AT&T

Intuity Message Manager Installation, Administration, and Diagnostics for Intuity Systems

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About This Document

Purpose

Intuity Message Manager Installation, Administration, and Diagnostics for Intuity Systems describes how an Intuity™ platform is set up with a Local Area Network (LAN) and client personal computers (PCs) to allow the Intuity™ Message Manager (IMM) application to work on the system.

Intended Audiences

This document is intended for system administrators, on-site technicians, and remote services personnel supporting the Intuity system and IMM. It is assumed that the primary readers of this book are familiar with basic system administration and troubleshooting techniques. They will work with the customer's LAN administrator who is responsible for setting up the LAN and making connections between the Intuity platform and the IMM users' PCs.

Related Resources

The following documents provide information relating to the information in this document.

- *Intuity MAP/5 Hardware Installation*, 585-310-146

- *Intuity MAP/40 Hardware Installation*, 585-310-138

- *Intuity MAP/100 Hardware Installation*, 585-310-139

- *Intuity Software Installation*, 585-310-140

- *Intuity Platform Administration and Maintenance*, 585-310-534

- *Intuity New System Planning*, 585-310-603

- *Intuity System Description*, 585-310-211

- *Intuity Message Manager User's Guide*, 585-310-725

The *Intuity Documentation Guide*, 585-310-540, describes all the books included in the Intuity document set.

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Overview and Planning

1

Intuity™ Message Manager (IMM) allows an AUDIX subscriber to use a personal computer (PC) to access and manipulate information in his or her AUDIX mailbox. Access is gained over a Local Area Network (LAN). IMM employs a standard Microsoft Windows interface, allowing use of icons, pulldown menus, a toolbar, and other Windows elements.

IMM requires three distinct components to operate:

- AUDIX server software—Purchasable with the Intuity AUDIX System as an IMM Right-to-Use feature package

- IMM client software diskettes—Separately purchasable and installed either on each subscriber's PC or on a LAN server

- LAN—Wholly owned and maintained by the customer. It must meet certain requirements for IMM to work.

IMM Feature Capabilities

IMM provides many message-processing capabilities, which interact with other Intuity AUDIX features as follows:

- *Address-by-Name*: Subscribers can use name addressing when using IMM.

- *Delivery Scheduling*: Subscribers can schedule delivery of messages with IMM.

- *Directory*: Subscribers can access the AUDIX directory using IMM.

- *Exit AUDIX*: Subscribers can exit the AUDIX system from IMM if IMM was used to log into the AUDIX system.

- *Mailing List*: Subscribers can set up their mailing lists using IMM.

- *Multilingual*: Subscribers can set up their Multilingual greetings using IMM.

- *Multiple Personal Greetings*: Subscribers can set up their Multiple Personal Greetings administration using IMM.

- *Outcalling*: Subscribers can set up Outcalling administration using IMM. Also, the IMM audio interface uses the Outcalling feature to complete a call to a subscriber's telephone. The number of Outcalling ports may need to be increased to accommodate IMM.

- *Voice Mail*: Subscribers can record and address voice mail messages with IMM.

- *Voice Mailbox:* Subscribers can view up to 16 message headers on their IMM screen and play selected messages. They also can reply to and forward messages.

IMM Feature Operation

The IMM feature operates under the following limits:

Table 1-1.   IMM Use on an Intuity System

LAN Connections to Intuity AUDIX	Limit	User Activities During Sessions
Administered Subscribers Those with IMM software loaded on their PCs and administered to use Intuity AUDIX	Available PCs	None
TCP/IP Sessions When administered subscribers are connected to the system, that is, that time when an IMM icon shows on the subscriber's Windows screen or the subscriber is logged in	0 to 500	Subscribers receive notification of new messages arriving in their AUDIX mailbox or are involved in a login session
Login Sessions That time when administered subscribers are logged into Intuity AUDIX and accessing and manipulating the IMM screens	0 to 32	—Message Creation —Personal Greeting Administration —Notification Administration —List Administration —Directory Access —Forward Message —Replay to Sender —Call Sender —Empty Wastebasket —Message movement between folders —Server data viewing and administration —Refresh message header contents
Audio Sessions That time when IMM requires a voice port	0 to 16 ports	—Message Playback —Recording and Playback of Personal Greetings —Message Creation —Call Sender —Play/record name —Originate call via IMM

Intuity AUDIX Server Requirements

When a client purchases IMM, the Intuity MAP/5, MAP/40, or MAP/100 platform is required to have a LAN interface card. This card provides Transmission Control Protocol/Internet Protocol (TCP/IP) server connectivity into the LAN.

TCP/IP is a commonly-used set of protocols which allows a process of one machine to send data to a process on another machine over a LAN. Using IEEE 802.3 network standards, TCP/IP supports multiple operating systems and machine architectures.

Figure 1-1 shows an SMC Elite 16C Ultra Ethernet card which is used for the LAN interface. Included with the card in the shipping box is the following:

- *EtherCard Elite Ultra Adapters User Guide*
- SMC Ethernet STREAMS Device Driver Package
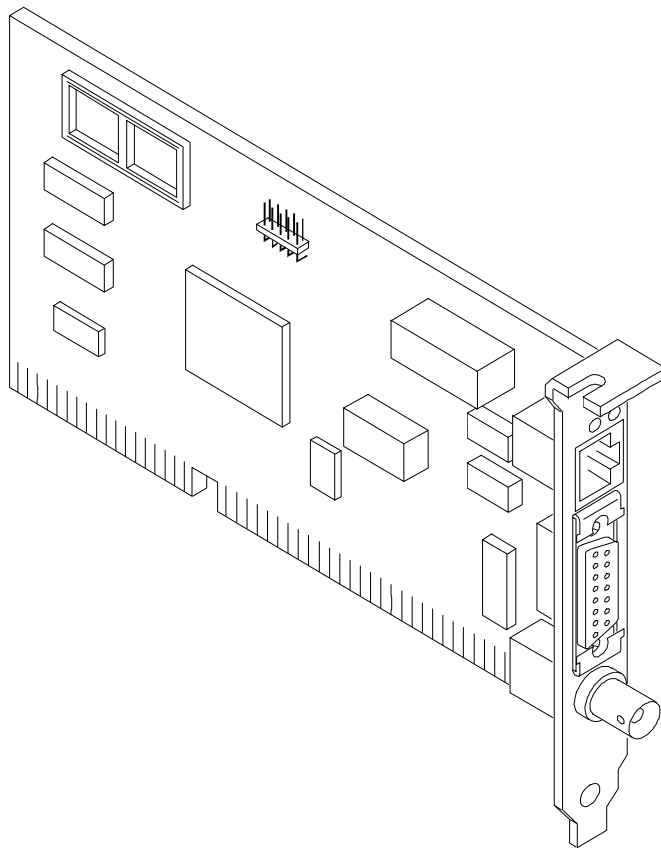
Figure 1-1.   The Ethernet LAN Interface Card

Only one (1) card can be installed in a MAP/5, MAP/40, or MAP/100 platform. The required slot positions are:

■ MAP/5—Slot 2 (The second slot is obstructed by SIMM modules. Only a half-length card can fit into this slot. The LAN interface card is half-length.

■ MAP/40—Highest available slot reserved for optional feature cards. These slots include slots 1 through 7, or slot 11.

■ MAP/100—Slot 15

The LAN card requires one jumper, connected to W1. The default setting is **1**, which sets the card for a "soft" configuration. Figure 1-2 illustrates the placement of the jumper on W1.
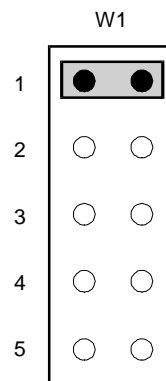
Figure 1-2.   LAN Card Software Programmable Jumper Setting

PC Requirements

A client PC requires the following minimum hardware and software to accommodate IMM.

