Impresa Nurse Dispatch

Technical Documentation





NOTICE

The information contained in this document is believed to be accurate in all respects but is not warranted by Mitel Networks Corporation (MITEL®). The information is subject to change without notice and should not be construed in any way as a commitment by MITEL or any of its affiliates or subsidiaries. MITEL and its affiliates and subsidiaries assume no responsibility for any error or omissions in this document. Revisions of this document or new editions of it may be issued to incorporate any such changes.

Nothing in this document may be reproduced in any manner, either wholly or in part for any use whatsoever, without written permission from Mitel Networks Corporation.

TRADEMARKS

MITEL, SX-200, SX-2000, MiTAI, TALK TO, IPERA, Nurse Dispatch, Guardian, and Impresa are trademarks of Mitel Networks Corporation. Adobe and Adobe Acrobat are trademarks of Adobe Systems Incorporated.

All other product names specified in this document are trademarks of their corresponding owners.

Impresa Nurse Dispatch Technical Documentation PN 50000699 March 2001, Revision B

 ®, ™ Trademark of Mitel Networks Corporation.
© Copyright 2001, Mitel Networks Corporation. All rights reserved. Printed in Canada.

1. About This Manual	7
Who This Manual is For	7
What This Manual Contains	7
Symbols Used in This Manual	8
Conventions Used in This Manual	8
Where to Find More Information	9
Impresa™ Nurse Dispatch Help System	. 9
Other Supporting Documentation.	. 9
Suggestions for Improving This Documentation	. 10
2. Product Overview	. 11
About Impresa Nurse Dispatch	. 11
Alarm Types	11
Alarm Path	12
Alarm Detection	12
Alarm Surveillance	12
3. System Overview	. 15
About the System	. 15
Impresa Nurse Dispatch Configuration	. 16
4. Installation Overview	. 17
Impresa Nurse Dispatch Network Requirements	. 17
Supporting Internet Domains	17
PBX Requirements	. 18
SX-200 [®] EL or SX-200 ML	18
SX-2000 [®] LIGHT or SX-2000 MICRO LIGHT	18
Client Requirements	. 18
Impresa Nurse Dispatch Server Specifications	. 19
Hardware Specifications.	19
Software Specifications	19
5. Installing the Server Environment.	.21
Before You Begin	.21
Preparing the Installation Site	.21
Unpacking the Impresa Nurse Dispatch Server	. 22
What You Received	22
About the Impresa Nurse Dispatch Installation Disc	23
Connecting the Server Peripherals	23
Adding the Impresa Nurse Dispatch Server to the Network	. 24
Information You Will Need	24
Editing the Network Settings	25
Checking the Country Code and Clock Settings	26
Adding Members to the Local Impresa Administrators Group	26

	Configuring the PBX	. 27
	Programming the PBX for MiTAI™ on the SX-200	. 27
	Programming MiTAI for the SX-2000 and IPERA™ 2000 PBX	. 30
	Connecting the Impresa Nurse Dispatch Server to the PBX	. 32
6.	Installing Client Software	. 35
	Before You Begin	. 35
	Information You Will Need	. 35
	Finding Your Impresa Nurse Dispatch Server Name.	. 35
	Sharing a Folder	. 36
	Uninstalling Client Software	. 36
	Installation Overview	. 36
	Mapping Network Drives to the Nurse Dispatch Server	. 36
	Installing the Client Software	. 38
	Installing Impresa Nurse Dispatch Software from a Network Drive	. 38
	Installing Impresa Nurse Dispatch Software from the Installation Disc	. 38
	Installing Administration Software	. 38
	Installing Guardian Software	. 48
7.	System Verification	. 59
	Verifying that Your MiTAI Link is Working	. 59
	Verifying that the System has Started	. 60
	Verifying that the Dialogic Ports are Correctly Assigned	. 60
	Verifying that the Dialogic Card is Functioning	. 60
	Configuring an Alarm Path and Testing the Alarm Configuration	. 60
8.	System Maintenance and Troubleshooting	. 61
	New Releases of Impresa Nurse Dispatch Server Software	. 61
	Before You Begin	. 61
	Upgrading Impresa Nurse Dispatch Server Software	. 62
	Upgrading Impresa Nurse Dispatch Client Software	. 62
	Preventing Problems	. 62
	Recovering Data	. 62
	Replacing Missing or Corrupted Data	. 62
	Recovering from Hard Disk Corruption	63
	Diagnosing and Resolving Problems	. 63
	Diagnosing Hardware Peripheral Faults	. 63
	Ventying the Boot Sequence	. 63
	Verifying Hardware Faults	. 64
	Verifying the File System.	. 04 65
_		. 03
9.	Engineering Rules	. 67
	Traffic Assumptions	. 67
	Ports Requirements	. 68
	Device Requirements	. 68

Server Requirements (Minimum)	68
Desktop Requirements (Minimum).	68
Desktop Requirements for Guardian (Minimum)	60
Application Constraints	60
Appendix A. Replacing Server Components	/1
Replacing Server Cards	/1 71
Power-down line server	/ I 70
Installing the Windows NT [®] Workstation Software	12 73
Setting up Windows NT	74
Installing the Network Adapter Driver.	74
Configuring Network Connectivity	74
Installing the Service Pack	76
Installing the Video Driver	76
Configuring the Video Driver	76
Installing Internet Explorer	77
Re-installing the Service Pack	77
Installing Symantec pcAnywhere version 9.2 (Host Version).	77
Configuring the MODEM Driver	70 70
Benlacing ISA Expansion Cards	79 80
Configuring the ISA Card	80
Re-installing the D/41H Dialogic Card	81
Re-installing the TALK TO [®] Card	82
Re-installing the Fiber Controller (AFC) Card	83
Appendix B. Installing and Configuring the Dialogic Drivers.	87
Installing the Dialogic Drivers	87
Configuring the Dialogic Drivers	92
Appendix C. Uninstalling Client and Server Software	99
Appendix D. Installing Microsoft Internet Explorer 5 and Internet Tools	01
Appendix E. Installing Java Runtime Environment1	05
Appendix F. Installing MiTAI	07
Installing MiTAI with a TALK TO CX Card (for an SX-200 PBX)	07
Installing MiTAI with Remote PBX Access (for an IPERA 2000)	10
Installing MiTAI with an AFC Card (for an SX-2000 PBX)1	12
Appendix G. Installing Impresa Nurse Dispatch Server	17
Appendix H. System and Site Planner1	25
Appendix I. Remote Access	33
Appendix J. File System Configuration1	35
••• •	

Impresa Nurse Dispatch

1 About This Manual

This manual is the technical documentation for MITEL[®] Impresa[™] Nurse Dispatch (ND). The manual provides a description of the product, plus installation, maintenance, and troubleshooting instructions.

Who This Manual is For

This manual has been written for certified technicians, network analysts, implementation consultants, installers, and administrators. To perform the procedures as described in this manual, you must have successfully completed the Installation and Maintenance courses for the MITEL PBX that you are installing on.

What This Manual Contains

This manual describes Impresa ND and contains the information that is needed to install and configure components of the Impresa ND software.

Chapter 1, "About This Manual", provides an overview of the contents of this manual.

Chapter 2, "Product Overview", describes the application of Impresa ND.

Chapter 3, "System Overview", describes the Impresa ND hardware and the Impresa ND environment.

Chapter 4, "Installation Overview", contains a high-level overview of the installation procedure, specifies the site requirements, and lists the server specifications.

Chapter 5, "Installing the Server Environment", explains how to install the Impresa ND server environment and configure the PBX to accept Impresa services.

Chapter 6, "Installing Client Software", describes how to install and configure Impresa ND client programs on network-connected PCs.

Chapter 7, "System Verification", provides steps to ensure the alarm operation is functioning properly.

Chapter 8, "System Maintenance and Troubleshooting", describes how to upgrade software and how to protect the system against potential problems. This chapter also provides guidelines for correcting system faults.

Chapter 9, "Engineering Rules", describes the Impresa ND system specifications, requirements and constraints.

Appendix A, "Replacing Server Components", describes how to re-install Impresa ND server components and replace faulty cards.

Appendix B, "Installing and Configuring the Dialogic Drivers", describes how to install and configure the Dialogic drivers.

Appendix C, "Uninstalling Client and Server Software", describes how to uninstall Impresa ND software.

Appendix D, 'Installing Microsoft Internet Explorer 5 and Internet Tools", describes how to install Microsoft Internet Explorer 5 and its internet tools.

Appendix E, "Installing Java Runtime Environment", describes how to install Java Runtime Environment.

Appendix F, "Installing MiTAI", describes how to install MiTAI on the three different PBX systems that can support Impresa ND.

Appendix G, "Installing the Impresa Nurse Dispatch Server", describes how to install Impresa ND server software.

Appendix H, "System and Site Planner", provides tables outlining the required information to configure your system and site, including the order that this data should be entered into the computer.

Appendix I, "Remote Access", describes how MITEL Product Support connects to the maintenance port on the Impresa ND server from a remote (off-site) location.

Appendix J, "File System Configuration", explains how to find, load, and configure files used with the Impresa Nurse Dispatch system.

Symbols Used in This Manual

WARNING

Indicates a situation that must be avoided to prevent potential harm to yourself or another person.

CAUTION

Indicates a situation that must be avoided to prevent potential damage to the data or equipment.

► Note

Provides additional information.

Conventions Used in This Manual

The following typographic conventions are used to help you locate and interpret information easily:

- UPPERCASE letters—Represent key presses, acronyms, and abbreviations. For example, press ENTER.
- **bold**—Used in body copy to represent command line parameters (but not their arguments), utility program names, menu names, dialog box titles and options, button names, keywords, icon names, file names, folder names, and paths.
- *Italics*—Represent book titles, chapter titles, and arguments (place holders in syntax and in user input). For example, see Chapter 1, *About this manual*.

• <>—Angle brackets (<>) represent an element of the syntax that you must substitute with a specific value; do not include the angle brackets. For example, you would supply the host name of the Impresa ND server in the following example:

http://<host_name>/adminclient

Where to Find More Information

The Impresa ND Suite comes with a comprehensive set of printed and printable documentation.

Printed documentation

• *Impresa Nurse Dispatch Start Here Guide*—Explains system integration concepts and provides a brief outline of the major system installation and start-up tasks.

Printable documentation

- *Impresa Nurse Dispatch Technical Documentation*—Describes the Impresa ND system and provides instructions on how to install, program, maintain, and troubleshoot the system.
- Impresa Nurse Dispatch User Guide—Provides instructions on how to administer and use the Impresa ND system.

These documents are provided in portable document format (*.PDF) on the Impresa ND Suite CD-ROM and on the Mitel Online Web site. To view them online, access the Adobe Acrobat[®] Reader from the Impresa Nurse Dispatch Installation Disc.

Impresa Nurse Dispatch Help System

The Impresa ND software includes the following online Help system:

• *Impresa Nurse Dispatch Help*—Provides assistance to administrators and supervisors who are responsible for managing, defining, and supporting the alarms through the Impresa ND system.

Other Supporting Documentation

Throughout this manual, references are made to third-party documentation and specific MITEL documentation. We assume that the following documents are available to you for reference purposes if required:

- MITEL SX-2000[®] Technical Documentation
- MITEL SX-200[®] Technical Documentation
- MITEL Ipera[™] 2000 Technical Documentation
- Microsoft[®] Windows NT[®] Server Start Here guide
- Dialogic Card Installation Guide
- Symantec pcAnywhere[™] User's Guide

Suggestions for Improving This Documentation

If you can suggest any way to improve Impresa ND documentation, please contact:

Customer Documentation group Mitel Corporation World Headquarters 350 Legget Drive P.O. Box 13089 Kanata, Ontario, Canada K2K 2W7

Telephone: 613-592-2122 Fax: 613-592-4784 Internet: http://www.mitel.com Email: mailto://techpubs@mitel.com

2 Product Overview

About Impresa Nurse Dispatch

MITEL[®] Impresa[™] Nurse Dispatch (ND) provides the ideal alarm messaging system for Assisted Living Centers with less than 250 rooms. The messaging system sends telephone, pull cord, and door alarms from the residents to the telephones and pagers of their nurses/ caregivers.

The nurses/caregivers can

• Provide immediate care 24-hours a day

The management can

- Provide a discrete alarm system
- Provide alarm logs
- Ensure constant supervision
- Increase staff efficiency

Impresa ND ensures a superior alarm system by using Guardian; a safety net for the alarm messaging system. Guardian provides a constant watch and flags any malfunctions in the system and in the devices being monitored. For more information about Guardian, see the *Impresa Nurse Dispatch User Guide*.

Alarm Types

Impresa ND supports the following alarm types:

- Telephone Timer Alarm: Generates when the telephone of the resident is in the following states.
 - Off-hook and nothing dialed for a specified time period
 - Off-hook and incomplete dialing for a specified time period
 - On hold for five minutes or more
 - Abnormal states (re-order tone) for a specified time period.

The Telephone Timer alarm does not generate if the telephone is in a connected state or if the telephone is on-hook.

- Emergency 911 Alarm: Generates when a resident or an attendant dials 911. This alarm notifies staff of an emergency, so the appropriate actions can take place.
- Assistance Required Alarm (pull cords): Generates when a pull cord is pulled. This alarm will remain active until the pull cord is put back to its normal state.
- Door Alarm: Generates when a monitored door opens. The monitored doors have twowired contact sensors; one on the frame and one on the movable door. When the door opens, the sensor contact is lost and the sensor generates an alarm. The alarm goes off when the door opens and remains active until the attendant takes responsibility for the alarm and closes the door. If the door is opened and closed immediately, the alarm

will remain active until an attendant takes responsibility for the alarm. The door can be monitored for a specified time period.

Alarm Path

The alarm path consists of Level 1, Level 2, and Level 3 attendant groups for the day and night shift. Each attendant group contains a list of attendants (nurses/caregivers).

Note: It is important to complete the Impresa ND system and site plan tables in Appendix H, "System and Site Planner".

The alarm path begins with notifying the first attendant listed in the attendant group assigned to Level 1. If the attendant does not accept or clear the alarm, the alarm then goes to the next attendant listed in this group until the alarm is accepted and cleared. If no attendant in Level 1 accepts and clears the alarm, then the alarm goes to Level 2, notifying the attendant listed first, and continues down the list until an attendant accepts and clears the alarm. The alarm route increments up to Level 3 if an attendant in Level 2 does not clear the alarm and does not take responsibility for the alarm. The attendants in Level 3 are notified in the same manner. The alarm re-generates at Level 3 until the alarm is accepted and cleared.

