY LINE = EXIT) .
:m

L - LIST
E - ENABLE
D - DISABLE
SELECT DESIRED MAILBOX OPTION (? = HELP, EMPTY LINE = EXIT) .
:e
Enter mailbox or range of mailboxes (EMPTY LINE = ALL) .
:2000-5999
Enter V for Verbose Q for Quiet (EMPTY LINE = FAILURE REPORTING ONLY) .
:
```

5. Type **v** (for Verbose) and press **ENTER**.

The system begins enabling mailboxes for NameSend. When complete, the system displays the message **Done** and the **@** prompt.

```
@namesend

Q - QUEUE
M - MAILBOX
S - STATUS
SELECT DESIRED OPTION (? = HELP, EMPTY LINE = EXIT).
:m

L - LIST
E - ENABLE
D - DISABLE
SELECT DESIRED MAILBOX OPTION (? = HELP, EMPTY LINE = EXIT).
:e
Enter mailbox or range of mailboxes (EMPTY LINE = ALL).
:2000-5999
Enter V for Verbose Q for Quiet (EMPTY LINE = FAILURE REPORTING ONLY).
:v
  ENABLING NAMESEND STATUS...
MAILBOX          NAMESEND STATUS
-----
2000              ENABLED
2002              ENABLED
2009              ENABLED
.                 .
.                 .
.                 .
5926              ENABLED
5931              ENABLED

DONE.

@
```

6. At the @ prompt, type **namesend** and press **ENTER**.

The system displays the NameSend Options menu.

```
@namesend

Q - QUEUE
M - MAILBOX
S - STATUS
SELECT DESIRED OPTION (? = HELP, EMPTY LINE = EXIT).
:q
```

7. Type **q** (for Queue) and press **ENTER**.

The system displays the Queue Options menu.

```
@namesend
```

```
Q - QUEUE  
M - MAILBOX  
S - STATUS  
SELECT DESIRED OPTION (? = HELP, EMPTY LINE = EXIT) .  
:q  
  
L - LIST  
A - ADD  
D - DELETE  
SELECT DESIRED QUEUE OPTION (? = HELP, EMPTY LINE = EXIT) .  
:
```

8. Type **a** (for Add) and press **ENTER**.

The system displays the Destination prompt.

```
@namesend
```

```
Q - QUEUE  
M - MAILBOX  
S - STATUS  
SELECT DESIRED OPTION (? = HELP, EMPTY LINE = EXIT) .  
:q  
  
L - LIST  
A - ADD  
D - DELETE  
SELECT DESIRED QUEUE OPTION (? = HELP, EMPTY LINE = EXIT) .  
:a  
Enter destination location name (EMPTY LINE = ALL) .  
:
```

9. Type the name of the Interchange system and press **ENTER**. In the example, the name is **Centra**.

The system displays the mailbox range prompt.

```
L - LIST  
A - ADD  
D - DELETE  
SELECT DESIRED QUEUE OPTION (? = HELP, EMPTY LINE = EXIT) .  
:a  
Enter destination location name (EMPTY LINE = ALL) .  
:centra  
Enter mailbox or range of mailboxes to add (EMPTY LINE = ALL) .  
:
```

10. Type the range of mailboxes whose subscriber names will go into the Interchange database. Then, press **ENTER**. In the example, the range is **2000 to 5999**.

The system displays the Verbose prompt.

```
:q
L - LIST
A - ADD
D - DELETE
SELECT DESIRED QUEUE OPTION (? = HELP, EMPTY LINE = EXIT).
:a
Enter destination location name (EMPTY LINE = ALL).
:centra
Enter mailbox or range of mailboxes to add (EMPTY LINE = ALL).
:2000-5999
Enter V for Verbose Q for Quiet (EMPTY LINE = FAILURE REPORTING ONLY).
:
```

11. Type **v** (for Verbose) and press **ENTER**.

The system displays the Confirmation prompt.

```
:q
L - LIST
A - ADD
D - DELETE
SELECT DESIRED QUEUE OPTION (? = HELP, EMPTY LINE = EXIT).
:a
Enter destination location name (EMPTY LINE = ALL).
:centra
Enter mailbox or range of mailboxes to add (EMPTY LINE = ALL).
:2000-5999
Enter V for Verbose Q for Quiet (EMPTY LINE = FAILURE REPORTING ONLY).
:v
ADD MAILBOX RANGE 1000-8999 TO LOCATION PBXICG. Are you sure (Y/N)?
:
```

12. Type **y** and press **ENTER**.

The system displays the names that Serenade puts into queue to send to Interchange. Serenade actually sends the names to Interchange based on the NameSend delivery mode (System Parameter 276), normally mode 1 — immediate.

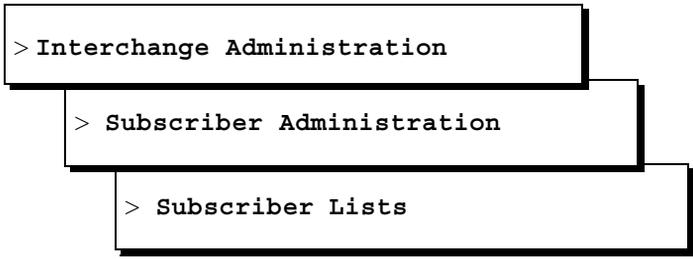
```
:q
L - LIST
A - ADD
D - DELETE
SELECT DESIRED QUEUE OPTION (? = HELP, EMPTY LINE = EXIT).
:a
Enter destination location name (EMPTY LINE = ALL).
:centra
Enter mailbox or range of mailboxes to add (EMPTY LINE = ALL).
:2000-5999
Enter V for Verbose Q for Quiet (EMPTY LINE = FAILURE REPORTING ONLY).
:v
ADD MAILBOX RANGE 1000-8999 TO LOCATION PBXICG. Are you sure (Y/N)?
:y