- A 386SX-25 MHZ with four Mbytes of random access memory and 2½ Mbytes of available disk storage (a PC with a 486 or higher processor is strongly recommended)

- A VGA monitor (color or monochrome)

- A mouse that is supported by Microsoft Windows (optional, but strongly recommended)

- Microsoft Windows version 3.1 or higher, or Windows for Work Groups 3.11 or higher

- Microsoft MS-DOS version 5.0 or higher

- WINSOCK.DLL version 1.1 access to TCP/IP protocol, provided by either:

    — A TCP/IP protocol stack in the PC

    — A Netware Loadable Module (NLM) located in the LAN server, accessing each PC whenever a session is established[*]

LAN Requirements

PC connectivity to the AUDIX server can be provided by:

- Twisted-pair wiring, either:

    — 10BaseT

    — without link integrity (See Figure 1-3)

- RG-58 50-ohm thinwire coaxial cabling (10Base2 BNC) (See Figure 1-4)

- RG-8 or RG-11 50-ohm thickwire coaxial cabling (10Base5 using an Auxiliary Unit Interface [AUI]. The AUI is also called a transceiver or patch cable.) (See Figure 1-5)

As shown in these figures, AT&T is responsible for the installation and upkeep of equipment up to the demarcation point. The customer is responsible for the LAN including the file server and other associated equipment, and the PCs.

---

[*] The Network Loadable Module can be used in an approved *Novell* network operating system.

MAP/5
Intuity Messaging System

Telephone
Punch-down Block

104 Connecting
Block

Demarcation on
Wall Field

Ethernet Card

10BaseT
Concentrator (Hub)

D8W
Wall Cord

RJ-45
Connection

IMM User PC

Twisted-
Pair Cables

IMM User PC

IMM LAN Connection
Using Unshielded Twisted-Pair

—RJ-45 connectors use four-pair
unshielded twisted-pair (UTP) cable

—Maximum cable length is 100 meters

—Each hub is a full 802.3 multiport repeater

—10BaseT or twisted pair without link integrity
set during administration

File Server

Figure 1-3. LAN Using Unshielded Twisted-Pair (UTP) Cable

50-ohm
BNC
Terminator

MAP/40
Intuity Messaging
System

IMM User PC

File
Server

BNC
T-Connector

Ethernet Card

◄─Demarcation

RG-58 Thin Coaxial
Cable

IMM LAN Connection Using 10Base2

—Thin Ethernet cable can be used in segments
of between .5 and 185 meters long

—A cable segment usually is made up of several
smaller lengths of cable joined by connectors

—Each segment can have a maximum of 30
computers connected to it

—Terminators must be connected to open ends of
a T-connector

IMM User PC

Figure 1-4.   **LAN Using Thin Coaxial Cable**

Ethernet Card

Demarcation

Transceiver Drop Cable

Transceiver Cable

IMM User PC

LAN Server

IMM User PC

(Transceiver)

N-Series Terminator

MAP/100
Intuity Messaging System

IMM LAN Connection Using 10Base2 Thick Coaxial

—Transceivers usually located inside office walls

—Maximum length for a transceiver cable is 50 meters

—Maximum segment length for thick coaxial cable is 500 meters

—Maximum number of transceivers for a cable segment is 100

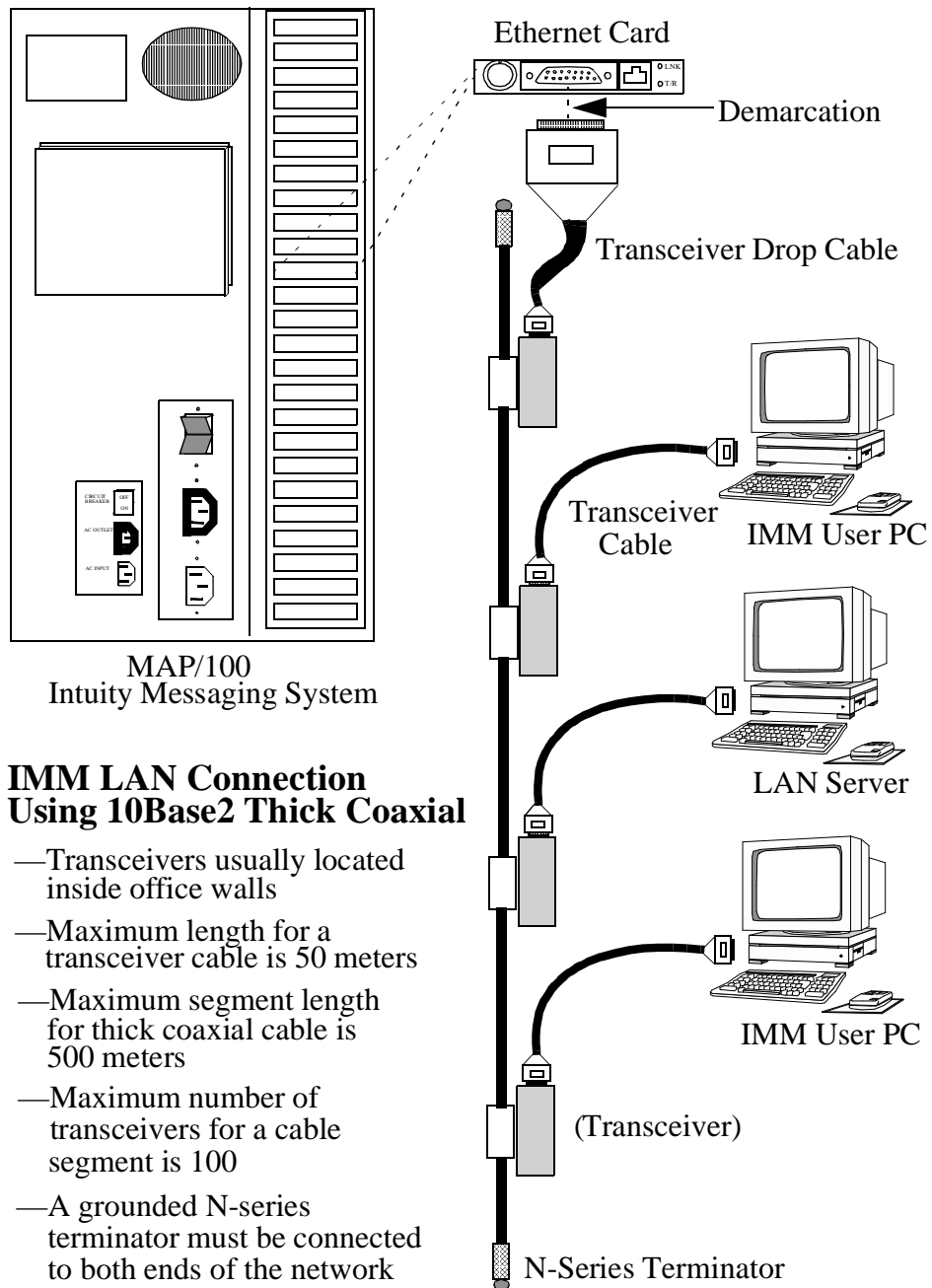—A grounded N-series terminator must be connected to both ends of the network

Figure 1-5.   LAN Using Thick Coaxial Cable

Planning for Installation

The following worksheet, *IMM Parameters and Installation Worksheet*, outlines the requirements that must be considered when ordering and successfully installing and administering IMM. Use this as a guide and checkoff list during installation and administration. These tasks are outlined in Chapter 2.