The last attendant in Level 3 can be an attendant with an external pager. If the internal staff do not accept the alarm, the alarm can be generated externally.

Alarm Detection

Nurses/caregivers can use the following devices to detect an alarm:

- Wired/wireless telephone
- Pager

The telephone of the attendant rings. The attendant answers the call and receives the alarm message. If the attendant is on a telephone call while an alarm is generated, the attendant receives beeps and the alarm camps-on (this is an optional feature). The attendant can use any type of telephone to receive the alarm message. The attendant listens to the alarm message and accepts or rejects the alarm.

The pager beeps the attendant. The pager shows a telephone number and the alarm code of the alarm. The attendant goes to the nearest telephone and dials the displayed telephone number. The telephone asks the attendant to enter the pager personal identification number (PIN) and the alarm code. The telephone then provides the alarm message. The attendant listens to the alarm message and accepts or rejects the alarm.

Note: The Guardian screen on the PC informs the PC viewer when an alarm is raised. The icon specific to that type of alarm shows a red background when an alarm is generated. The PC can also beep when an alarm is raised.

Alarm Surveillance

Guardian keeps a watch on the system and on the monitored devices for Impresa ND. The Guardian window displays real-time status and shows a log of all the alarms as they happen. The window also has four icons that color-code the operational status of the system and each alarm type (phones, doors, and pull cords). The icons are green for a normal condition,

red for an alarm, and yellow for a malfunction. The icons also show pliers snipping a cord if the system is down or when the monitoring device (phone, door, or pull cord) is disabled.

A front-desk operator or a user outside the facility can use Guardian to monitor the system. Guardian can be set to beep and/or print whenever an alarm generates, clears, or regenerates. Impresa Nurse Dispatch

3 System Overview

About the System

The MITEL[®] Impresa[™] Nurse Dispatch (ND) system is a software application that resides on a Mitel Telephony Server 800 (hereinafter collectively called Impresa ND server). Impresa ND is a turnkey operation; all of the software and hardware in the Impresa ND server is preloaded for you. The only installation required involves setting the environment for Impresa ND, loading the Impresa ND Guardian and/or Administration software on the client PCs, and programming the configuration of the alarm paths.

The Impresa ND server adjuncts with the following systems:

- SX-200 EL or SX-200 ML
- SX-2000 LIGHT or SX-2000 MICRO LIGHT
- IPERA 2000 PBX.

All of the systems mentioned above use:

- ONS card and DNIC card circuits in the PBX for the devices (telephones, pull cords, or doors) that generate alarms
- MiTAI in the Impresa ND server to monitor the devices that generate alarms and to monitor the telephone used by the attendant
- A Dialogic card in the Impresa ND server to call the attendants when an alarm is generated. The Dialogic card uses ONS circuits from the PBX.
- A LAN to permit communication between the Impresa ND server, Guardian and Administration via TCP/IP.

Each of the systems differ with their connection to the Impresa ND server

- With the SX-200 PBX, the Impresa ND server connects to the PBX via DNIC protocol. A silver satin cable runs from the DNIC card in the PBX to the Talk To CX Card in the Impresa ND server. The MiTAI software in the Impresa ND server is set to Local Run Time.
- With the SX-2000 PBX, the Impresa ND server connects to the PBX via a fiber link. A fiber cable runs from the FIM in the control node to the AFC card in the Impresa ND server. The MiTAI software in the Impresa ND server uses the Local RunTime.
- With the IPERA 2000, the Impresa ND server connects to the IPERA 2000 server via a network connection. The MiTAI software in the Impresa ND server uses the Remote RunTime.

Impresa Nurse Dispatch Configuration

The following diagram is an overview of the configuration for Impresa ND with the SX-200 PBX, the SX-2000 PBX, or the Ipera 2000. A Resident sets off an alarm with a telephone, pull cord, or door. The Attendant receives the alarm via a pager or an analog, digital, or wireless telephone. Some customers will have multiple PCs attached to the Impresa ND server. One PC should have the Administration and Guardian software. The other PCs should only have the Guardian software.



4 Installation Overview

The MITEL[®] Impresa[™] Nurse Dispatch (ND) server is shipped with all of the required hardware and software installed. It has been configured to operate as a stand-alone Windows NT server, and many of Impresa's defaults have already been set.

The installation procedure involves:

- Verifying that the installation requirements can be met
- Configuring the PBX to accept Impresa ND (refer to Chapter 5, "Installing the Server Environment")
- Connecting the Impresa ND server to the PBX (refer to Chapter 5, "Installing the Server Environment")
- Installing Impresa ND software on the client's workstations and/or on any remote PCs (refer to Chapter 6, "Installing Client Software")
- Creating alarm path configurations (refer to Appendix H, "Alarm Path Planner")
- Verifying the Impresa ND system operation (refer to Chapter 7, 'System Verification')
- Ensuring the engineering rules are adhered to (refer to Chapter 9, "Engineering Rules").

The platform requirements (the network, the PBX, and the client's PC) are provided in this chapter, along with the specifications of the Impresa ND Server.

System maintenance and troubleshooting procedures can be found in Chapter 8, 'System Maintenance and Troubleshooting'.

Impresa Nurse Dispatch Network Requirements

The customer is responsible for installing and maintaining a number of network components.

The Impresa ND server can connect to a LAN through a standard network interface connector. The LAN must have the following characteristics:

- 10/100 Base-T Ethernet
- TCP/IP protocol enabled

Supporting Internet Domains

An IP address provided by the customer's Internet provider or the InterNIC is essential to provide a fully routable IP address for the Impresa ND server. Even if the required IP address is obtained from the InterNIC, some Internet providers could decline to use it, so make sure you talk to the Internet provider before the IP address is obtained.

If the Impresa Nurse Dispatch server will have a specific domain name, the domain name must be registered with the InterNIC. In this case, the Impresa ND server must have a static IP address and two Domain Name Service (DNS) servers fully functional on the LAN at all times. Most Internet providers can register the domain name and provide the required primary and secondary DNS servers.

PBX Requirements

SX-200 EL or SX-200 ML

The Impresa ND server connects to a DNIC line card on the PBX through a MITEL-supplied, silver-satin cable. To proceed with the installation of the DNIC line card and subsequent configuration of Impresa ports, the PBX must have the following resources:

- DNIC and ONS line cards with free circuits
- Lightware 17 or greater
- MAI option enabled

No specific software is required.

SX-2000 LIGHT or SX-2000 MICRO LIGHT

The Impresa ND server connects to a Fiber Interface Module (FIM) and its carrier card on the PBX through a Mitel-supplied, fiber-optic link. To proceed with the installation of the FIM, or the FIM with carrier card, and subsequent configuration of Impresa ports, the PBX must have the following resources:

- Fiber Interface Carrier card (for the SX-2000 MICRO LIGHT)
- DNIC and ONS Line cards with free circuits
- LIGHTWARE 30 Release 1.0 or greater system software
- HCI/CTI Basic Telephony Control option enabled
- HCI/CTI Advanced Telephony Control option enabled
- HCI/CTI/TAPI Large Traffic Level option enabled
- One available FIM slot
- AFC card software in the Impresa ND server compatible with the current PBX load

Client Requirements

The Impresa ND Server needs 128 MB RAM P550 (or better).

The Impresa ND Guardian needs 32 MB RAM P166 (or better).

For optimum performance, each customer-supplied client PC should be equipped with the following hardware (or better):

- Intel Pentium 166 MHz CPU
- 32 MB RAM
- 150 MB free disk space
- SVGA graphics supporting a resolution of at least 800 x 600 pixels
- Integrated 10/100 Base-T NIC.

The following software (or later versions) must be installed and configured on each client PC prior to installing the Impresa ND software:

• Microsoft NT Workstation 4.0 with Service Pack 5, or Windows 98

- TCP/IP protocol enabled.
- Important

If the client PC is running Windows 98, power-saver mode must be disabled. To disable power-saver mode, access the Power Management utility in the Control Panel.

Impresa Nurse Dispatch Server Specifications

Hardware Specifications

The Impresa ND server is housed in a standard computer chassis. For optimum performance, the Impresa ND server has been equipped with the following hardware (or better):

- Intel Pentium III 550 MHz CPU
- 1 x 128 MB RAM
- SCSI controller with 4.1 GB (or larger) hard disk
- SCSI CD drive
- SCSI adapter (accommodates a customer-supplied backup device)
- Dialogic card
- Talk To CX or AFC card
- NIC
- Internal MODEM card
- Integrated video
- Integrated 10/100 Base-T NIC
- PS2 mouse and keyboard.

Software Specifications

The following third-party software (or later versions) has been installed on the Impresa ND server:

- Windows NT Workstation 4.0 with included Service Pack 5.0 or greater
- Microsoft Internet Explorer 5.0 with Service Pack
- MODEM card driver (e.g., U.S. Robotics 56.6 Kbps Sportster®)
- Symantec pcAnywhere Version 9.2 remote access software
- 4-port Dialogic card drivers
- Java Runtime Environment v. 1.3

The following Mitel software components have been installed on the Impresa ND server:

- Impresa ND server software
- MiTAI[™] Runtime software—Enables Impresa applications to receive call events and to perform control functions.
- AFC device driver—Allows the Impresa ND server to control devices and collect device call data or Talk To CX device drivers.

Impresa Nurse Dispatch

5 Installing the Server Environment

This chapter explains how to install and configure the MITEL[®] Impresa[™] Nurse Dispatch (ND) server environment. The server contains the Windows NT 4.0 Workstation operating system. To set up the Impresa ND server environment, you must perform the following tasks:

- Prepare the installation site
- Unpack the Impresa ND server and connect its peripherals
- Add the Impresa ND server to the network
- Configure the PBX
- Connect the Impresa ND server to the PBX

Procedures for completing these tasks are provided in this chapter and should be performed in the sequence given.

CAUTION

The Impresa ND server is shipped pre-configured with default settings to ensure the optimum balance of security, performance, and maintainability. If you elect to modify any of the default settings, please do so in consultation with your Mitel Product Support Services representative.

Before You Begin

Before you begin, take a moment to verify that the site's hardware and software requirements have been met (see Chapter 4, "Installation Overview").

Preparing the Installation Site

To install the Impresa ND server, we assume that the following customer-supplied items are available:

- Monitor with attached signal cable
- Surge protector and uninterrupted power supply (recommended)
- Standard Plain Old Telephone Service (POTS) jack and cable (for a MODEM connection)
- A backup device
- A network cable and connection

Position the Impresa ND server where it has access to these connections and the AC power source.

Unpacking the Impresa Nurse Dispatch Server

When you unpack the equipment:

- Handle the components with care
- Collect all product documentation and warranties
- Unpack the components separately (including the box, keyboard, mouse, warranties and software).

The Impresa ND server comes equipped with the necessary hardware and software for the PBX system specified (SX-200, SX-2000, or IPERA 2000).

All of the above PBX systems include:

- a four-port Dialogic card set to IRQ 10, with a D000H address
- a modem card
- network, video, and sound adaptor connectors on the main board

The Impresa ND server for the SX-200 PBX also contains:

• a TALK TO Card set to IRQ 11, with an I/O address of 300.

The Impresa ND server for the SX-2000 PBX also contains:

• an AFC card set to IRQ 11, with an I/O address of A300.

The server cabinet comes with the required expansion cards, a power cable, keyboard, and mouse.

CAUTION

The Impresa ND server is delivered with all boards/cards installed and factory-configured. MITEL service representatives may only replace or add a card. More information is provided in Appendix A, "Replacing Server Components".

What You Received

Your shipment should contain the following items in addition to the Impresa ND server:

- Impresa Nurse Dispatch Start Here Guide
- Impresa Nurse Dispatch Installation Disc
- Dialogic D/41H Card
- 56K internal modem
- PC ANYWHERE software
- Microsoft NT Workstation Operating System software
- Folder with a disk driver for the network card, disk driver for the video card, and an emergency repair disk.
- Keyboard and mouse
- Connectivity kit for the SX-2000 (fiber cable, FIM module for SX-2000 PBX) The FIM carrier card is not provided. If any other items are missing, contact the MITEL Customer Service Desk.

Note: The *Impresa Nurse Dispatch User Guide* is available from the Impresa Nurse Dispatch Installation Disc and from the MITEL online Web site.

About the Impresa Nurse Dispatch Installation Disc

The Impresa ND Installation Disc contains:

- Impresa ND server software, MiTAI 7.5.3 Local Runtime, Dialogic drivers, NT 4.0 Service Pack 5, NT 4.0 Internet Explorer, Java Runtime Libraries are all pre-loaded onto the Impresa ND server. This software communicates with MiTAI 7.5.3 and also assigns ports to the Dialogic card.
- Impresa ND Client software (Administration and Guardian). The Administration software, which includes Guardian, should only be installed on one client PC in the system. The Guardian software can be installed on multiple client PCs in the system.
- Documentation in portable document format (PDF), such as the *Impresa Nurse Dispatch User Guide* and the *Impresa Nurse Dispatch Technical Documentation*.
- An Adobe Acrobat Reader.

Connecting the Server Peripherals

The monitor, keyboard, mouse, AC power cable, network cable, and backup device connect to the rear panel of the server



Non-redundant 800S Platform

To connect the peripherals:

- 1. Verify that the AC power switch on the monitor is OFF.
- 2. Verify that the server's AC power switch is OFF.
- 3. Plug the monitor's signal cable into the server's video adapter connector.
- 4. Plug the monitor's AC power cord into the power source.
- 5. Plug the keyboard's signal cable into the server's keyboard connector.
- 6. Plug the mouse signal cable into the server's mouse connector.
- 7. Connect the AC power cable to the server's power connector and then plug the other end of the cable into the power source.
- 8. If available, connect the backup device to the SCSI adapter.
- 9. If required, connect the LAN cable to the server's Ethernet network adapter.

Adding the Impresa Nurse Dispatch Server to the Network

The Impresa ND server has been factory-configured to operate as a stand-alone server. To support the Client Desktop component, the Impresa ND server must be made part of the same domain as the customer's existing primary Windows NT domain controller. It may optionally be made part of an InterNIC domain in addition to making it part of the existing Windows NT domain.