  ADDING TO NAMES QUEUE...
NAME                MAILBOX          DEST   QUEUED   STATUS
-----
                2000                ---   ---     NO NAME
                2002                ---   ---     NO NAME
.
.
.
HILSADONN,MAURIE   5853                CENTRA 10/24/01 SUCCESS
FELSON L           5855                CENTRA 10/24/01 SUCCESS
SOOK T             5856                CENTRA 10/24/01 SUCCESS
DONE
@
```

Task 16: 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 41](#)).



Figure 41. 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 verify that it matches the number of subscribers administered on the Serenade system. If you ran a demand remote update, also check to see that voiced names appear for subscribers.
4. Press **F6** (Cancel) to return to the Interchange Administration menu.

Task 17: Test the Connection

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

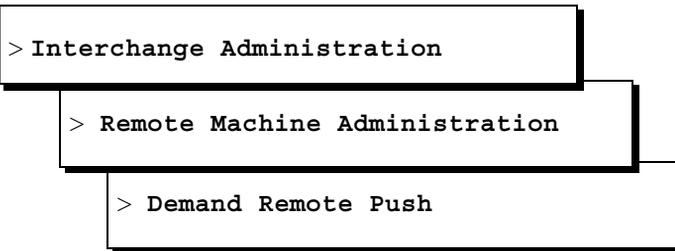
1. Log in to a voice mailbox on a *different* messaging system in the Interchange network.
2. Create a test message (for example, "This is a test message from Bob. Please message me back.").
3. Address and send the message to the test mailbox on the new messaging system. The address includes the whole Interchange network address, which includes the Map To digits, as defined in [Task 10: Map the New System's Dial Plan for Interchange \(see page 50\)](#), 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 \(see page 10\)](#).
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 18 (Optional): Manually Update the Serenade 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 Serenade system by using the following steps.

To perform a demand remote push, do the following:

1. Start at the Interchange main menu and select



The system displays the Demand Remote Push screen ([Figure 42](#)).

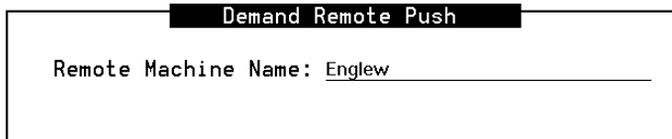


Figure 42. Demand Remote Push Screen

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 43](#)).

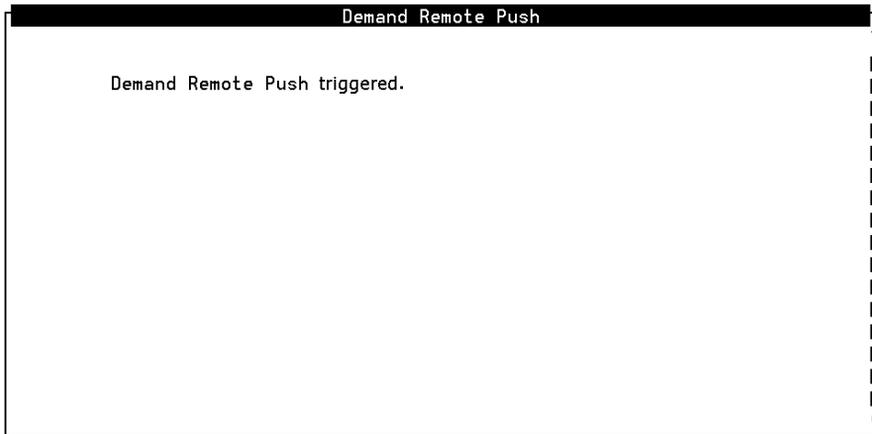


Figure 43. Demand Remote Push Screen

Interchange will now update the Serenade 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 19: 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 74) (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 18 (Optional): Manually Update the Serenade System (see page 71) . 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.
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, complete for that remote system the same steps as in Manually Update an Intuity AUDIX System(see page 74) (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 18 (Optional): Manually Update the Serenade System(see page 71) . 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 18 \(Optional\): Manually Update the Serenade System \(see page 71\)](#) 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

```
>AUDIX Administration
```

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 for 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.