IMM Parameters and Installation Worksheet

Customer:	
Phone Number:	
Prepared by:	
Date:	
Phone Number of Remote Maintenance Center:	
LAN System Administrator:	
Phone Number:	
Special Instructions:	

Requirement	Default	Options
Intuity Platform		
Installation of SMC Elite 16C Ultra Ethernet card inserted into proper slot on platform		
—MAP/5: Slot 2		
—MAP/40: Highest available slot reserved for optional feature cards. Includes slots 1 through 7, or slot 11.		
—MAP/100: Slot 15		
Jumper connection for W1 on circuit card	1	
Cable type connected to circuit card		—RJ-45
		—BNC T-connector
		—Transceiver drop cable

Requirement	Default	Options
Planned Number of IMM Users: _____		

Planned Number of IMM Users: _____

Software is purchased and installed in one of the two following ways:

—**Client License** (One copy per PC)

   One or more packages can be ordered. Each package contains five copies each of the software, tutorial, and user guide.

How many?____

—**Site License** (One copy on the LAN)

   One package is ordered. It contains two copies each of the software, user guide, and tutorial, and one copy of the license agreement appropriate to the number of users at the site.

Expected IMM LAN Traffic

—Each packet = 100-200 bytes
—Each voice packet = 2,000 bytes
—Each connection with 5-minute session
   timeout interval generates 50
   packets/hour
—Each active session generates
   2.1 packets/second

Choose category of busy hour usage:

Light_____ (93 packets/user)

Medium_____ (128 packets/user)

Heavy_____ (163 packets/user)

V Heavy_____ (198 packets/user)

E Heavy_____ (233 packets/user)

Total packets during busy hour: _____
   (Category x number/users)

Requirement	Default	Options
Intuity Administration		
Feature Options: (Set prior to delivery)		
—Max Number of IMAPI Sessions	32	N/A
—TCP/IP Administration	ON	N/A
Ethernet Board Configuration:		—10Base-T
		—AUI
		—BNC
		—Twisted Pair No Link Integrity
Will the LAN manager:		
Preadminister the LAN? _____		
Administer it during installation? _____		

Requirement	Default	Options
TCP/IP Administration:		
—UNIX Machine Name (Assigned name up to eight letters) — — — — — — — —		
—IP Address (Assigned Number) — — —.— — —.— — —.— — —		
NOTE: LAN administrator must add this number to the network domain name server prior to installation. This allows name addressing for the AUDIX server.		
—Subnet Mask (Assigned Number) — — —.— — —.— — —.— — —	255.255.0.0 (Does not show on screen)	
—Default Gateway IP Address (Assigned Number) — — —.— — —.— — —.— — —		
—Test IP Address — — —.— — —.— — —.— — —	None	
—Alternate Test IP Address — — —.— — —.— — —.— — —	None	

Requirement	Default	Options
AUDIX Administration		
System-parameters imapi-options:		
—Maximum Number of ENABLED IMAPI Sessions	32	
—Enable Check New Messages	n (No)	y (Yes)
—Enable Deliver CA Message	n	y
—Enable Voice File Transfer	n	
—IMAPI Session Timeout	5	10 through 60, in five minute increments
Class of Service:		
—IMAPI Access?	n	y
—IMAPI Voice File Transfer?	n	y
Subscriber:		
—IMAPI Access?	n	y
—IMAPI Voice File Transfer?	n	y

Installation, Administration, and Test

2

This chapter provides information to install, administer, and test the hardware and software that will allow an Intuity MAP/5, MAP/40, or MAP/100 to work with Intuity Message Manager (IMM).

- "Task 1: Configure and Install the LAN Interface Card"
- "Task 2 (Optional): Install 10BaseT Connection to Wall Field"
- "Task 3: Verify Feature Activation"
- "Task 4: Administer TCP/IP Networking"
- "Task 5: Reboot System and Attach LAN Cable"
- "Task 6: Test TCP/IP Connection"
- "Task 7: Administer IMM Options on AUDIX"
- "Task 8: IMM Software Installation and Tests"

It also discusses the escalation procedures an IMM user would use to solve a problem with IMM.

Task 1: Configure and Install the LAN Interface Card

⇒ **NOTE:**
The driver on the LAN interface card has been configured prior to shipment. Before installing the card, make certain the jumper W1 is set to position 1 - SOFT CONFIGURATION.

1. Install the LAN interface card using the detailed circuit card installation procedures for the MAP/5, MAP/40, or MAP/100. These instructions are found in the following manuals:

- *Intuity MAP/5 Hardware Installation*, 585-310-146

- *Intuity MAP/40 Hardware Installation*, 585-310-138

- *Intuity MAP/100 Hardware Installation*, 585-310-139

The following substeps outline the general procedure used to install a LAN interface card into a MAP/100. This procedure is similar to the steps performed when installing the card into a MAP/5 or a MAP/40, except the requirements to open and close each specific platform.

⚠ **WARNING:**
Observe proper electrostatic discharge precautions when handling computer components. Wear a ground wrist strap against your bare skin and connect to an earth ground.

a. Ensure that the LAN interface card appears to be in usable condition and was not damaged during shipment.

b. Perform a "soft" shutdown if the system has been operating as a fully-loaded system.

c. Turn *off* both the front panel power switch and the circuit breaker in the rear and remove the incoming line. Also disconnect keyboard and video cords.

d. Tag the power plugs with a note indicating that nobody other than yourself should reconnect power to the equipment.

e. Remove the dress covers and open the card cage.

f. Remove the filler for the appropriate slot and save the retaining screw.

g. Align the circuit card faceplate and the edge of the circuit card with the circuit card guide and the backplane slot position. The card is now next to the expansion slot. Move the card until it touches the slot.

h. Place your thumbs flat on the edge of the card over the connector and push it into the backplane slot. Firmly push on the card until it is completely seated.

i. Reinstall any internal and/or external cable assemblies that were previously removed, making sure the cable connector pin 1 indicator is mated to the circuit card or pin header.

j. Replace the retaining screw by placing it through the card faceplate opening that is similar to the cover plate previously removed.

k. Close the card cage and/or peripheral bay access door, and replace the dress covers if you have completed work inside the platform.

l. Power up the Intuity platform.

Task 2 (Optional): Install 10BaseT Connection to Wall Field

The customer must provide an RJ-45 connection into the LAN within 25 feet of the Intuity platform. This could be an RJ-45 drop cord or a 104-type outlet. If an outlet isn't within reach, AT&T will provide a 104A connecting block and a 10BaseT twisted pair cable to make the connection between the wall and the Intuity platform. Set up as follows:

1. On the 104A mounting block, unfasten the bolt on the top cover with a flathead screwdriver and lift off the cover.

2. Check whether or not eight wires are hard-connected across the two mounting blocks inside the 104A, as shown in Figure 2-1. If the blocks are not connected:
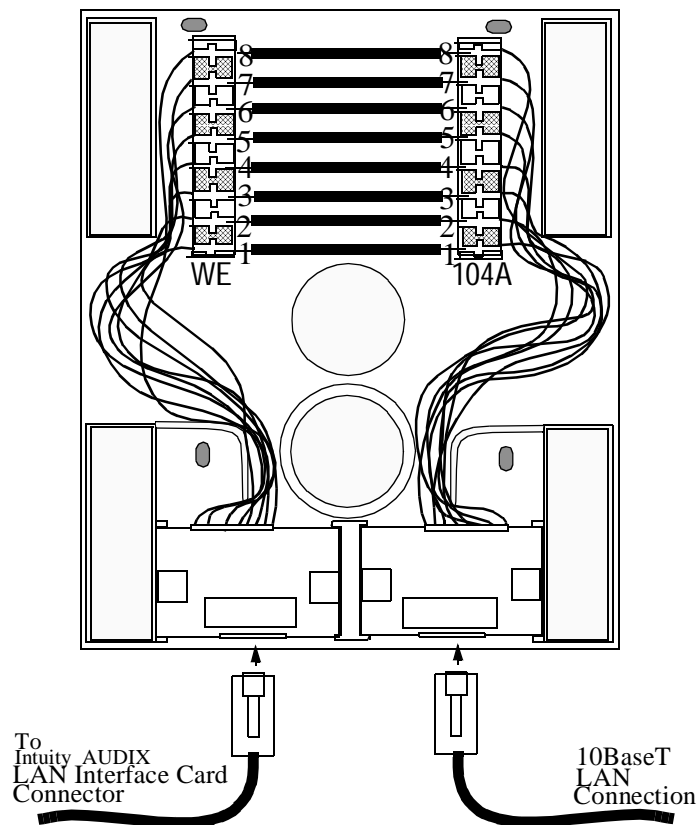