The following procedure describes how to install the Impresa ND server on an existing Windows NT domain and configure it to participate in an InterNIC domain.

▶ Tip

To avoid the potential degradation of Impresa real-time performance on LANs that experience high-volume traffic, you may choose to install the Impresa ND server and client PCs on a separate network segment.

Information You Will Need

When you create a computer account on the existing LAN for the Impresa ND server, the user will be asked to enter values for the following parameters:

- Impresa ND server's host name (if it has to be different than the supplied default)
- Username of the person who has administration rights on the existing domain
- Impresa ND server's IP address and subnet mask (by default, these values are "127.0.0.2" and "255.255.255.0" respectively)
- Existing network domain name(s)
- The IP addresses of the primary/secondary domain controllers and default gateway (if applicable).

Editing the Network Settings

Network settings are accessed through the Windows NT Control Panel at the Impresa ND server. To set up network-access parameters for the Impresa ND server:

- 1. On the desktop, click **Start**, point to **Settings**, and then click **Control Panel**.
- 2. Double-click **Network**.
- 3. On the **Identification** tab, click **Change**.
- 4. In the **Computer Name** box, enter a different host name for the Impresa ND server if required. The name you choose will be recognized by the Windows NT domain login prompt.

The default host name is "IMPRESA_ND".

- 5. Click **Domain** and then type the name of the existing Windows NT domain in which the Impresa ND server is to participate. The name you choose will be recognized by the Windows NT domain login prompt.
- 6. Click Create a Computer Account in the Domain.
- 7. In the **User Name** box, type the username of the person who has administration rights on the currently selected Windows NT domain.
- 8. In the **Password** box, type the password that belongs to the domain administrator's account.
- 9. Click OK.
- 10. Click Protocols.
- 11. Select **TCP/IP Protocol** and then click **Properties**.
- 12. In the **Adapter** box, verify that (1) Intel EtherExpress PRO Adapter

sand_slot_number> is selected.

Note

The bus and slot number that is displayed will correspond to the position of the main board in the Impresa ND server.

- 13. Click Specify an IP address.
- 14. In the IP Address box, type the IP address that will identify the Impresa ND server.
- 15. In the **Subnet Mask** box, type a value that indicates how many bytes represent the IP address space and how many bytes represent the unique machine address (for example, to indicate a Class C address range, type "255.255.255.0").
- 16. If the domain does not have a gateway, ignore this step. Otherwise, in the **Default Gateway** box, type the IP address that belongs to the default gateway.
- 17. Click **Apply**.
- 18. If the Impresa ND server will participate in an InterNIC domain (that is, the domain is part of the Internet Domain Name System), click **DNS**. Otherwise, skip this step.
 - If the Impresa ND server requires a DNS-based host name that is different than its Windows NT domain host name (not recommended), type a different host name for the Impresa ND server into the **Host Name** box.

- In the **Domain** box, type the name of the site's existing InterNIC-registered domain (for example, "company.com").
- In the **DNS Service Search Order** box, click **Add** to specify the IP addresses of all available TCP/IP DNS servers, and then list them in the most appropriate search order.
- In the **Domain Suffix Search Order** box, click **Add** to append a suffix to the host name in order to resolve host names faster.
- Click Apply.
- 19. To make the Impresa ND server visible while Windows NT domain users are browsing the network neighborhood, click **WINS Address**. Then
 - In the Adapter box, verify that (1) Intel® EtherExpress PRO Adapter <bus_and_slot_number> is selected (the bus and slot number that is displayed will correspond to the position of the main board in the Impresa ND server).
 - In the **Primary WINS Server** box, type the IP address of the primary Windows NT domain controller.
 - If a secondary WINS server is available, type the IP address of the secondary domain controller into the **Secondary WINS Server** box.
 - Click Apply.
- 20. Click OK.
- 21. Before you close the Control Panel and reboot the Impresa ND server, check the regional settings as described in the next section.

Checking the Country Code and Clock Settings

Verify that the country code and system clock on the Impresa ND server are set correctly— Impresa clients depend on the server's system clock for data validation.

- 1. In the Control Panel, double-click **Regional Settings**.
- 2. Update all regional settings to reflect the locale.
- 3. Click **Apply**, then click **OK**.
- 4. Close the Control Panel and reboot the Impresa ND server.

Adding Members to the Local Impresa Administrators Group

A local group account has been created on the Telephony Server for the Impresa administrator. Any existing Windows NT domain users who require access to the Impresa ND server programs should be added to this local Impresa group.

To secure access to Impresa's administration resources, a local **Impresa Administrators** group has been created on the Impresa ND server. Initially, the **Impresa Administrators** group contains one member only—the **Impresa Administrator**. By default, the username of the Impresa Administrator is "Administrator", and the associated password is "mitel".

The Windows NT User Manager lets you change the password of the **Impresa** Administrator account and add the appropriate Windows NT domain users and/or domain groups to the **Impresa Administrators** group.

To add members to the Impresa Administrators group:

- 1. Log into the Impresa ND server as the Impresa Administrator ("Administrator", "mitel").
- 2. On the desktop, click **Start**, point to **Programs**, and then point to **Administrative Tools** (common).
- 3. Click **User Manager**.
- 4. In the **Groups** list, double-click **Impresa Administrators**.
- 5. Click Add.
- 6. From the list of **Names**, select the domain users and/or groups to be given administration rights to the Impresa administration tools, and then click **Add**.
- 7. Click **OK** to exit the **Add Users and Groups** dialog box.
- 8. Click **OK** to exit the **Local Group Properties** dialog box.
- 9. To change the password that is associated with the Impresa Administrator account
 - In the Username list, double-click Impresa Administrator.
 - In the **Password** box, type a new password.
 - In the **Confirm Password** box, type the same password.
 - Clear User Must Change Password at Next Log On.
 - Click Password Never Expires.
 - Click OK.
- 10. On the User menu, click Exit.

Configuring the PBX

The Impresa ND server connects to an SX-200, SX-2000, or IPERA 2000 system. Before you connect the Impresa ND server to the PBX, the PBX must be installed, configured, and tested according to the instructions provided in the technical documentation for that system. In particular, the Customer Data Entry (CDE) section in the technical documentation describes how to program the system and fill out CDE forms to support basic operations.

Programming the PBX for MiTAI on the SX-200

Program the Talk To CX card in the Impresa ND server as a DS2103 DATASET. The link between the server and the PBX uses the DNIC protocol. Refer to the *SX-200 Technical Documentation* for more information.

1. Program the monitored devices with telephone extensions

Impresa ND monitors the devices (telephones, pull cords, and doors) with ONS lines as their monitoring circuit. Therefore, each device type being monitored has its own extension number. The CDE programming must reflect this. 2. Program the Dialogic card with telephone extensions

The Dialogic card occupies four ONS line circuits. The dialogic card notifies the attendants of the alarms.

3. Program the CTI link to the server

Each of the three systems (SX-200, SX-2000, or an IPERA 2000) accept the Impresa ND server in different ways.

Portions of this programming reference the DS2103 DATASET, for connection to a DNIC interface. However, this unit is no longer required for installations using the TALK TO CX DNIC interface card.

Information exchange between the server and the SX-200 ML or SX-200 EL is achieved through the MITEL APPLICATION INTERFACE (MAI).

To accommodate the MAI link, the PBX should conform to the following basic hardware/ software description:

- one digital line circuit for the PC-to-PBX connection
- Models of PBX other than the SX-200 ML/EL require an MAI Decryption Module

You can program the MAI link without removing the PBX from service.

You can program only one MAI port for the PBX system.

To program the PBX with an MAI port, enter profile information into the following forms (in the order given):

- System Configuration (Form 1)
- Class Of Service (Form 3)
- System Options/System Timers (Form 4)
- Data circuit Descriptors (Form 11)
- Data Assignment (Form 12)
- Direct I/O (Form 34).

Programming details are provided on the pages that follow. Where values are provided for examples, these values apply to a typical PBX installation. For complete information on data entry refer to the *SX-200 EL Technical Documentation*.

SYSTEM CONFIGURATION (Form 1)

When you install a new Digital Line Card, this form is used to establish the card's bay and slot location.

- Define the Bay/Slot/circuit number for the Digital Line Card.
- Enable the location as a "Digital Line Card".

COS DEFINITION (Form 3)

To control events (features) via a MiTAI application, the features must be enabled on the PBX. This is generally done in the Class of Service Options Assignment form. Refer to *SX-200 EL Technical Documentation* for further information.

SYSTEM OPTIONS (Form 4)

Enable "Mitel Application Interface" option.

DATA CIRCUIT DESCRIPTOR (Form 11)

This form is used to set up a data circuit descriptor for the MAI port.

- Define a new descriptor number (01 to 25) for the MAI port, OR select an existing descriptor number that has parameters set as shown below.
- Change the parameters to the values shown in the table below.

MAI Programming: Data Circuit Descriptors Form

Parameter Name	Value
SYNC: Operating Mode	SYNCHRONOUS
SYNC: Rate Adaptation Scheme	X.31
SYNC: Clock Source	SYSTEM
MAXIMUM BAUD RATE	19200
MINIMUM BAUD RATE	19200

DATA ASSIGNMENT (Form 12)

This form is used to program the MAI port for the dataset.

- Program a Dataset 2103 as the device type for the MAI circuit on the digital line card that you programmed in Form 1.
- Assign an extension number (EXT), class of service number (COS, Form 3), and class of restriction number (COR) for the dataset.
- Assign the Data Circuit Descriptor Number (CDN) that you set up in Form 11.

DIRECT I/O (Form 34)

This form is used to enter the extension number of the MAI port. Enter the same extension number that you assigned to the Dataset 2103 dataset unit in Form 12.

- Enter the extension number of the MAI port.
- Press the appropriate softkeys to program the Printout, Printout Type, and Guaranteed fields as shown in CDE Table below.

MAI Programming: Direct I/O Form

Ext Num	Printout	Printout Type	Guaranteed	
1802	MAI	AUTOPRINT	NO	

CHECKING MAI INSTALLATION AND PROGRAMMING

After installing the physical link from the PC to the PBX, check to ensure the:

- MAI programming is correct
- DNI line card is installed and programmed correctly

Use the Show Status command in the Maintenance facility to check these areas of the installation and commissioning. The Show Status command displays the current call processing or maintenance state of the devices that are connected to a PBX circuit card.

USE THE SHOW STATUS COMMAND

• Using the Maintenance facility, determine the status of a device by its bay/slot/ circuit number or extension number. An example of the display is shown below.

SOFTWARE_ID	BB	SS	сс	SC	EX/TX	SWSTAT	Receiver	Other Party
datastn 0	1	8	5	2	1805	TALKG		

Show Status Command Display

If the MAI link is up and running, the SWSTAT field shows TALKG. If the link is not operating, the SWSTAT field shows IDLE.

Programming MiTAI for the SX-2000 and IPERA 2000 PBX

The SX-2000 connectivity kit includes an FIM. The FIM can be installed in any of the slots that are available for FIMs. Make a note of the cabinet shelf and slot number that you will be using—this information is needed for CDE programming.

CAUTION

Wear an anti-static strap whenever you handle circuit cards.

To install the FIM in the SX-2000 PBX:

- Unpack the unit.
- Slide the FIM into one of the available "FIBRE CARRIER" slots on the rear panel of the cabinet.
- Verify that the TX and RX LEDs on the back of the unit are flashing.
- 1. Program the monitored devices with telephone extensions

Impresa ND monitors the devices (telephones, pull cords, and doors) with ONS lines as their monitoring circuit. Therefore, each device type being monitored has its own extension number. The CDE programming must reflect this.

2. Program the Dialogic card with telephone extensions

The Dialogic card occupies 4 ONS line circuits. The dialogic card notifies the attendants of the alarms.

3. PBX Programming for MiTAI on the SX-2000 and Ipera 2000

Program the AFC card in the Impresa ND server as a communicator processor card. Data exchange between the server and the SX-2000 LIGHT PBX is managed by the HCI protocol. A portion of the HCI software is pre-installed on the Application Fiber Controller (AFC) Card, the other part must be installed on the server and the SX-2000 LIGHT PBX. To accommodate the HCI link, the SX-2000 LIGHT PBX must conform to the following basic hardware and software description:

- MS2007 system software, or later release.
- HCI Basic Telephony Feature Package software option.
- HCI Advanced Telephony Feature Package software option.
- Mitel Applications Capacity Level (HCI Traffic) option.
- **Note:** You can program the HCI link without removing the PBX from service if the SX-2000 LIGHT options are already installed.

Enter data into the following PBX Customer Data Entry (CDE) forms (in the order given).

- Cabinet Assignment
- System Configuration Assignment

Where values are provided as examples, these values apply to a typical four-cabinet SX-2000 LIGHT PBX. Refer to the *SX-2000 Light Technical Documentation*, "Program System" section for complete information on CDE.

CABINET ASSIGNMENT

Adding a cabinet to an operating PBX will cause it to reset.

This form applies to fiber distributed systems. It tells the main control cabinet what types of cabinets are at the ends of the fiber links. The server registers as a fiber distributed digital service unit (FD_DSU) cabinet type.

The Cabinet Assignment form identifies each fiber link by the FIM to which it connects at each end. It specifies each FIM by cabinet, shelf, and slot.

Add the server as a fiber distributed digital service unit (FD_DSU) cabinet type on shelf 1 in slot 1 or 6.

In the following table, the fiber going to the server connects to the FIM in the first cabinet, second shelf, third slot (1/2/3) in the control cabinet and to the AFC Card at fourth cabinet, first shelf, first slot (4/1/1) in the server.

Main Control Fiber Interface				Perip	oheral/DS	U Fiber I	nterface
Cabinet	Shelf	Slot	Туре	Cabinet	Shelf	Slot	Comments
1	2	3	FD_DSU	4	1	1	Gateway

Cabinet Assignment

SYSTEM CONFIGURATION ASSIGNMENT

The System Configuration form records the position of all printed circuit cards in the system. The Cabinet, Shelf, Slot and Installed Card Type fields are read-only. Refer to the System Configuration Form Table below.

Verify that the FIM card is programmed and installed in the PBX system. If the FIM is not installed, refer to SX-2000 LIGHT PBX documentation for instructions on how to install it.

Enter the AFC card as a Communications Processor card on shelf 1 in slot 2 or slot 3.

The card location in the table is an example only. Actual locations in the customer installation may vary.

System Configuration

Cabinet	Shelf	Slot	Programmed Card Type	Installed Card Type
4	1	1	Fiber Interface	Fiber Interface
4	1	2	Communication Processor	Communication Processor

Connecting the Impresa Nurse Dispatch Server to the PBX

Connect the PBX to the Dialogic card

The ONS Line card in the SX-200, SX-2000, and the Ipera 2000 systems use silversatin cables to connect the Dialogic card in the Impresa ND server.

Establish the physical link between the PBX and ND server

The SX-200, SX-2000, and Ipera 2000 systems connect to the Impresa ND server in different ways.

SX-200

Connect the DNIC card in the PBX to the TALK TO CX card in the Impresa ND server with the silver-satin cable.

SX-2000

Connect the FIM in the PBX to the AFC card in the Impresa ND server with the fiber cable.

The fiber link has a transmit connector and a receive connector. Synchronization between the AFC card and the FIM is indicated by their LEDs, which stay illuminated continuously when both ends are in synch. If the transmit and receive connectors are reversed or if the cards are not in synch, the LEDs will flash.

Retrieve the fiber cable from the connectivity kit.

At the PBX, slide one end of the fiber cable through the sliding cable port at the rear of the cabinet, and then route the cable to the FIM or FIM and its carrier card.

Remove the dust caps from both the fiber cable connectors and the fiber optic ports on the FIM or FIM and its carrier card.

Insert and lock the transmit and receive connectors into the corresponding transmit and receive ports on the FIM or FIM and its carrier card.

Route the other end of the fiber cable to the rear panel of the Impresa ND server.

Remove the dust caps from both the fiber cable connectors and the fiber-optic ports on the AFC card.

Insert and lock the transmit and receive connectors into the corresponding transmit and receive ports on the AFC card.

Power up the Impresa ND server.

On the AFC card, verify that the green status LEDs corresponding to the fiber-optic connection stay illuminated. If the LEDs flash, power down the Impresa ND server and swap the transmit and receive connections on the AFC card.

IPERA 2000

Connect the Impresa ND server to the LAN and domain where the IPERA 2000 resides.

Impresa Nurse Dispatch

6 Installing Client Software

The procedures in this chapter explain how to install MITEL[®] Impresa[™] Nurse Dispatch (ND) client software on a network-connected PC that is running the Windows NT 4.0 Workstation or Windows 98 operating system.

Note: You must uninstall any software components you intend to replace before reinstalling these components. For instructions, please refer to Appendix B, "Uninstalling Client and Server Software".

Two types of software installations exist for the Impresa ND client PC.

- Administration (includes Guardian)
- Guardian

Install the Administration software on only one PC in the system. This installation can be executed either on the Impresa ND server, or on a separate client PC. The Administration installation allows the user to create, modify, and delete attendants, residents, and alarm paths, and should, therefore, have limited usage. The Administration installation also includes the Guardian system.

Install the Guardian software on a separate client PC. The Guardian will notify staff of alarms, device failure and system failure.

Before You Begin

Before you begin, take a moment to verify that the client PC hardware and software requirements have been met (see Chapter 4, "Installation Overview").

Information You Will Need

You will need the following information to complete the procedures in this section.

- a valid Windows Administrator login username and password
- the network drive where your server software resides or Impresa ND software Installation Disc
- your Impresa ND server (computer) name

Finding Your Impresa Nurse Dispatch Server Name

Your Impresa ND server name is required during the Guardian software installation procedure. To find this name on the Impresa ND server:

- 1. Click the **Start** button on the lower left corner of your screen.
- 2. Click Settings, then click Control Panel.
- 3. Double-click the **Network** applet icon.
- 4. Write down the computer name.

Note: Installing the client software can be accomplished in two ways: through a network connection or using the Impresa ND Installation Disc. If you are installing the ND client software from a network drive, you must ensure that the drive on the Impresa ND server is shared.

Sharing a Folder

To share a folder:

- 1. Right-click on the drive folder in Microsoft Explorer.
- 2. When the Properties window opens, click the **Sharing** tab.
- 3. Click Shared as.
- 4. Type the folder name in the Shared Name box.
- 5. In the User Limit window, click **Maximum allowed**.

Uninstalling Client Software

If you would like to uninstall any Impresa ND software, please refer to Appendix B, "Uninstalling Client and Server Software".

Installation Overview

Installing the client software can be accomplished in two ways: through a network connection or using the Impresa ND Installation Disc.

Installing the client software through a network connection involves

- Mapping a logical network drive letter to a shared folder on the Impresa ND server
- Installing the client software on one or more network-connected PCs
- Setting the locale of the client PC to match the locale of the Impresa ND server.

Procedures for completing these tasks are provided in this chapter and should be performed in the sequence given.

Mapping Network Drives to the Nurse Dispatch Server

A share name has been assigned to the **Rollout** folder on the Impresa ND server. For example, the host name of the Impresa ND server is "Impresa1". All Impresa ND client PCs need access to this share. The **Rollout** share contains the Impresa ND Guardian and Administration directories.
For example, to map a network drive to the Rollout folder, you must

- 1. Launch Windows Explorer on the client PC.
- 2. On the **Tools** menu, click **Map Network Drive**.
- 3. In the **Map Network Drive** dialog box, select an unused, logical drive letter (for example, "M").
- 4. In the **Shared Directories** box, locate the Impresa ND server (e.g. "Impresa1") and select its **Rollout** share.

Map Network	c Drive			×
<u>D</u> rive:	🖃 F:	\\IMPRESA1\Roll	out 💌	ОК
<u>P</u> ath:	\\IMPRES	A1\Rollout	•	Cancel
<u>C</u> onnect As:				<u>H</u> elp
	☑ <u>R</u> econr	nect at Logon		
Shared Direct	ories:		☑ <u>E</u> xp	and by Default
🛛 🗿 TR/	AINING			_
8	IMPRESA1		T I · I	
	Prompts	:	This share was cr	reated by the
+_	NTPBX		This share was ci	
+	NTPBX2			
+ 📃	NTPBX3			
+ 🗐	OPSMGR1			
	OPSMGR2			
	OPSMGR3			
	PCEN2			

- 5. Click **Reconnect at Logon**.
- 6. Click OK.

Installing the Client Software

The procedures in this section describe how to install Impresa ND client software on a network-connected client PC in two ways; over the network, and via the Impresa ND Installation Disc.

Installing Impresa Nurse Dispatch Software from a Network Drive

The Setup programs reside in the **Rollout** share directory on the Impresa ND server. By default, the setup programs copy files to the local **C:\Program Files\Mitel\Impresa\Nurse Dispatch** folder and the installation script adds items to the **Mitel** folder in the **Programs** folder on the **Start** menu.

- 1. Using Windows Explorer, access the Roll-out directory on the Impresa ND server.
- 2. Select the Administration or Guardian installation folder, depending on which software you require.
- 3. Double-click the Setup.EXE file in the directory chosen in step 2.
- **Note:** The following section "Installing Impresa Nurse Dispatch Software from the Installation Disc" outlines the procedure you will complete.
- 4. In the **Welcome** dialog box (see figure below), click **Next**.
- 5. Read the **Software License Agreement** (see figure below). Provided that you agree with the terms of the license agreement, click **Yes**.
- 6. In the Choose Destination Location dialog box, verify the location C:\Program Files\Mitel and then click Next.
- 7. In the **Enter Server Information** dialog box, enter the host name of the Impresa ND server (for example, "Impresa1") and then click **Next**.
- 8. In the Start Copying Files dialog box, click Next.
- 9. In the Setup Complete dialog box, click Finish.
- 10. Close the Impresa ND Client folder.

Installing Impresa Nurse Dispatch Software from the Installation Disc

Installing Administration Software

1. Insert the Impresa ND Installation Disc.

- 2. Upon insertion of the disc, your computer may start the Install Wizard on its own. If it does not, click the **Start** button in the lower left corner of your screen, click **Settings**, click **Control Panel** and then double-click the **Add/Remove Programs** icon.
- 3. When the Add/Remove Programs Properties window appears, click the **Install** button on the Install/Uninstall tab.
- 4. When the Install Program from Floppy Disk or CD-ROM window appears, click **Next**. When the Run Installation Program window appears, accept the default setting and click **Finish**. If Windows is unable to locate your installation program, click **Browse** in the Run Installation Program window, then click the arrow beside the Look in: dialog box to access the drop-down menu.
- 5. Find your CD-ROM drive and click it.

Browse			? ×
Look jn: dialogic English NA mitel Ms mtemp nt nt	 (C:) 3½ Floppy (A:) (C:) Nd_verl_1_0 (D:) twriter_grp on 'medlev 2' (E:) edwardtr\$ on 'nant03' (M:) Pcapps on 'nant03' (S:) Network Neighborhood My Briefcase 	etup Files	Autoexec.b. jdk1_2_1-w
File <u>n</u> ame: Files of <u>t</u> ype:	Programs	•	<u>O</u> pen Cancel

6. Double-click the Administration Installation folder.

Browse			? ×
Look jn:	😵 Nd_ver1_1_0 (D:)	- 🗈 (* 🔳
Administatio	on Installation		
🛛 💾 Guardian Ir	Istallation		
📄 Internet Exp	plorer 5.0		
📃 Java Runtir	me Enviroment		
Server Insta	allation		
1			
File <u>n</u> ame:			<u>O</u> pen
Files of tupe:	Programs		
r nes or gype.			Lancel

- 7. Double-click the **Setup.exe** icon.
- 8. In the Run Installation Program window, click **Finish**.
- 9. When the Welcome window appears, read its contents and click Next.



- 10. Read the Software License Agreement and click Yes.
- 11. Read the prerequisites necessary to install Impresa ND Administration and ensure your system can meet them:
- Your operating system is Windows NT Workstation 4.0 with Service Pack 5.0 or greater or Windows 98
- Your computer is connected to a network
- Ensure Impresa ND Server software is running

Note: To make sure Impresa ND Server is running:

- 1. Click the Start button on the lower left of your screen.
- 2. Click Programs.
- 3. Click Mitel Impresa Nurse Dispatch, then click System Control Manager.
- 4. When the Nurse Dispatch System Control window appears, click the Start Nurse Dispatch button.
- Internet Explorer 5.0 (included on Impresa ND CD-ROM) or higher is installed
- Java Runtime Environment (included on Impresa ND CD-ROM) is installed
- Your computer must be restarted when the dialog box prompts you to do so
- A local printer must be installed on the parallel port if printing will be enabled.
- Click Next.
- 12. Note the default location where your Impresa ND Administration program files will be stored and click **Next**.

Mitel Impresa Nurse Dispatch Setup	×
Choose Destination Location Select folder where Setup will install files.	
Setup will install Mitel Impresa Nurse Dispatch in the following folder.	
To install to this folder, click Next. To install to a different folder, click Browse and select another folder.	
Destination Folder	
C:\\Mitel\Mitel Impresa Nurse Dispatch Browse	
InstallShield	
< <u>B</u> ack Car	ncel

13. Note the program folder your program icons will be added to and click **Next**.

Mitel Impresa Nurse Dispatch Setup
Select Program Folder Image: Select a program folder.
Setup will add program icons to the Program Folder listed below. You may type a new folder name, or select one from the existing folders list. Click Next to continue.
Program Folders:
Mitel Impresa Nurse Dispatch
Existing Folders:
Administrative Tools (Common) Adobe Acrobat 4.0 Dialogic System Software Java 2 Runtime Environment Linkbot Pro 5.5 Mitel
Mitel Docs Mitel Impresa Nurse Dispatch
Mitel Telephony Application Interface
InstallShield-
< <u>B</u> ack <u>N</u> ext > Cancel

14. Type <**Impresa ND server name**> (e.g. Impresa1") in the dialog box that prompts you for a server name, then click **Next**.

Mitel Impresa	Nurse Dispatch Setup		×
Enter the c	omputer name of the Nurse	Dispatch server.	
It is very im	portant that this name be correct		
Server	Enter Computer Name		
Installphield —			1 1
		< <u>B</u> ack <u>N</u> ext>	Cancel

15. When you are asked to select the drive that contains your Impresa ND server software, click **Browse**.

Mitel Impresa Nurse Dispatch Setup	×
Read the instructions below.	
Select the drive containing the Nurse Dispatch This drive will be located on the Nurse Dispatch	Server software. n server.
Destination Folder \\\ InstallShield	< Back Next > Cancel

16. Select the drive you have installed your Impresa ND server software onto and click OK. If you are installing Administration software on the Impresa ND server, the drive letter, or path, could be "C:\". If you are installing Administration software on a client PC, the drive letter, or path, could be "Impresa1\C:\".

Choose Folder	×
Please choose the installation folder.	
Path:	
	-
JC:V	
Directories:	
🖃 🚵 Desktop	•
🚍 🗐 🥮 My Computer	
⊕	
twriter_grp on 'mediap2' (E:)	
⊕	
Control Panel	-
	-
OK Cancel	

17. Note the drive containing the Impresa ND server and click **Next**. A window will appear that shows the Impresa ND Administration software being copied to the local path you have specified.

Mitel Impresa Nurse Dispatch Setup			×
Read the instructions below.			
Select the drive containing the Nurse Dispato This drive will be located on the Nurse Dispat	ch Server software. tch server.		
Destination Folder			
C:V			B <u>r</u> owse
InstallShield			
	< <u>B</u> ack	<u>N</u> ext >	Cancel

18. Ensure that "Yes, I want to restart my computer now." is selected, and click **Finish** to complete the installation.

Mitel Impresa Nurse Dispatch Setup			
	InstallShield Wizard Complete The InstallShield Wizard has successfully installed Mitel Impresa Nurse Dispatch. Before you can use the program, you must restart your computer. • Yes, I want to restart my computer now. • No, I will restart my computer later. Remove any disks from their drives, and then click Finish to complete setup.		
	< Back Finish Cancel		

Installing Guardian Software

- 1. Insert the Impresa ND Installation Disc.
- 2. Upon insertion of the disk, your computer may start the Install Wizard on its own. If it does not, click the **Start** button in the lower left corner of your screen, click **Settings**, click **Control Panel** and then double-click the **Add/Remove Programs** icon.
- 3. When the Add/Remove Programs Properties window appears, click the **Install** button on the Install/Uninstall tab.
- 4. When the Install Program from Floppy Disk or CD-ROM window appears, click **Next**.
- 5. When the Run Installation Program window appears, accept the default setting and click **Finish**. If Windows is unable to locate your installation program, click **Browse** in the Run Installation Program window, then click the arrow beside the Look in: dialog box to access the drop-down menu.
- 6. Find your CD-ROM drive and click it.