Figure 2-1.   104A Mounting Block

a. Remove the four protector caps that cover the tops of the mounting blocks.

b. Strip the ends of eight proper lengths of wire of insulation.

c. Using a punch-down tool, press the ends of these eight wires into matching *WE* and *104A* block connectors (numbered 1 to 8).

d. Press the four protector caps back into place on the mounting blocks.

3. Using four screws, mount the 104A on the wall field within 25 feet of the Intuity platform.

4. Attach and tighten the cover.

5. Plug the LAN drop cable and the supplied twisted-pair cable into the 104A.

> ⚠ **CAUTION:**
> *Do NOT connect the twisted-pair cable into the LAN card until after the system has been powered up and TCP/IP administration has been completed. This is a preventative measure to keep from disrupting the customer's LAN.*

Task 3: Verify Feature Activation

1. If you are not already logged onto the Intuity system, press ENTER. The system responds:

```
The systems's name is Intuity
Welcome to USL UNIX system V Release 4.2 Version
Console Login:
```
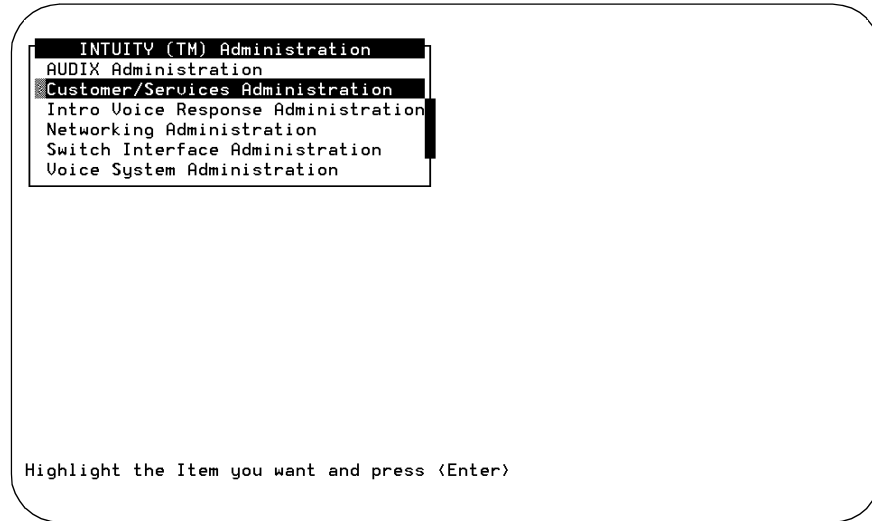
It may be necessary to press ENTER more than once to obtain a console login prompt.

2. Log on as **craft**. The system displays the *INTUITY (TM) Administration* menu.

```
    INTUITY (TM) Administration
 AUDIX Administration
▓Customer/Services Administration
 Intro Voice Response Administration
 Networking Administration
 Switch Interface Administration
 Voice System Administration










Highlight the Item you want and press <Enter>
```

3. Using the ▼ (scroll down) key or the TAB key and pressing ENTER, go through the following path.

> Customer/Services Administration
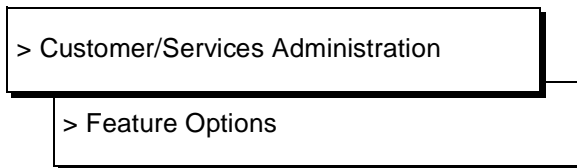
> Feature Options

The system responds with the *Feature Options* screen. Screen configuration may differ slightly depending on the features activated on individual Intuity systems.

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

AMIS Analog Networking                OFF          N/A
High speed digital ports              0            12
Low speed digital ports               0            12
Max Number of IMAPI Sessions          32           32
Multilingual                          ON           N/A
SCSI Disk Mirroring                   OFF          N/A
TCP/IP Administration                 ON           N/A
hours_of_speech                       12           16
voice_ports                           12           12
```

4. Verify that the `Max Number of IMAPI Sessions` field has been administered to **32**. For this field, **0** (zero) is "off" and **32** is "on."

5. Verify that the TCP/IP Administration field is set to **on**.

⇒ **NOTE:**
   If these fields are different, contact your remote maintenance center. They will make the changes. After the changes are made, ensure that the system is rebooted.

6. Press (CANCEL) (F6) until you reach the INTUITY (TM) Administration screen.

7. Contact the LAN or System Administrator.

Customer LANs differ. Some LANs may be pre-administered prior to your arrival on site. Other LANs require that the administration for a new machine be administered around the time of installation because an open connection may cause the LAN to fail.

Refer to the *IMM Parameters and Installation Information* worksheet from your project manager. It will indicate if you must ask the LAN administrator to administer the LAN, or if the LAN has already been administered.
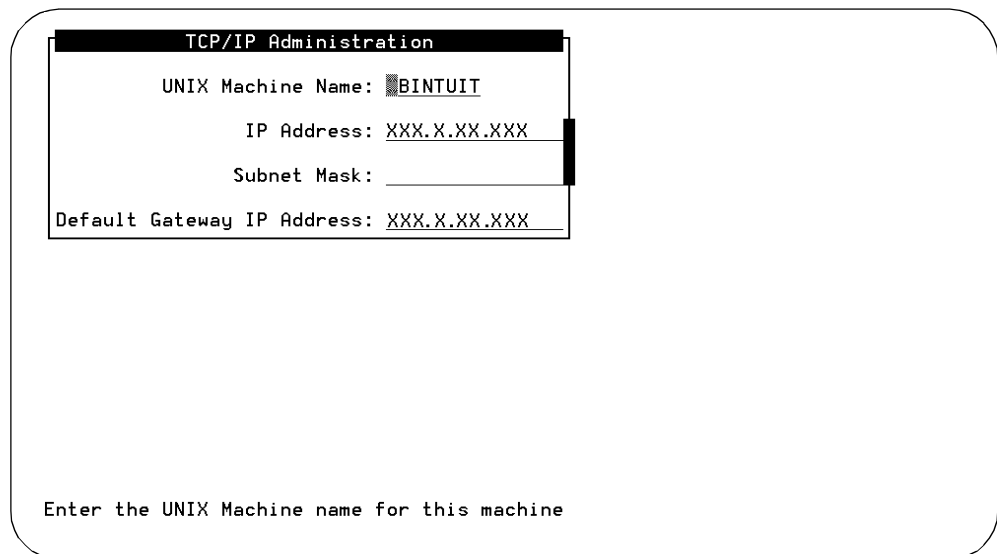
Task 4: Administer TCP/IP Networking

1. Starting at the INTUITY (TM) Administration menu, go through the following path:

```
> Networking Administration
```
```
    > TCP/IP Administration
```
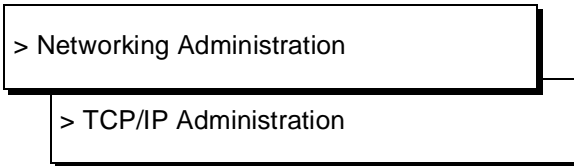
The system responds with the *TCP/IP Administration* screen. Enter those values listed on the *IMM Parameters and Installation Information* worksheet.

Use the UP and/or DOWN arrow keys or the ⌜TAB⌟ key to move through the fields.