Browse			? ×
Look jn: dialogic English NA mitel Ms mtemp nt	 (C:) 3½ Floppy (A:) (C:) Nd_ver1_1_0 (D:) twriter_grp on 'medlev2' (E:) edwardtr\$ on 'nant03' (M:) Pcapps on 'nant03' (S:) Network Neighborhood My Briefcase 	etup Files	Autoexec.b. Autoexec.b. jdk1_2_1-w Ntdetect.co
File <u>n</u> ame: Files of <u>t</u> ype:	Programs	•	<u>O</u> pen Cancel

7. Double-click the **Guardian Installation** folder.

Browse			? ×
Look jn:	🔊 Nd_ver1_1_0 (D:)	• 🖻 (
Administat	ion Installation		
	kplorer 5.0		
📃 Java Runt	time Enviroment		
Server Ins	tallation		
File <u>n</u> ame:			<u>O</u> pen
Files of type:	Programs	•	Cancel

- 8. Double-click the **Setup.exe** icon.
- 9. In the Run Installation Program window, click **Finish**.
- 10. When the Welcome window appears, read its contents and click Next.



11. Read the Software License Agreement and click Yes.

- 12. Read the prerequisites necessary to install Impresa ND Guardian and ensure your system can meet them:
- Your operating system is Windows NT Workstation 4.0 with Service Pack 5.0 or greater, or is Windows 98
- Your computer is connected to a network
- Ensure Impresa ND Server software is running
 - Click the Start button on the lower left of your screen.
 - Click Programs.
 - Click Mitel Impresa Nurse Dispatch, then click System Control Manager.
 - When the Nurse Dispatch System Control window appears, click the **Start Nurse Dispatch** button.
- Internet Explorer 5.0 (included on Impresa ND CD-ROM) or higher is installed
- Java Runtime Environment (included on Impresa ND CD-ROM) is installed
- Your computer must be restarted when the dialog box prompts you to do so
- A local printer must be installed on the parallel port if printing will be enabled.
- Click Next.
- 13. Note the default location where your Impresa ND Guardian program files will be stored and click **Next**.

Mitel Impresa Nurse Dispatch Setup	×
Choose Destination Location Select folder where Setup will install files.	
Setup will install Mitel Impresa Nurse Dispatch in the following folder.	
To install to this folder, click Next. To install to a different folder, click Brows another folder.	se and select
Destination Folder C:\\Mitel\Mitel Impresa Nurse Dispatch InstallShield	Browse
< <u>Back</u>	Cancel

14. Note the default program folder your icons will be added to and click **Next**.

Mitel Impresa Nurse Dispatch Setup
Select Program Folder Please select a program folder.
Setup will add program icons to the Program Folder listed below. You may type a new folder name, or select one from the existing folders list. Click Next to continue.
Program Folders:
Mitel Impresa Nurse Dispatch
Existing Folders:
Administrative Tools (Common) Adobe Acrobat 4.0 Dialogie Sustem Settuare
Java 2 Runtime Environment
Mitel
Mitel Docs Mitel Impresa Nurse Dispatch
Mitel Telephony Application Interface
InstallShield
< <u>B</u> ack <u>N</u> ext > Cancel

15. Type <Impresa ND server name> (e.g. "Impresa1") in the dialog box that prompts you for a server name, then click Next.

Mitel Impresa	Nurse Dispatch Setup		×
Enter the o	computer name of the Nurse	Dispatch server.	
It is very in	portant that this name be correct.		
Server	Enter Computer Name		
InstallShield —			
		<back next=""></back>	Cancel

16. When you are asked to select the drive that contains your Impresa ND server software, click **Browse**.

Mitel Impresa Nurse Dispatch Setup	×
Read the instructions below.	
Select the drive containing the Nurse Dispatch This drive will be located on the Nurse Dispatch	Server software. n server.
Destination Folder \\\ InstallShield	< <u>B</u> ack <u>Next</u> Cancel

17. Select the drive you have installed your Impresa ND server software onto and click **OK**. If you are installing Guardian software on the Impresa ND server, the drive letter, or path, could be "C:\". If you are installing Guardian software on a client PC, the drive letter, or path, could be "Impresa1\C:\".

Choose Folder	×
Please choose the installation folder.	
Path	
	_
<u>D</u> irectories:	
🖃 📩 Desktop	
🚊 🖳 My Computer	
twriter_grp on mediap2" (E:)	
⊕	
Engine Control Panel	_
OK Cance	I

18. Note the drive containing the Impresa ND server and click **Next**. A window will appear that shows the Impresa ND Guardian software being copied to the local path you have specified.

Mitel Impre	sa Nurse Disp	oatch Setup					X
Read the	instructions b	elow.					
Select tł This driv	e drive containi e will be located	ng the Nurse D I on the Nurse [)ispatch S Dispatch :	erver softwa server.	are.		
Destin	ation Folder						
C:V						B <u>r</u> o	owse
InstallShield -							
				< <u>B</u> ack	Next >		Cancel

19. Ensure that "Yes, I want to restart my computer now." is selected, and click **Finish** to complete the installation.

Mitel Impresa Nurse Dispatch	Setup
	InstallShield Wizard Complete The InstallShield Wizard has successfully installed Mitel Impresa Nurse Dispatch. Before you can use the program, you must restart your computer. Image: Main to restart my computer now. No, I will restart my computer later. Remove any disks from their drives, and then click Finish to complete setup.
	< Back Finish Cancel

Impresa Nurse Dispatch

7 System Verification

The procedures in this chapter explain how to start up and test the operation of MITEL[®] Impresa[™] Nurse Dispatch (ND) application.

Verifying that Your MiTAI Link is Working

To verify that your MiTAI link is working:

SX-2000

1. Click the Start button in the lower left corner of your screen.

Click Settings, then click Control Panel.

- 2. Double-click the **MiTAI Application Fiber Controller** icon.
- 3. Click the **Software** tab.
- 4. Ensure that all of the indicators are green. If they are not, press the **Start** button in the dialog box. Three of the four indicators will turn green. The fourth indicator, Telephony Link Is Up, will turn green when the AFC card has completely loaded and the link is established.

Note: If any of the indicators remain red, and the load progress bar is blue, you have probably selected the wrong driver. In the Current Software Load drop menu, ensure you have selected the correct AFC driver for the PBX load that you are trying to connect.

SX-200

- 1. Click the **Start** button in the lower left corner of your screen.
- 2. Click **Settings**, then click **Control Panel**.
- 3. Double- click the Mitel Talk To Controller icon.
- 4. Click the **Software** tab.
- 5. Ensure that all of the indicators are green. If they are not, press the **Start** button in the dialog box. Four of the five indicators will turn green. The fifth indicator, Telephony Link Is Up, will turn green, when the Talk To CX card driver is loaded and the link is established.

IPERA 2000

- 1. Click the Start button in the lower left corner of your screen.
- 2. Click Settings, then click Control Panel.
- 3. Double-click the **Mitel Remote Access** icon.
- 4. Ensure that the machine name in the Mitel Remote Access Settings window matches the machine name for the Ipera 2000 you are trying to connect with.
- 5. Ensure **8000** is in the dialog box for the port number in the Mitel Remote Access Settings window.

- Double-click the MiTAI.EXE file in the C:\PROGRAM FILES\MITEL\MITAI\TOOLS directory. When prompted to enter an extension number, type an extension number from one of the ONS Dialogic ports and press Enter.
- Note: If you receive an error message, then the MiTAI link is not established.

Verifying that the System has Started

To verify that the system has started:

- 1. Click the Start button in the lower left corner of your screen.
- 2. Click **Programs**, click **Mitel Impresa Nurse Dispatch** and then click **System Control Manager**.
- 3. When the Nurse Dispatch Window Control window appears, ensure that the **Start Nurse Dispatch** button is greyed out. This indicates that the Impresa ND system has started.

Verifying that the Dialogic Ports are Correctly Assigned

To verify that the Dialogic ports are correctly assigned:

- 1. Click the Start button in the lower left corner of your screen.
- 2. Click **Programs**, click **Mitel Impresa Nurse Dispatch** and then click **Dialogic Port Configuration**.
- 3. Ensure that each of the four Dialogic ports have been configured, that the associated PBX ONS extension numbers have been assigned to these ports, and that the direction is set to "OUTBOUND" for at least three of these ports.

Verifying that the Dialogic Card is Functioning

To verify that the Dialogic Card is functioning:

- 1. Click the **Start** button in the lower left corner of your screen.
- 2. Click **Programs**, click **DIALOGIC SYSTEM SOFTWARE**, and click **DIALOGIC CON-FIGURATION MANAGER - DCM**.
- 3. Click on the **Service Manager** and ensure that the Start Service item is grayed out. This shows that the service has been started and is running. Another indication that the card is functioning is if the Stop sign in the DCM tool bar is red.

Configuring an Alarm Path and Testing the Alarm Configuration

To configure an alarm path, refer to the *Impresa Nurse Dispatch User Guide* or to the *Impresa Nurse Dispatch Help System*.

Appendix H, "Alarm Path Planner", provides tables outlining the required information to configure an alarm path, and the order in which this data should be entered into the computer.

To test the alarm configuration, generate an alarm for every alarm type and note the alarm path that the alarm takes.

8 System Maintenance and Troubleshooting

This chapter contains basic MITEL[®] Impresa[™] Nurse Dispatch (ND) maintenance and troubleshooting information.

Maintaining the system involves

- Installing new releases of Impresa ND software
- Preventing problems.

Troubleshooting the system involves:

- · Isolating system faults
- Correcting problems.

An overview of the issues and preventative measures that you can take to protect the system against potential problems is also included in this chapter.

New Releases of Impresa Nurse Dispatch Server Software

From time to time, Mitel may make a new version of Impresa ND server software available to you. New releases of server software are shipped on CD-ROM. You must first uninstall some of the server software components before installing new Mitel utilities, upgraded CTI services (MiTAI), and upgraded Impresa ND software onto the Impresa ND server.

► CAUTION

This procedure takes the Impresa ND server out of service. Upgrade the server during off-hours only.

Before You Begin

Before you begin, Mitel recommends that you make a backup copy of the database.

To backup the database:

- 1. Click the **Start** button in the bottom left of your screen, then click Programs.
- 2. Click **Windows NT Explorer**, then click the plus sign beside your hard drive.
- 3. Click the plus sign beside the **Program Files** folder.
- 4. Click the plus sign beside the **Mitel** folder.
- 5. Click the plus sign beside the **Mitel Impresa Nurse Dispatch** folder.
- 6. Click the plus sign beside the **Server** folder.
- 7. Copy the NurseDispatchDB.mdb file to a selected network drive, to back up the database.

Upgrading Impresa Nurse Dispatch Server Software

To uninstall Impresa ND server software:

- 1. Log into the Impresa ND server using the Impresa Administrator's Windows NT login username and password.
- 2. Click **Start**, point to **Settings**, and then click **Control Panel**.
- 3. Double-click Add/Remove Programs.
- 4. On the Install/Uninstall tab, click Mitel Impresa ND server.
- 5. Click Add/Remove.
- 6. In the **Confirm File Deletion** dialog box, click **OK**.
- 7. In the Close The Control Panel Window to Proceed dialog box, click OK.
- 8. Close the Control Panel. The **Remove Programs From Your Computer** dialog box is displayed while the files are being removed.
- 9. In the Setup Complete dialog box, verify that Yes, I want to restart my computer now is selected, and then click Finish.
- 10. Follow the installation instructions outlined in Appendix G, "Installing Impresa Nurse Dispatch Server", to install the latest version of the Impresa ND server software.

Upgrading Impresa Nurse Dispatch Client Software

- 1. Follow the general uninstall instructions in Appendix B, "Uninstalling Client and Server Software", to uninstall Impresa ND Administration and Impresa ND Guardian software.
- 2. Follow the installation instructions in Chapter 6, "Installing Client Software", to install Administration and Guardian software.

Preventing Problems

This section offers several suggestions to protect the system against potential problems. While Impresa ND has been designed to be as robust as possible, there will always be unforeseen incidents such as hardware failures, interrupted power, or end-users doing unexpected things at the wrong time.

Recovering Data

To recover from the unforeseen loss of data, the on-site administrator must perform nightly backups of the database.

Replacing Missing or Corrupted Data

In the case of data losses due to human error, data corruption, or catastrophic hardware failure, you should be able to restore any aspect of the Impresa ND database to the state it was in prior to the current date by using backups.

Recovering from Hard Disk Corruption

If you have a recent backup of the Impresa ND server's hard disk on a network drive, you can restore the server software to the hard disk. Also, try the Microsoft Windows NT emergency repair disk.

Mitel service representatives only may replace a faulty hard disk and rebuild the Impresa ND server. Instructions for rebuilding the server are provided in Appendix A, "Replacing Server Components".

Diagnosing and Resolving Problems

Impresa ND software is shipped with a number of diagnostic tools for isolating system faults and resolving data access problems, including:

- MiTAIX—Monitors specific directory numbers.
- Service Recovery Manager-Monitors, stops, and restarts Impresa ND services.
- AFC Card Configuration—Monitors, stops, and restarts fiber-link connectivity between the Impresa ND server and the PBX.
- Dialogic Diagnostics Utility.

► CAUTION

These tools are provided for Mitel Product Support purposes only. Do not attempt to fix any problem without first talking to your Mitel Product Support representative.

Diagnosing Hardware Peripheral Faults

The procedures in this section can be used to identify and resolve hardware faults. If the suggested actions do not resolve the problem, contact your Mitel Product Support representative.

Verifying the Boot Sequence

The normal boot sequence and basic start-up of Impresa ND server services are sequenced as follows:

- 1. Verify that power to the Impresa ND server and monitor are both switched ON.
- 2. If necessary, reboot the Impresa ND server.
- 3. The Microsoft Windows NT operating system loads the installed hardware device drivers, and those with a startup type of "Boot", "System", or "Automatic" start automatically.
- 4. The installed services are loaded, and those with a startup type of "Automatic" become active automatically.
- 5. The Impresa system is initialized and the run-time files are loaded into memory and executed.
- 6. The load of the FIM in the PBX triggers the load of the AFC card in the Impresa ND server, which resets the fiber link (for the SX-2000).

Note: For the SX-200, the TALK TO CX card has no load.

- 7. The Impresa ND server's Dialogic LS/DSP (Loopstart/Digital Signal Processor) board is initialized.
- 8. The Impresa servers begin normal operation and the Windows NT desktop is displayed.

Identifying Hardware Faults

The Hardware Faults table below can be used to identify and resolve peripheral faults and network-connectivity problems.

If you see this	Do this
Power and hard drive lights do not come on.	Check power and signal cables to Impresa ND server.
Characters on screen are distorted or incor- rect, or characters do not appear on screen.	Adjust brightness and contrast controls. Ver- ify that monitor is compatible with the cur- rently selected video mode. Ensure that the video signal and power ca- bles are plugged in and that power to the monitor is switched ON.
Flickering video display, unexpected system reboot, or system not responding to mouse/ keyboard commands.	A transient voltage spike, power outage, brownout, or static zap to mouse or key- board port may have occurred.
"Cannot find network server???" message is displayed on Impresa ND server after login.	Check LAN connection to Impresa ND serv- er. Verify that primary domain server is on line.
"Cannot find server" message is displayed on client PC after Impresa ND Guardian or Impresa ND Administration has been launched.	Check LAN connection to client PC. Verify that Impresa ND server is on line.

Hardware Faults

Verifying the File System

The file system on the Impresa ND server contains Impresa program files and data, computer-telephony-integration (MiTAI) services, and optional third-party programs and data.

To verify the file system

• In Windows Explorer, verify that all required directories are present and in the correct locations.

Verifying the Fiber Link (SX-2000)

Frame synchronization is indicated by the LEDs on the FIM at the PBX and the AFC card at the Impresa ND server. The upper LED indicates the status of the local connection and the lower LED indicates the status of the remote connection.

If the remote (lower) LED on the AFC card is off, go to the PBX and check the FIM or FIM and its carrier card's local (upper) LED. If the local connection at the PBX is on, the fiber optic cable could be faulty.

Upper LED	Meaning at Local FIM Connection
ON	In frame synchronization.
OFF	Power off or held in reset.
FLASHING	Out of synchronization, or Tx or Rx cables could be reversed.
Lower LED	Meaning at Local AFC Card
ON	In frame synchronization.
OFF	Power off or held in reset.
FLASHING	Out of synchronization, or Tx or Rx cables could be reversed.

Meanings for LED Indications

To verify the fiber link:

- 1. Inspect the LEDs at both ends of the fiber link as described above.
- 2. If a faulty cable is indicated, swap the cable with one that is known to work.
- 3. If a faulty card is indicated, replace the card.
- 4. If the AFC card on the Impresa ND server was replaced, reboot the Impresa ND server.

Impresa Nurse Dispatch

9 Engineering Rules

Traffic Assumptions

The following table lists the call and pull volumes associated with the Impresa Nurse Dispatch (ND) application. The following numbers are extreme, so allow for spare bandwidth on the HCI pipe.

Traffic Type	Estimated Calls/Pulls per Room	Extended to 80 Rooms	Extended to 120 Rooms	Extended to 150 Rooms	Extende d to 250 Rooms	Description of Call Type
Inbound calls to rooms/hr	0.75	60	90	112.5	187.5	From Central Office (CO) to room
Outbound calls from rooms/hr	0.75	60	90	112.5	187.5	To CO from room
True or false alarms/hr/room	0.5	40	90	75	125	To PBX from alarmdev
Inter-room traffic calls/hr/room	0.5	40	60	75	125	To room from room
Administration Seats	20	15	18	20	30	
Inbound calls to administration/hr	3	45	54	60	90	From CO
Outbound calls from admin/hr	3	45	54	60	90	To CO
Inter-desk traffic calls/hr/desk	3	45	54	60	90	To admin
Totals Average Traffic		335	492	555	895	Calls/hr
Events/second		2680	3936	4440	7160	Events/sec
Bandwidth Utilization SX-200		24.8%	36.4%	41.1%	66.3%	
Bandwidth Utilization SX-2000/IPERA		3.0%	4.4%	4.9%	8.0%	

Traffic Assumptions

Ports Requirements

ONS Lines = (# of pull cords + # of doors monitored + # of windows monitored + # of analog telephones) DNIC Ports = (4 Ports + # of DNIC telephones)

Device Requirements

Devices utilized for pull cords, windows and doors must be UL/CSA approved devices. Connectivity is to an ONS port, so the device must have a 600 Ohm impedance.

Server Requirements (Minimum)

The minimum server requirements for the Impresa ND system include:

- Pentium Server 200
- 128 MB of RAM
- 4.1 GB hard disk
- Microsoft Windows NT 4.0 Workstation SP 5 or greater
- Microsoft Networking (TCP/IP) with Winsock Version 1 (winsock.dll)
- Microsoft Internet Explorer 5.0
- CD-ROM network interface card (optional, but required if connecting remote clients)
- Keyboard and mouse
- Local or network printer
- 3.5 inch floppy disk drive

Desktop Requirements (Minimum)

The minimum desktop requirements for the Impresa ND system include:

- Pentium 133 PC
- 32MB Ram
- 1GB hard drive
- CD-ROM network interface card
- Keyboard, Mouse, and color monitor
- Local or network printer
- 3.5 inch floppy disk drive
- Microsoft Windows 98 or NT 4.0 Workstation
- Microsoft Networking (TCP/IP) with Winsock Version 1 (winsock.dll)

Desktop Requirements for Guardian (Minimum)

The minimum desktop requirements for the Impresa ND system include:

- Pentium 133 PC
- 32MB Ram
- 1GB hard drive
- CD-ROM network interface card
- Keyboard, Mouse, and color monitor
- Local or network printer
- 3.5 inch floppy disk drive

- Microsoft Windows 98 or NT 4.0 Workstation
- Microsoft Networking (TCP/IP) with Winsock Version 1 (winsock.dll)

PBX Requirements

SX-200:

Lightware 17 Rel. 4

Note: The system's flash timer must be programmed to no greater than one second.

SX-2000:

Lightware 30 Rel. 1.0 or greater

Note: The system's flash timer must be programmed to no greater than one second.

Application Constraints

- 1. Each attendant group can administer a maximum of six attendants.
- 2. The Attendant Creation and Modification forms display a maximum of nine attendant groups. If more than nine attendant groups exist, the Attendant Group Configuration form can be used.
- 3. The system can administer a maximum of:
 - 50 attendants
 - 500 residents
 - 30 attendant groups
 - 30 alarm paths
 - 50 door monitors

Impresa Nurse Dispatch

Appendix A Replacing Server Components

Replacing Server Cards

This appendix is provided for Mitel service representatives. It explains how to rebuild the Impresa ND server, and how to remove and replace the following cards:

- Dialogic D/41H card
- TALK TO CX card
- AFC card

Rebuilding the server involves:

- Powering-down the Impresa Nurse Dispatch (ND) server
- Reserving interrupts for the expansion cards

This appendix also explains how to replace faulty expansion cards.

Power-down the server

- 1. On the Impresa ND server, close all client applications.
- 2. On the Start menu, click Shut Down.
- 3. In the Shut Down Windows dialog box, click Shut Down the Computer, and then click Yes.
- 4. When prompted to turn off the power, switch power to the monitor and PC OFF.

Reserve interrupts for expansion cards

This section explains how to edit the BIOS from the default configuration to reserve ISA card interrupts and make changes to the boot sequence and power management settings.

To reserve interrupts for expansion cards

- 1. Restart the computer.
- CAUTION

At this point, DO NOT switch power to the system OFF. Use a backup power supply to avoid power interruptions. It is critical to maintain power throughout the next procedure while reserving interrupts for expansion cards.

- 2. If the Intel Motherboard logo appears, or while the memory is being tested, press F2.
- 3. Wait for the BIOS configuration utility to launch.
- 4. Use the right arrow key to navigate to **Advanced** settings.
- 5. Use the down arrow key to navigate to **Peripheral Configuration**.
- 6. Verify that the **Audio** feature is enabled.

- 7. Press ESC to return to the **Advanced** settings.
- 8. Use the down arrow key to navigate to **IDE Configuration**.
- 9. Select **IDE Controller** and disable both IDE controllers.
- 10. Press ESC to return to the Advanced settings.
- 11. Select Resource Configuration and then press ENTER.
- 12. Use the down arrow key to navigate to Interrupts.
- 13. Reserve the following IRQs:
 - IRQ 11 AFC board or TALK TO CX card
 - IRQ 10 Dialogic D/41H board
- 14. Press ESC.
- 15. Use the right arrow key to navigate to the **Boot Screen**.
- 16. If applicable, enable the **Boot-time Diagnostic Screen** and disable **Quickboot Mode**.
- 17. Press F10 to Save and Exit, and then click Yes to confirm.

Re-installing the Operating System Software

This section explains how to re-install the Windows NT Workstation operating system and all required drivers onto a reformatted hard disk. To perform the procedures in this section, you will need the following items:

- Microsoft Windows NT Workstation 4.0 CD-ROM
- Windows NT Service Pack xx CD-ROM (with Internet Explorer 5)
- MITEL 2940UW Driver Software floppy diskette
- MITEL NTWK ETHREXPRS PRO DRIVER floppy diskette
- ATI Technologies Inc. 3D RAGE PRO TURBO floppy diskette
- Symantec pcAnywhere 9.2 CD-ROM
- MODEM driver floppy diskette or CD-ROM (for example, U.S. Robotics Connections Volume 3 CD-ROM).

To reinstall the operating system software

- 1. Reformat the hard drive.
- 2. At the Impresa ND server, insert the Windows NT Workstation 4.0 CD-ROM into the CD-ROM drive.
- Note

Initially, the 800S platform may not see the CD-ROM drive as a SCSI device. As a result, the Windows NT setup cannot be booted from the CD-ROM.

If you cannot boot the Windows NT setup program from CD-ROM

 On any existing Windows NT Workstation, launch the WINNT32 program and make a set of three floppy diskettes from the Microsoft Windows NT Workstation CD-ROM. Type D:\I386>WINNT32\ox
- Boot the Impresa ND server from the first diskette in the set.
- When prompted, insert the second diskette and follow the instructions on the screen.
- When prompted, press **ENTER**.
- To have the system detect mass storage devices automatically, press ENTER.
- When prompted, insert the third diskette.
- The program will recognize no mass storage devices. Press S to specify an additional SCSI adapter.
- Press ENTER to choose Other.
- When prompted to enter the manufacturer-supplied hardware support disk, insert the MITEL 2940UW Driver Software floppy diskette, and then press **ENTER**.
- From the list of drivers, select Adaptec AHA290x/291x/294x/394x/4944/AIC-78xx PCI SCSI Controller (NT 4.0), and press ENTER.
- Press ENTER to continue.
- Re-insert the third diskette and press ENTER.
- The system will now see the SCSI device properly, so the normal installation procedure can continue from CD-ROM at this point. Press **ENTER** to continue whenever prompted until you reach the "continue Setup" prompt.
- To continue Setup, press **C**.
- When prompted, insert the Windows NT Workstation CD-ROM.

Installing the Windows NT Workstation Software

- 1. Press ENTER.
- 2. Scroll through the Windows NT Workstation licensing agreement, and, if you agree, press **F8**.
- 3. The detected hardware and software components are displayed. To accept the defaults, press **ENTER**.
- 4. Information related to the existing partitions is shown. To install Windows NT on the selected partition, press **ENTER**.
- 5. When prompted to format the partition, select **Format the partition using the NTFS file system**, and press **ENTER**.
- 6. Accept the default location to install Windows NT files, then press ENTER.
- 7. Allow Setup to examine the hard disk for corruption, then press **ENTER**.
- 8. When prompted to insert the Adaptec 7800 Family Manager Set for Windows NT 4.0 disk, insert the MITEL 2940UW Driver Software floppy diskette, then press **ENTER**.
- 9. Remove all floppy diskettes and CD-ROMs from their drives.
- 10. Press **ENTER** to restart the Impresa ND server. The system will convert the FAT file system to NTFS and restart itself again.

Setting up Windows NT

- 1. In the Insert Disk dialog box, click OK.
- 2. In the **Windows NT Setup** dialog box, click **Next**. This gathers information about the computer.
- 3. In the **Name** box, type the registered user's name.
- 4. In the **Organization** box, enter the registered user's company name and click **Next**.
- 5. In the **Product ID** box, type the 20-digit product ID. This number can be obtained from the certificate of authenticity and click **Next**.
- 6. In the **Per Server for** box, type the number of concurrent connections that have been purchased by the customer and click **Next**.
- 7. In the name box, enter the host name that was used previously by the Impresa ND server (for example "IMPRESA1").
- 8. In the Server Type dialog box, click Stand-Alone Server, and then click Next.
- 9. In the **Password** box, type a password for the local Administrator account (for example "mitel").
- 10. In the Confirm Password box, retype the same value and click Next.
- 11. Create an emergency repair disk: click Next.
- 12. In the Select Components dialog box, click Next.
- 13. In the Windows NT Setup dialog box, click Next.
- 14. When prompted for how the Impresa ND server will participate on a network, verify that the **This computer will participate on a network** and **Wired to the network** options are selected and click **Next**.
- 15. When prompted to install Microsoft Internet Information Server, install IIS (version 2): click **Next**.

Installing the Network Adapter Driver

- 1. In the Windows NT Workstation Setup dialog box, click Select from list.
- 2. In the Select Network Adapter dialog box, select **Have Disk**.
- 3. When prompted, insert the 9148-000-035-NA NT Server PC 143022901 NTWK ETH-REXPRS PRO DRIVER floppy diskette into the floppy disk drive, and click **OK**.
- 4. In the Select OEM Option dialog box, click Intel EtherExpress PRO Adapter and then click OK.
- 5. In the Windows NT Workstation Setup dialog box, verify that the **adapter** has been selected, and then click **Next**.

Configuring Network Connectivity

- 1. In the Network Protocols box, clear NWLink IPX/SPX Compatible Transport, and then click Next.
- 2. Accept all default network services and click **Next**.