```
                TCP/IP Administration
        UNIX Machine Name: ▓BINTUIT
                IP Address: XXX.X.XX.XXX
               Subnet Mask: _____
Default Gateway IP Address: XXX.X.XX.XXX

    Enter the UNIX Machine name for this machine
```

2. Enter the **UNIX machine name**.

The UNIX name may be up to eight characters in length, and consist of letters and/or numbers. This is a case-sensitive field: capital letters must be entered as capitals, and lower-case letters as lower case.

If you are installing digital networking, the UNIX name should be the same as the local machine name specified on the Local Machine Administration screen.

3. Enter the **IP** (Internet protocol) **Address**. This is the Intuity system's address.

4. Enter the **Subnet Mask**.

   The subnet mask is used to determine which bytes of the IP address specify the network and host addresses. This is an optional field. If there is no entry for this field on your worksheet, leave the field blank. The system will automatically use a default of 255.255.0.0.

5. Enter the **Default Gateway IP Address**.

   The default gateway IP address is the address of the gateway router that serves to connect to addresses on other LANs. This field is left blank if the Intuity system will only be communicating with other machines on the same LAN.

6. Press (CHG-KEYS) (F8) to change the identity of the soft keys.

7. Press (BRD CNFG) (F4) to display the Ethernet Board Configuration screen.

   The system responds with the Ethernet Board Configuration screen.

```
          TCP/IP Administration

        UNIX Machine Name: cbintuit

               IP Address: XXX.X.XX.XXX

              Subnet Mask: _____

Default Gateway IP Address: XXX.X.XX.XXX




           Ethernet Board Configuration

Network Interface Type: _____




Enter the Interface Type, use <CHOICES> for options
```

8. Press (CHOICES) (F2) to display a list of the network interface types.

   The system responds with the *Network Interface Types* screen.

```
        TCP/IP Administration              Network Interface Types
                                          ▓10BASE-T
         UNIX Machine Name: cbintuit       AUI
                                           BNC
                IP Address: XXX.X.XX.XXX   Twisted Pair - No Link Integrity

               Subnet Mask: _____▉

Default Gateway IP Address: XXX.X.XX.XXX___



              Ethernet Board Configuration

Network Interface Type: _____



Select an interface type and press <Enter>
```
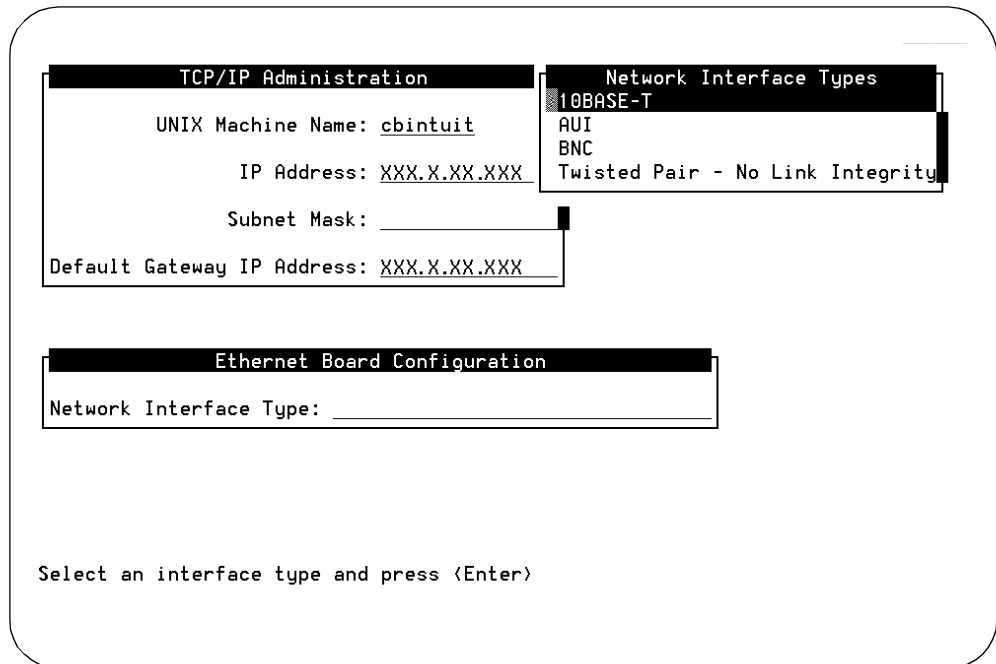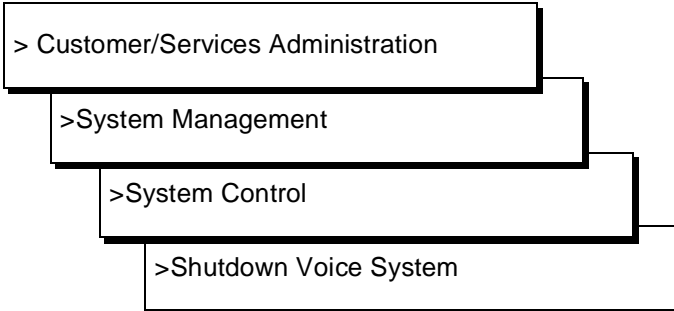
9. Highlight and enter the **network interface type** to be used on this system. Your selection is displayed in the `Network Interface Type` field in the Ethernet Board Configuration screen.

10. Press `SAVE` (F3) to save the Ethernet Board configuration.

11. Press `SAVE` (F3) to save the TCP/IP administration values.

12. Press `CANCEL` (F6) twice to return to the INTUITY (TM) Administration menu.

Task 5: Reboot System and Attach LAN Cable

Rebooting at this point must be done to apply the newly entered network information into the system.

1. Starting at the INTUITY (TM) Administration menu, take the following path:

```
┌──────────────────────────────────────────┐
│ > Customer/Services Administration        │
│   ┌──────────────────────────────────────┐│
└───│ >System Management                   ││
    │   ┌──────────────────────────────────┐│
    └───│ >System Control                  ││
        │   ┌──────────────────────────────┐│
        └───│ >Shutdown Voice System       ││
            │                              ││
            └──────────────────────────────┘│
```

The path to the shutdown command is shown below.

```
┌───────────────────────────────────────────────────────────────────────┐
│                                                                        │
│   ┌─────────────────────────────────┐    ┌────────────────────────┐    │
│   │ Customer/Services Administration│    │  System Management     │    │
│   │ Alarm Management                │    │  Disk Management        │    │
│   │ Backup/Restore                  │    │ ›System Control         │    │
│   │ Database Audits                 │    │  UNIX Management         │    │
│   │ Diagnostics                     │    └────────────────────────┘    │
│   │ Feature Options                 │                                  │
│   │ Log Administration              │                                  │
│   │ ›System Management              │                                  │
│   │ System Verification             │    ┌────────────────────────┐    │
│   └─────────────────────────────────┘    │     System Control     │    │
│                                          │▓Shutdown Voice System   │    │
│                                          │ Start Voice System      │    │
│                                          │ Stop Voice System       │    │
│                                          └────────────────────────┘    │
│                                                                        │
│                                                                        │
│   Highlight the item you want and press <Enter>                        │
│                                                                        │
└───────────────────────────────────────────────────────────────────────┘
```

The system responds:

```
Enter y to continue, no to quit
```

2. Enter **y** to continue the shutdown.

The system responds:

```
Shutdown started.  Month date time year

INIT: New run level: 0
The system is coming down. Please wait

The system is down.
Press CTRL-ALT-DEL to reboot your computer.
```

3. If the LAN cable has not been connected to the back of the ethernet board, *continue with Step 4.*

   If the LAN cable has already been connected, *skip to Step 8.*

4. Press the circuit breaker on the Intuity platform to OFF to turn off system power.

5. Attach the LAN cable to the proper connector on the Ethernet board (See the figures in Chapter 1).

6. Press the circuit breaker on the Intuity system to ON to turn on system power.

7. Press the reset button or (CONTROL)-(ALT)-(DEL) to reboot the system.

   The system responds in two stages. The first, readying the system, displays copyright and address information, and rebuilds the UNIX kernel.

   ### ⚠ CAUTION:
   Do not strike ENTER or Esc. during this process: the system will automatically proceed to the next step.

   The system then repeats the copyright and address information. This stage ends with the message:

   ```
   The system is ready.
   ```

   After this message, the system presents a console login, followed by the message:

   ```
   Automatically starting the voice system.
   ```

   This message signals the start of the second stage, the stage that starts the voice system. This stage includes auditing a database, initializing AUDIX, and running file checks. The last two messages in this series are:

   ```
   Startup of the Voice System is complete.
   Saving output to trace process.
   ```

   Saving the output to trace process takes approximately a minute.

8. Press (ENTER) to obtain a console login prompt.

   The system responds:

   ```
   The systems's name is Intuity
   Welcome to USL UNIX system V Release 4.2 Version
   Console Login:
   ```

   It may be necessary to press (ENTER) more than once to obtain the login prompt.

Task 6: Test TCP/IP Connection

1. Log on as **craft.**

2. Press (ENTER) to accept the default of AT386 as your terminal (TERM) type.

3. Starting at the INTUITY (TM) Administration menu, go through the following path:

```
> Customer/Services Administration

    > Diagnostics

        > TCP/IP Diagnostics

            >Send & Receive Test Packets
```
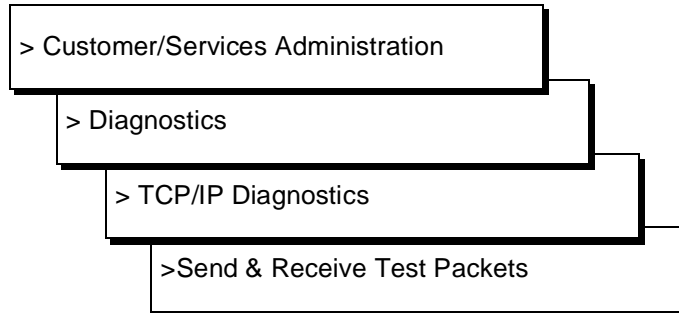
The system responds with the *Send & Receive Test Packets From* screen.

```
        TCP/IP Diagnostics            Send & Receive Test Packets From
    View Packet Statistics
    >Send & Receive Test Packets      IP Address: ▌_____




















    Enter the IP Address of the machine to test with
```

4. Referring to the worksheet, type in the **Internal Protocol (IP) Address**. This is the Intuity system's own address.

5. Press (SAVE) (F3) to start the test.

The system responds by displaying the word "working" and a flashing cursor at the upper right-hand corner of the screen. While the cursor flashes, the system is performing the test.

When the system has finished the test, it displays the *Test Packets Results* screen. (The test results displayed on the following screen are sample test results.)

```
                         Test Packets Results

----XXX.XXX.XX.XX PING Statistics----
10 packets transmitted, 0 packets received, 100% packet loss

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.
```
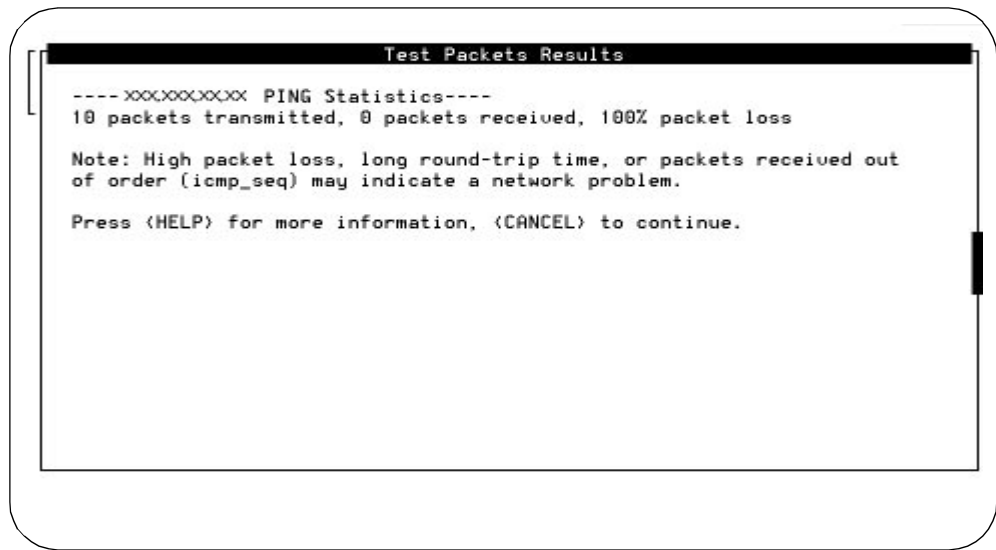
6. Examine the PING Statistics:

   The packet loss field, which does not access the LAN, will be either 0% or 100%.

   If 0% packet loss is reported, the test is successful. Continue with **Step 7**.
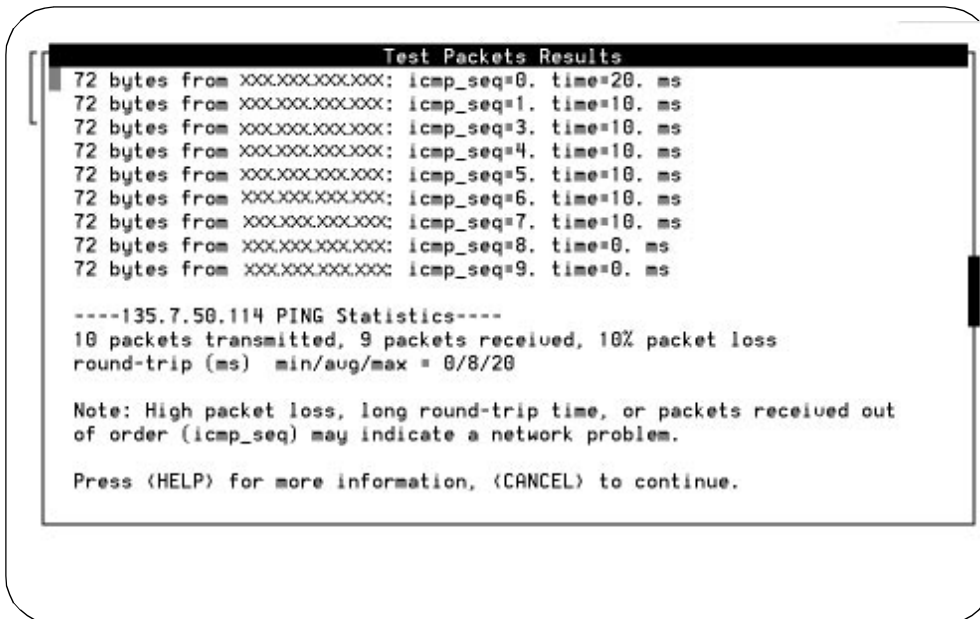
   If 100% packet loss is reported, the test failed.

   a. Go back to the Send & Receive Test Packets From screen by pressing (CANCEL) (F6). Verify that you entered the correct IP Address for the Intuity system.

   b. If it matches the address on the worksheet, press (CANCEL) (F6) continuously until you get back to the INTUITY (TM) Administration menu.

   c. Go to the TCP/IP Administration screen. Check that the IP Address matches that on your worksheet.

   d. If they do not match, re-administer the TCP/IP Administration screen and reboot the system.

   e. Send and receive test packets again. If the test fails this time, contact your remote maintenance center.

   f. After the problem has been resolved, *repeat substeps a through e*.

g. If the test passes, go back to the `Send & Receive Test Packets From` screen.

7. Type in the **IP Address**, using the test address listed at the bottom of the worksheet.

8. Press ⌷SAVE⌷ (F3) to start the test.

The system responds by displaying the word **working** and a flashing cursor at the upper right-hand corner of the screen. When the system has finished the test, the *Test Packets Results* screen is displayed.