- 3. To install the selected networking components, click Next.
- 4. When the Adapter Properties dialog box is displayed, accept the defaults and click **OK**.
- 5. When prompted "if there is a DHCP server on the network", click **No**.
- 6. On the IP Address tab, specify an IP address for the Impresa ND server (for example, "127.0.0.2") and, if applicable, the IP address of the network's default gateway, then click **DNS**.
- 7. In the Domain box, specify the domain name of a DNS server.
- 8. Under DNS Service Search Order, click Add.
- 9. In the TCP/IP DNS Server dialog box, type the IP address of a DNS server on the specified domain and click **Add**.
- 10. If you would like to resolve computer names to IP addresses, click WINS and then
 - In the **Primary WINS Server** box, type the IP address of the primary WINS server.
 - Click Enable DNS for Windows Resolution.
 - Click Apply, then click OK.
- 11. In the Windows NT Workstation Setup dialog box, accept the defaults and click Next.
- 12. To start the network, click Next.
- 13. Click **Domain**, then type the name of the domain in which the Impresa CI server will participate.
- 14. Click Create a Computer Account in the Domain.
- 15. Click Next.
- In the Create Computer Account in < domain> Domain dialog box, type the username and password of the on-site administrator who has rights to add workstations to that domain and click OK.
- 17. Click **Finish**. The Impresa ND server is now configured to run Windows NT Workstation.
- 18. In the Microsoft Internet Information Server 2.0 Setup dialog box, accept the defaults and click **OK**.
- 19. When prompted to create the C:\WINNT\System32\inetsrv folder, click Yes.
- 20. In the Publishing Directories dialog box, click OK.
- 21. When prompted to create the C:\InetPub subdirectories, click Yes.
- 22. In the Install Drivers dialog box, click **SQL Server**, then click **OK**.
- 23. In the Date/Time Properties dialog box, choose the call center's time zone, date, and time, then click **Close**.
- 24. In the Detected Display dialog box, click **OK**.
- 25. In the Display Properties dialog box, click Test, and then click OK.
- 26. After the test is complete, click **Yes**.
- 27. Click **OK** to save the settings.
- 28. Click **OK** to close the Display Properties dialog box.

- 29. Remove all floppy diskettes and the CD-ROM from their drives.
- 30. Restart the computer.

Installing the Service Pack

- 1. Log into the Impresa CI server locally using the default local Windows NT Administration login (for example, "Administrator", "mitel").
- 2. Close the Welcome to Windows NT dialog box.
- 3. Insert the Windows NT Workstation Service Pack xx CD-ROM into the CD-ROM drive.
- 4. Click **Install Service Pack xx** (for example, Service Pack 5).
- In the Windows NT Service Pack Setup dialog box, read the license agreement. If you
 agree with the terms of the license agreement, click the Accept the License Agreement (must accept before installing the Service Pack) option, then click Install.
- 6. When prompted to restart the computer, remove the CD-ROM from the CD-ROM drive, and click **Restart**.

Installing the Video Driver

- 1. Log into the Impresa ND server locally using the default local Windows NT Administration login (for example, "Administrator", "mitel").
- 2. In the Control Panel, double-click **Display**.
- 3. Click Settings.
- 4. Click **Display Type**.
- 5. Click Change.
- 6. Click Have Disk.
- 7. Insert the ATI Technologies Inc. 3D RAGE PRO TURBO floppy diskette into the floppy diskette drive.
- 8. Click Ati.inf, then click Open.
- 9. In the Install From Disk dialog box, click OK.
- 10. In the Change Display dialog box, click **ATI Technologies Inc. 3D RAGE PRO TURBO**, then click **OK**.
- 11. When you are prompted to proceed, click **Yes**.
- 12. When the Installing Driver dialog box opens, remove the floppy diskette from the floppy diskette drive, and then click **OK**.
- 13. Click **Yes** to restart the computer.

Configuring the Video Driver

- 1. Log into the Impresa ND server locally using the default local Windows NT Administration login (for example, "Administrator", "mitel").
- 2. When the Invalid Display Settings dialog box opens, click OK.

3. In the Display Properties dialog box, choose and test the desired settings for optimum performance.

Installing Internet Explorer

- 1. Access the Windows NT Workstation Service Pack xx CD-ROM.
- 2. Click Install Microsoft Internet Explorer 4.01 Service Pack 2.
- 3. Click Install IE 5 for Intel-based Systems.
- 4. In the **Confirm File Open** dialog box, click **Open**.
- 5. In the Internet Explorer 5 Active Setup dialog box, click Next.
- 6. If you agree with the terms of the license agreement, click **Accept the license agreement**, then click **Next**.
- 7. In the Installation Option dialog box, click **Next**.
- 8. In the Windows Desktop Update dialog box, click **No**, then click **Next**.
- 9. In the Active Channel Selection dialog box, click the call center's country, then click **Next**.
- 10. In the Destination Folder dialog box, click **Next**.
- 11. In the Internet Explorer 5 Active Setup dialog box, click OK.
- 12. Remove the CD-ROM from the CD-ROM drive and restart the computer.

Re-installing the Service Pack

- 1. Log into the Impresa ND server locally, using the default local Windows NT Administration login (for example, "Administrator", "mitel").
- 2. Close the Welcome to Windows NT dialog box.
- 3. Insert the Windows NT Workstation Service Pack xx CD-ROM into the CD-ROM drive.
- 4. Click Install Service Pack xx (for example, Service Pack 5).
- In the Windows NT Service Pack Setup dialog box, read the license agreement. If you agree with the terms of the license agreement, click Accept the License Agreement (must accept before installing the Service Pack) option, then click Install.
- 6. When prompted to restart the computer, remove the CD-ROM from the CD-ROM drive, then click **Restart**.

Installing Symantec pcAnywhere version 9.2 (Host Version)

- 1. Log into the Impresa ND server locally using the default local Windows NT Administration login (for example, "Administrator", "mitel").
- 2. Insert the Symantec pcAnywhere CD-ROM in the CD-ROM drive.
- 3. Click Install Current Software.
- 4. Click pcAnywhere 9.2 Host Only.
- 5. In the Welcome dialog box, click **Next**.

- 6. In the Select Installation Type dialog box, click the **Typical** button.
- 7. In the User Information dialog box, verify that the Name and Company values are correct, and then click **Next**.
- 8. If you agree with the terms of the license agreement, click **Yes** when prompted to accept or decline the license agreement.
- 9. In the Choose Destination Location dialog box, click **Next**.
- 10. In the Setup Review dialog box, click Next.
- 11. In the Symantec Support Solutions dialog box, click Next.
- 12. In the How to Reach Us dialog box, click Next.
- 13. In the Windows 9x/NT Solutions dialog box, click Next.
- 14. Provided that the software has already been registered on the customer's behalf, in the Register Now dialog box, click **Skip**.
- 15. In the Additional Options dialog box, click Next.
- 16. When the Setup Complete dialog box is displayed, remove the CD-ROM from the CD-ROM drive, then click **Finish**.

Creating a Domain User Account for the Impresa Administrator

- 1. On the primary domain controller, create an Impresa Administrator account as a domain user.
- 2. Add this domain user account to the local Administrator's group on the Impresa ND server (see Adding members to the local Impresa Administrators group in Chapter 5, Installing the server environment).

Configuring the MODEM Driver

- 1. At the Impresa ND server, log into the Windows NT domain as the Impresa Administrator.
- 2. Insert the MODEM driver floppy diskette or CD-ROM (for example, the U.S. Robotics Connections Volume 3 CD-ROM) into the floppy diskette or CD-ROM drive.
- 3. In the Control Panel, click **Modems**.
- 4. In the Install a New Modem dialog box, click **Next**. The program queries all communications ports automatically.
- 5. When the standard modem is found, click **Change**.
- 6. In the Install a New Modem dialog box, click **Have Disk**.
- 7. Click Browse.
- 8. Find and open your CD-ROM drive.
- 9. In the Install From Disk dialog box, click **OK**.
- 10. In the Manufacturers box, click the name of the MODEM driver that matches the installed MODEM card (for example, U.S.Robotics Access Corp).
- 11. In the Models box, click the name of the installed MODEM card (for example, **Sportster** 56000 Voice Internal), then click OK.
- 12. Verify your selection and click **Next**.
- 13. Click Finish.
- 14. In the Modem Properties dialog box, select the settings that are optimum for the site (see *Configure the modem connection* in Appendix I, *Remote access*) and click **Close**.

Replacing ISA Expansion Cards

Power-down the server before replacing any hardware. In all cases, consult the installation instructions that come with the expansion card.

CAUTION

Leave the new boards in their anti-static wrappers until you are ready to install them. Handle the boards carefully and only by their edges. Always wear an anti-static wrist strap.

To replace an expansion card:

- 1. Power off the Impresa ND server and disconnect it from the power source.
- 2. Remove the chassis cover and set it aside.
- 3. Unfasten the end-bracket of the card/board.
- 4. Gently pull the card/board out of the ISA slot.
- 5. Configure the jumper settings and/or DIP switches on the card/board as described below (see *Default card configurations*).
- 6. Insert the new card/board into the empty ISA slot.
- 7. Fasten the card/board's end bracket to the back of the chassis.
- 8. Replace the chassis cover and reconnect the Impresa ND server to its power source.

Configuring the ISA Card

Before installing an ISA board/card in the Impresa ND server, determine the Input/Output (I/O) address and Interrupt Request (IRQ) setting of each board/card.

Note: To avoid I/O address conflicts and IRQ conflicts between cards, use these MITEL defaults. Use the Windows NT Diagnostics utility to identify any conflicts.

IRQ Level	I/O Address	Description
11	A300	AFC card
10	D0000	Dialogic 4-port card

Default card configuration—800S (Non-redundant) system

AFC card The MITEL AFC card requires the reservation of a unique IRQ and an I/O address. All configuration is done with jumpers and Dual In-line Pin (DIP) switches on the card. For more information about the installed AFC card (PN 9400-700-301-NA), see the MITEL *AFC Installation Instructions*.

To configure the AFC card

- 1. Locate the **P10** jumper (IRQ level setting).
- 2. Short-out pins 3 and 4.
- 3. Locate DIP switch **S1** (I/O address setting).

Note: The default setting is hexadecimal address range A300.

- 4. Open or close the DIP switch settings as follows:
 - S1-1-Open
 - S1-2-Close
 - S1-3—Open
 - S1-4-Open
- 5. Set the **RUN/PRG** switch to the "RUN" position.
- 6. Remove the fiber connector lead protectors from the card before you insert the card into the ISA slot.

Re-installing the D/41H Dialogic Card

Read all safety instructions in the D/41H Dialogic card (referred to hereafter as the Dialogic card) Installation Guide before beginning the replacement procedure:

- 1. Take note of the available IRQs, I/O and memory base. This will save you a lot of time and confusion later.
- 2. It is strongly recommended to keep the default hardware settings on the Dialogic card, but it is possible to change these settings if another device on the system is using those configurations. There are three components on the card that can be modified, with each component having different options. The technical terminology used for these is jumper settings.

The first component is the Interrupt Level (IRQ) setting, situated on JP1. By default, the IRQ is set to 10. If this interrupt level is already being used, move the jumper to a different IRQ.

The second component is the base memory address, situated on JP5 and JP6. By default, the base memory address is set to D000H. If this address is being used by another device, move the jumpers to a different position to assign a new base memory address.

The third component is a series of switches called the Offset Address, situated on SW1. These switches are labeled one to four and are located on the right hand side of the card, along with the other jumpers.

Note: Refer to the D/41H Dialogic Card documentation included with your new Dialogic card for the complete list of all the settings.

- 3. Once the jumper settings have been corrected (if necessary) on the Dialogic card, you can now turn off your PC and remove the cover. There should be an available ISA slot where you will insert your Dialogic card. Ensure that it is firmly placed in the casing. Put the cover back on your PC and power it back up.
- 4. To install the Dialogic software, refer to the D/41H Dialogic Card documentation included with your new Dialogic card.
- 5. To configure the Dialogic software, click **Start**, **Programs**, click **Dialogic System Software**, and then click **Dialogic Configuration Manager-DCM**.
- 6. When the Dialogic Configuration Manager-DCM screen opens, click Action and then click Add Device. On the right-hand side is a list of devices supported by this software. Click the D/41H and, on the left side of the screen, click the type of card that is physically present in your system.
- 7. When the next screen appears, the Wizard will ask you to identify the device by entering the serial number in the space provided. This step becomes very important if you have more than one Dialogic card in your system. Now that the DCM recognizes the new devices, it is important to configure it properly to correctly start the services. Under the *System* tab, click on the parameter you wish to modify. Lower down on the same window, the *Value* field allows you to select a value.
- **Note:** The *Value* field only displays the available system parameters. It is strongly recommended to select one from the list. For the correct entries, refer to step 2. Once you have entered the setting, click **OK**.
- 8. Click the **Action** menu and then click **Start Service** to start the services. If the service is started successfully, you should be prompted with a confirmation message. If the service failed to start, return to step 2 and ensure you have entered the correct settings in the *DCM Properties* window.

Once you successfully start the services, you will have completed the installation and configuration of the Dialogic card and can proceed to install the Impresa ND application.

Re-installing the TALK TO Card

Read all safety instructions in the TALK TO Installation Guide before beginning the replacement procedure.

To replace the TALK TO card:

- 1. Prepare the system for power shutdown by following the procedures outlined in the specific application and operating system software.
- 2. Turn off the AC power switch located on the PC unit.
- 3. Remove all interface cables attached to the PC unit, including the monitor, printer and LAN connection.
- 4. Remove the AC power cord for the PC unit from the AC source.
- 5. Carefully remove the cover mounting from the PC unit (save the screw for the expansion slot cover).
- 6. Remove the faulty TALK TO card.

- 7. Ensure the settings for the replacement TALK TO card match the settings on the faulty card (the address selection jumper should be set to 300, and the IRQ should be set to 11).
- 8. Hold the top of the TALK TO card and insert the card into the slot. Press firmly to seat the connector (it will snap into place).
- 9. Align the slot in the TALK TO card retaining bracket with the hole in the rear panel of the unit and insert the screw retained in step 5.
- 10. Replace the PC unit cover.
- 11. Attach the modular line cord into the top (Line) jack on the rear of the TALK TO card.
- 12. Plug in the PC unit power cord.