```
                        Test Packets Results
72 bytes from XXX.XXX.XXX.XXX: icmp_seq=0. time=20. ms
72 bytes from XXX.XXX.XXX.XXX: icmp_seq=1. time=10. ms
72 bytes from XXX.XXX.XXX.XXX: icmp_seq=3. time=10. ms
72 bytes from XXX.XXX.XXX.XXX: icmp_seq=4. time=10. ms
72 bytes from XXX.XXX.XXX.XXX: icmp_seq=5. time=10. ms
72 bytes from XXX.XXX.XXX.XXX: icmp_seq=6. time=10. ms
72 bytes from XXX.XXX.XXX.XXX: icmp_seq=7. time=10. ms
72 bytes from XXX.XXX.XXX.XXX: icmp_seq=8. time=0. ms
72 bytes from XXX.XXX.XXX.XXX: icmp_seq=9. time=0. ms

----135.7.50.114 PING Statistics----
10 packets transmitted, 9 packets received, 10% packet loss
round-trip (ms)  min/avg/max = 0/8/20

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.
```

9. Examine the packets-out-of-sequence (`icmp_seq=`) field. If one or two packets are out-of-sequence, the condition is acceptable to the Intuity system.

   However, if more than two packets are out-of-sequence (for example, 0, 2, 5, 3, 1...), inform the LAN or system administrator. Out-of-sequence packets may indicate network congestion or misrouting.

10. Examine the `Ping Statistics`. The number of "lost" packets will vary from network to network. Percentage of loss depends upon the number of users, the number of machines, and the distance between machines.

   ■ Consider the test successful if the Intuity system reports a packet loss percentage between **0** and **49%**. Do, however, inform the LAN or system administrator if the loss is above **10%**. Slow response time may be the result of such a loss.

   If the test is successful, press ⌷CANCEL⌷ (F6) until you reach the INTU-ITY (TM) Administration menu, and continue with Task 7.

■ Consider the test a failure if the packet loss value is between **50** and **99%**. In this range, IMM will be extremely slow, or will completely fail to communicate even though it has made a connection to the LAN.

Press (CANCEL) (F6) and refer to the troubleshooting procedures below.

■ A **100%** packet loss indicates that the Intuity system has not established communication to the test machine address. The test will not report if packets are being sent to an incorrect or non-existent machine. Verify that you used the correct test IP address. If you entered the correct address from the worksheet, return to Task 4 and repeat the test using the Alternate Test IP Address from your worksheet. If the Alternate Test IP Address doesn't work, refer to the troubleshooting procedures section below.

Troubleshooting Guidelines for IMM

The following is a suggested troubleshooting procedure for use if an Intuity system has failed the TCP/IP diagnostics send and receive test packets test.

➡ NOTE:
AT&T service technicians dispatched for Intuity system installation and maintenance may not troubleshoot the customer LAN. After cutover, the customer is responsible for maintaining the TCP/IP addresses and administration on the Intuity system unless otherwise specified by contract.

1. Verify the physical connection.

   a. Visually inspect the faceplate of the LAN (SMC Ultra-16 Elite) interface card. The green LED on the faceplate should be lit under the following conditions:

      — The interface type is twisted pair without link integrity, or

      — The interface type is 10 BASE T and the hub device is up.

      ### ➡ NOTE:
      For 10 BASE 2 or 10 BASE 5, the green light will not necessarily be lit. Do not consider this a failure, but continue with these procedures.

   If the LED is lit, *go to substep b*. If it is not lit, perform the following numbered substeps.

      1. Return to Task 4 and verify that the Board Configuration is correct. If not, make the correction.

      ### ➡ NOTE:
      You do not have to reboot the system to reconfigure the board interface type.

2. Check the green LED again. If it is lit, retry the send and receive packets test using the Test IP Address, and *continue with substep b*.

3. If the green LED is not lit, have the LAN administrator test the LAN to see if it is live.

— If it is not live and the cable is 10 BASE T, the LAN interface card, cable, or the hub device may be bad.

— If it is not live and the cable is twisted pair, the card is bad. Contact your remote support and replace the card.

b. Visually inspect the faceplate of the LAN interface card. For all interface types, the yellow transmit/receive light on the faceplate should flash if the card is sensing packets on the LAN. On Ethernet LAN networks, each machine reads all packets transmitted to and from other machines on the network, and ignores the packets not addressed directly to that machine.

— If the yellow light is flashing, *continue with Step 2*.

— If the yellow light is not flashing:

1) Visually inspect the cable and the cable connection. If the connection is loose, tighten the cable and retry the send and receive packets test. If the test fails again:

2) Contact the customer LAN or system administrator. It is the responsibility of the customer to provide you with a live cable.

3) If the cable is live but the yellow light still won't flash, the LAN interface card may be bad. Contact your remote maintenance center and replace the circuit card.

2. Verify your TCP/IP addressing and board configuration administration. Return to *Task 4: Administer TCP/IP Networking*, and use the procedure listed to display the screens.

If your addressing is correct, use the (CANCEL) (F6) key to exit from the screens and *go to Step 3*.

If your addressing or board configuration is not correct, re-administer the Intuity TCP/IP networking screen and reboot the system. Retry the send and receive packets test. If this test fails again, *go to Step 3*.

3. Ask the LAN or the system administrator to verify that the LAN is correctly administered for the Intuity system. Ask the administrator to verify the Intuity:

■ UNIX name

■ Internet Protocol (IP) address

- Subnet mask

- Default gateway

If all of the information matches what you have administered onto the Intuity system, *go to Task 7*.

If the information for the Intuity system was not correctly administered for the LAN, re-administer the Intuity TCP/IP networking screen and reboot the system. Try the send and receive packets test again.

If the send and receive packets test fails after you have re-administered and rebooted the Intuity system, ask the administrator to attempt a PING test to the Intuity system. If the administrator reports a failure to you but indicates that the customer LAN is operational, contact your remote support.

Task 7: Administer IMM Options on AUDIX

This task is required if the customer has ordered IMM. Refer to the worksheet from your project manager for the settings for these parameters.

Task 7A: Set System Parameters for IMM

1. Starting at the INTUITY (TM) Administration menu, select:

> AUDIX Administration

The system responds with the *AUDIX* screen.

➡️ NOTE:
This screen provides command-line entry. The prompt for these forms is locate toward the lower left-hand corner of the screen. To exit these forms, enter **exit.**

```
AUDIX              Active           Alarms:                  Logins: 2
████████████████████████████████████████████████████████████████████████








███████████████████████████████████████████████████████████████████████
enter command:
```

1. With the cursor on the DEFINITY AUDIX command line, enter **change system-parameters IMAPI-options**.

   The system displays the *System-parameters Imapi-options* screen.

```
AUDIX              Active        Alarms: Mm A              Logins: 2
change system-parameters imapi-options                   Page 1 of 1

                     SYSTEM-PARAMETERS IMAPI-OPTIONS


      Maximum Number of ENABLED IMAPI Sessions: █_

                   Enable Check New Messages: n

                   Enable Deliver CA Message: n

                  Enable Voice File Transfer: n

                       IMAPI Session Timeout: 5__




████████████████████████████████████████████████████████████████████████
enter command: change system-parameters imapi-options
```

2. Move the cursor to the Maximum Number of ENABLED IMAPI Sessions field. This should be `32`.

3. Move the cursor to the `Enable Check New Messages` field. Set to **y**. This allows clients to check for new messages without the overhead of logging in. If left at **n,** automatic new message notification from IMM is disabled.

4. Move the cursor to the `Enable Deliver_ca_Message` field. Leave at **n**. Entering **y** enables the public class-of-service function allowing messages to be delivered over the IMAPI interface. This feature is not used in IMM Release 1.0.

5. Move the cursor to the `Enable Voice File Transfer` field. Enter **y** to enable the use of the personal folder in IMM and also voice file transfer for all subscribers who have `IMAPI Voice File Transfer enabled`.

6. Move the cursor to the `LAN Session Timeout` field. This is the amount of time that a session can be inactive before the user is logged out of the mailbox. Intervals can be set in five-minute increments from 5 to 60 minutes. Leave at 5. After being logged out, the user still has an active TCP/IP connection to the AUDIX server.

7. Press the (ENTER) (F3) function key to save the changes.

Task 7B: Check Access for IMM

You need to give the subscriber permission to use IMM. You may:

— Change each subscriber's profile which results in a custom class of service (cos), or

— Change the cos for people who are to have IMM permission. In this case, perform the following steps:

1. With the cursor on the DEFINITY AUDIX command line, enter **change cos** and the class of service the group of subscribers using IMM will be assigned to.

The system displays the *Change COS* screen.

```
drmfb2      Active    Alarms:  mwA                              Logins: 4
change cos 9                                                   Page 1 of 2
                            CLASS OF SERVICE


            Name: class09       COS Number: 9          Modified? y
Addressing Format: extension


                                    Login Announcement Set: System
System Multilingual is ON        Call Answer Primary Annc. Set: System
Call Answer Language Choice? n  Call Answer Secondary Annc. Set: System


PERMISSIONS  Type: call-answer            Announcement Control? n
       Outcalling? n      Priority Messages? n      Broadcast: none
    IMAPI Access? y  IMAPI Voice File Transfer? y




_____
enter command: change cos 9
1Cancel   2Refresh  3Enter    4ClearFld 5Help    6Choices  7NextPage 8PrevPage
```

2. Ensure that the `IMAPI access?` field for IMM and the `IMAPI
   Voice File Transfer?` field for a personal folder are set to **y**.

3. With the cursor on the DEFINITY AUDIX command line, enter **add
   subscriber** and the extension of a subscriber who will have Intuity
   Message Manager on their PC. Press ⌑NEXTPAGE⌑ (F7) to display the
   second page.

The system displays the *Add Subscriber* screen.

```
AUDIX              Active              Alarms: MmwA                      Logins: 2
add subscriber 86437                                                  Page 2 of 2
                      SUBSCRIBER CLASS OF SERVICE PARAMETERS
Addressing Format: ▓xtension
                                              Login Announcement Set: System_____
System Multilingual is ON         Call Answer Primary Annc. Set: System_____
Call Answer Language Choice? n  Call Answer Secondary Annc. Set: System_____

PERMISSIONS  Type: call-answer____            Announcement Control? n
       Outcalling? n          Priority Messages? n        Broadcast: none_
     IMAPI Access? y       IMAPI Voice File Access? y

INCOMING MAILBOX            Order: fifo              Category Order: nuo_
   Retention Times (days),   New: 10_       Old: 10_         Unopened: 10_
OUTGOING MAILBOX            Order: fifo              Category Order: unfda
Retention Times(days), File Cab: 10_        Delivered/Nondeliverable: 5__

Voice Mail Message (seconds),  Maximum Length: 300_ Minimum Needed: 32__
Call Answer Message (seconds), Maximum Length: 120_ Minimum Needed: 8___
        End of Message Warning Time (seconds): __
        Maximum Mailing Lists: 25_    Total Entries in all Lists: 250_
Mailbox Size (seconds), Maximum: 1200            Minimum Guarantee: 0__
Press [ENTER] to execute or press [CANCEL] to abort
enter command: add subscriber 86437
```

4. Ensure that the `IMAPI access?` field for IMM and the `IMAPI Voice File Transfer?` field for a personal folder are set to **y**.

Task 8: IMM Software Installation and Tests

From this point, PC users assigned to use IMM will install the software in their machines *if a client license* was purchased. If a *site license* was purchased, the LAN administrator will normally install the software on the LAN server.

Prior to IMM installation, each PC will be tested with the *Intuity Message Manager Bravo Test Tool*. The tests on this diskette ensure that the needed TCP/IP network package and the associated WINSOCK.DLL have been loaded and put into the correct Windows or Network directory.

To test the installed IMM software, PC users will send a ping from their DOS window to the assigned IP address (or UNIX name) of the AUDIX server.

Isolating Faults

If IMM isn't working, users should try to isolate the problem from their PC before escalating the problem to you or the LAN administrator.

■ If the user forgets a step or does something incorrectly while using IMM, Message Manager brings up a message box stating the problem.

■ If IMM locks up during use, there may be a Windows or PC problem. The user should exit and restart Windows and Message Manager, and then reboot her PC if necessary.

■ If the reboot works, the user should bring up some other PC application and see if it is working correctly. **If the PC will not reboot, the user should call his PC repair person.**

■ If Message Manager will not play messages or otherwise connect to the AUDIX server, the user should pick up his phone and dial into his AUDIX system.

■ If the AUDIX system answers, the AUDIX server probably is not the problem. To doublecheck, however, the user should try to log into Message Manager from another PC, or ask other Message Manager users if they can log in. **If the AUDIX server doesn't answer, is busy, or won't let other users log in, the user should contact you at this point.**

■ To test the LAN and TCP/IP software, the user should bring up another Windows application that uses the LAN. For example, she could print a file over the network or connect to a network drive.

■ The user should check the physical connections between his PC and the LAN. **If any cables are disconnected, he should contact his LAN administrator.**

■ A user should attempt to ping the AUDIX server by name and by TCP/IP address using the ping utility that came with her TCP/IP software. She must run the ping from a DOS box while Windows is running.

■ The user should check that the correct TCP/IP drivers are installed on his PC. These are typically installed in the 386 Enhanced section of the Windows *system.ini* file.

■ The user should make certain that the TCP/IP files including WINSOCK.DLL are installed in the correct directory in her PC, and that each required directory is in her DOS path. **The LAN administrator should be contacted for assistance if files appear out of place or the ping doesn't work.**

■ To check the phone switching system, the user should call himself from another phone or have someone else call him, making sure the call eventually covers to the AUDIX system. **If the phone or coverage-path doesn't work, the user should contact his telecommunications person**.

■ **If the problem still has not been solved, the user should contact you with a detailed description of the problem. It is up to you to:**

— Ensure that the user has been properly administered to use Message Manager

— Run the *TCP/IP Diagnostics* and the *Send & Receive Test Packets* tests. (These should be run on a periodic basis whether or not problems occur)

— Ensure that the LAN interface card is properly configured

— Ensure that the LAN interface card is properly seated in the Intuity platform, that its green and yellow LEDs are lit, and that it has a good connection to the LAN

— Work with the LAN administrator to figure out the problem.

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