Re-installing the Fiber Controller (AFC) Card

The AFC Card has jumpers and DIP switches that allow you to program the Interrupt Request Level (IRQ), I/O Base Address, and Clock Termination.

IRQ Level and Base Address settings ensure that the communication channels with the motherboard and the ISA Interconnect Board are established. The AFC drivers are designed with the assumption that the AFC Card will be set to a particular I/O Base address.

Card Type	IRQ Level	Base Address	I/O Address			
Ethernet NIC	10	C8000-C9FFF	280			
Other	12†					
IDE Interface 1	14					
IDE Interface 2	15					
AFC	11	D0000-D7FFF	A300			
Other	5					
†Usually dedicated for the on-board mouse port, however, user-available otherwise.						

IRQ and I/O Base Address Programming

RUN/PRG Switch

This switch is accessible from the rear of the gateway (see AFC Card IRQ and Address Selection). For proper operation of the Application Gateway or Server, this switch must be set to the factory default "RUN" position.

IRQ Settings

The IRQ Levels on the AFC Card can be programmed using the P10 jumpers. See the "AFC Card IRQ and Address Selection" diagram for location of the P10 jumpers on the AFC Card. The following table lists all the possible IRQ settings on the AFC card.

IRQ Level	Header	Jumper Position
5	P10	13-14
7	P10	9-10
9	P10	11-12
10	P10	1-2
11	P10	3-4
12	P10	5-6
15	P10	7-8

AFC IRQ Setting

I/O Base Address Settings

The I/O Base Address on the AFC Card can be programmed using the S1 dip switch. See the "AFC Card IRQ and Address Selection" diagram for location of the S1 dip switch on the AFC Card. The following table lists all the possible I/O settings on the AFC card.

Note: Hex Address Range A300 (shaded) is the default setting on the S1 device.

Hex Address Range	S1-4	S1-3	S1-2	S1-1	Also Mirrored to the Following
200	0	0	0	0	0600, A00, E00, 1200, 1600, 1A00, 1E00
300	1	0	0	0	0700, B00, F00, 1300, 1700, 1B00, 1F00
2200	0	1	0	0	02600, 2A00, 2E00, 3200, 3600, 3A00, 3E00
2300	1	1	0	0	02700, 2B00, 2F00, 3300, 3700, 3B00, 3F00
4200	0	0	1	0	04600, 4A00, 4E00, 5200, 5600, 5A00, 5E00
4300	0	1	0	0	14700, 4B00, 4F00, 5300, 5700, 5B00, 5F00
6200	0	1	1	0	06600, 6A00, 6E00, 7200, 7600, 7A00, 7E00
6300	1	1	1	0	06700, 6B00, 6F00, 7300, 7700, 7B00, 7F00
8200	0	0	0	1	18600, 8A00, 8E00, 9200, 9600, 9A00, 9E00
0=Close, 1	=Open				

Hex Address Range	S1-4	S1-3	S1-2	S1-1	Also Mirrored to the Following
8300	1	0	0	1	18700, 8B00, 8F00, 9300, 9700, 9B00, 9F00
A200	0	1	0	1	1A600, AA00, AE00, B200, B600, BA00, BE00
A300	1	1	0	1	1A700, AB00, AF00, B300, B700, BB00, BF00
C200	0	0	1	1	1C600, CA00, CE00, D200, D600, DA00, DE00
C300	1	0	1	1	1C700, CB00, CF00, D300, D700, DB00, DF00
E200	0	1	1	1	1E600, EA00, EE00, F200, F600, FA00, FE00
E300	1	1	1	1	1E600, EA00, EE00, F200, F600, FA00, FE00
0=Close, 1	=Open				

AFC I/O Base Address Settings (continued)



AFC Card IRQ and Address Selection

Impresa Nurse Dispatch

Appendix B Installing and Configuring the Dialogic Drivers

Installing the Dialogic Drivers

- 1. Upon insertion of the Impresa Nurse Dispatch Installation Disc, your computer may start the Install Wizard on its own. If it does not, click the **Start** button in the lower left corner of your screen, click **Settings**, click **Control Panel**, and then double-click on the **Add/Remove Programs** icon.
- 2. When the Add/Remove Programs Properties window appears, click the **Install** button on the Install/Uninstall tab.
- 3. When the Install Program from Floppy Disk or CD-ROM window appears, click Next.
- 4. When the Run Installation Program window appears, accept the default setting and click **Finish**. If Windows is unable to locate your installation program, click **Browse** in the Run Installation Program window, then click the arrow beside the Look in: dialog box to access the drop-down menu.
- 5. Find your CD-ROM drive and click it.



- 6. Double-click on the Dialogic Drivers folder.
- 7. When the Run Installation Program window appears, click **Finish**. This will launch the Dialogic System Software program.

8. When the Welcome to Dialogic window appears, read its contents and click Next.

Welcome to Dialogic Set	up	×
	This program will install Dialogic System Software _ SDK for Windows NT System Release 5.0 onto your computer.	
	It is strongly recommended that you exit all Windows programs before running this Setup program.	
	Click Cancel to quit Setup and then close any programs you have running. Click Next to continue with the Setup program.	
<u>s</u>	WARNING: This program is protected by copyright law and international treaties.	
	Unauthorized reproduction or distribution of this program, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under law.	
	<u>Next</u> Cancel	

9. When the Registration window appears, click on the Name: dialog box and type **<your name>**, then click on the Company: dialog box and type **<your company name>**, then click **Next**.

10. When the Setup Options window appears, click the **Custom** installation button.

Setup Options:		×
	Using the mouse following setup o	e (or tab and space bar), please select one of the options:
		TYPICAL (240 MByte): Installs options needed by most CT developers, including the development library and samples. Online help may be accessed from CD-ROM.
		COMPLETE (600 MByte): Installs everything.
	₽	COMPACT (22 MByte): Installs only a basic runtime environment.
		CUSTOM: Lets you choose exactly which software components to install.
		< <u>B</u> ack <u>N</u> ext > Cancel

11. Click on the **Clear All** button in the Custom Component Selection window. Click the Dialogic drivers, Firmware and Configuration Files box, then click **Next**.

Custom Component Seles	Select the components you want to install by placing check marks in adjacent boxes: Dialogic Drivers, Firmware & Configuration Files 20.0 MB Dialogic Development SDK 1.0 MB Dialogic Development SDK 1.0 MB Sample Programs 20.0 MB Online Documentation 4.0 MB Performance Counters for Win NT Perf. Monitor 1.0 MB ISDN Package 5.0 MB GlobalCall API Package 5.0 MB TextTalk 1.5 MB DM3 65.0 MB GDK 4.0 MB	
	< <u>Back</u> <u>Next></u> Cancel	

- 12. Note the destination directory in the Destination Location window and click Next.
- 13. Note the default program group folder and click Next.

14. Ensure the installation settings listed in the Setup Options window are correct and then click **Next**. If the settings are incorrect, click **Back**. The Dialogic Drivers, Firmware and Configuration Files will be copied to the specified directory.



15. When the Dialogic Setup Finish Options Window appears, clear all checked boxes and click **Finish**.

Configuring the Dialogic Drivers

Now that the Dialogic System Software is installed, the software needs to be configured.

- 1. In the lower left corner of your screen, click **Start**, click **Programs**, click **Dialogic System Software** and click **Dialogic Configuration Manager - DCM**.
- 2. If the "Computer Name Dialogic Configuration Manager" window appears, click **Local** and click **Connect**.

Computer Name - Dialogic Configuration Manager				
E Select Comp	uter			
C Local	DECUYSPC			
O Remote	KEnter Remote Con	nputer Name> 💌		
Time elapsed: 00 : 00 : 00				
Connect		Cancel		

3. When the "Dialogic Configuration Manager - DCM" window opens, click Add Device.

<u></u> 2	ialogic	: Config	uration I	Manager				- 🗆	×
<u>F</u> ile	⊻iew	Action	<u>S</u> ervice	<u>H</u> elp					
		A <u>d</u> d Dejet Dejet <u>C</u> onfi Restr	D <mark>evice</mark> e Device gure Device pre Device	ce Defaults	Ctrl+D Ctrl+L Ctrl+F Ctrl+Z	5	())	?	
	Ē	<u>E</u> nab Disat	le Device de Device		Ctrl+E Ctrl+I				
		A <u>u</u> to	Detect De	vices	Ctrl+O				
		Re <u>f</u> re	sh						
		Start Stop	Device Device						
Dia Add (logic Sy: Device	stem Ser	vice Statu	s: St	opped				

4. The "Add Hardware Wizard" window appears. Click **D/x1H** in its right pane, which shows a list of devices supported by this software. Then click the type of card in the window's left pane that is physically present in your system D/41H and click **Next**.

Dialogic (Configuration Manager - Ad	d Hardware Wizard	X
	This wizard will walk you through configuration of a Dialogic board you wish to install, first select the model. Press F1 for details.	i the installation and . To select the board family, then the	
F	amily:	Model:	
	0/42-PCI 0/x1D 0/x1D-PCI 0/x1E 0/x1E-PCI 0/x1H 0/x1H 0/x1H 0/x1J 0/x1J 0/x1J 0/x1G/HD 0/ALOG/HD 0/ALOG/HD 0/ALOG/HD	D/21H D/41H	
	< Back	ext > Cancel Help	

5. When the InstallWizard asks you to uniquely identify your device, type a unique identifier, such as its serial number, in the space provided. This step becomes very important if you have more than one Dialogic Card in your system. Click **Next**.

Dialogic	Configuration Manager - Add Hardware Wizard	х		
Enter a name for the board that will uniquely identify it from other boards of the same model. For example, the serial number of the board could be entered here.				
D/41H · board1				
		_		
	< <u>B</u> ack <u>N</u> ext > Cancel Help			

6. Now that the DCM recognizes the new devices, it is important to configure it properly so your PC will correctly start the services. Under the System tab, click on the address parameter. In the Edit pane lower on the System tab, click on the Value drop-down menu arrow and select d8000. Then click the interrupt parameter near the top of the System tab, just below the address parameter you just changed. In the Edit pane, click on the Value drop-down menu arrow and select 10. Click **OK**.

7. The next step consists of starting the services. From the Service menu, click **Start Service**. A window displaying the status of the service should now appear.

🚟 Dialogic Configuration Manager 📃 🗖 🗙					
<u>File ⊻iew Action</u> <u>Service</u> <u>H</u> elp					
Startup Mode					
Start Service Ctrl+R Stop Service Ctrl+T D/x1H D/x1H D/41H- <serial#> TDM Bus Bus-0</serial#>					
Dialogic System Service Status : Stopped					
Start Dialogic System Service					

You can also start service for the Dialogic card you have added with a click of the green button icon on the DCM tool bar.

🚟 Dialogic Configuration Manager 📃 🗖 🗙					
<u>F</u> ile <u>V</u> iew <u>A</u> ction <u>S</u> ervice <u>H</u> elp					

Start Service					
Start Service Configured Devices on_DECUYSPC D/x1H D/x1H D/41H-board1 D/41Bus Bus-0					
Dialogic System Service Status : Stopped					
Start Dialogic System Service					

8. If the service was started successfully, you should be prompted with a confirmation message. Click OK. The red circle in the status icon for your Dialogic card will turn green. If the service failed to start, ensure you have entered the correct settings in the DCM Properties screen.

You have successfully completed the installation and configuration of the Dialogic card. The next step is to install Impresa Nurse Dispatch.

Impresa Nurse Dispatch

Appendix C Uninstalling Client and Server Software

Use the procedure in this section to remove client software from a PC that will no longer be used to support Impresa Nurse Dispatch software. If you will be upgrading client software, do not uninstall the software first—refer to the procedures in Chapter 8, "System Maintenance and Troubleshooting" for more information.

Note: Before uninstalling the server software and reinstalling the server, you must backup the database. This procedure can be found in the section Before You Begin, in Chapter 8, "System Maintenance and Troubleshooting".

Follow this procedure to uninstall an existing version of any client software.

- 1. Log into the client PC as the Impresa Administrator.
- 2. Click Start, point to Settings, and then click Control Panel.
- 3. Double-click Add/Remove Programs.
- 4. On the Install/Uninstall tab, click (program name).
- 5. Click **Add/Remove**.
- **Note:** When uninstalling MS Internet Explorer 5.0, select Restore the previous Windows configuration, and then click **OK**. When the Tools Setup dialog box appears, click **OK**. If asked "Are you sure?" click **Yes**. When the Internet Explorer 5 Setup dialog box appears, note which components are affected by reverting to your previous Internet component. The uninstall procedure will take a few minutes. To complete the uninstall, click **Restart Windows** when prompted. When your computer restarts, the Internet Explorer version you have reverted to will launch and offer you a quick tour of its features.
- 6. In the **Confirm File Deletion** dialog box, click **Yes**.
- 7. In the Remove Shared File dialog box, click Yes To All.
- 8. When prompted once more to remove the shared file, click **Yes.**
- 9. When the **Remove Programs from Your Computer** dialog box finishes the uninstall, click **OK**.
- 10. If the Add/Remove Program Properties dialog box appears, click OK.
- 11. Close the Control Panel.

Impresa Nurse Dispatch

Appendix D Installing Microsoft Internet Explorer 5 and Internet Tools

To install Microsoft Internet Explorer 5.0 and Internet tools:

- 1. Insert the MITEL[®] Impresa[™] Nurse Dispatch CD-ROM.
- 2. Upon insertion of the CD-ROM, your computer may start the Install Wizard on its own. If it does not, click the **Start** button in the lower left corner of your screen, click **Settings**, click **Control Panel** and then double-click the **Add/Remove Programs** icon.
- 3. When the Add/Remove Programs Properties window appears, click the **Install** button on the Install/Uninstall tab.
- 4. When the Install Program from Floppy Disk or CD-ROM window appears, click **Next**.
- 5. When the Run Installation Program window appears, accept the default setting and click **Finish**. If Windows is unable to locate your installation program, click **Browse** in the Run Installation Program window.
- 6. Click the arrow beside the Look in: dialog box to access the drop-down menu, then click your CD-ROM drive.



7. Double-click the Internet Explorer 5.0 folder.



- 8. Double-click the **le5setup.exe** icon.
- 9. In the Run Installation Program window, click **Finish**.
- 10. When the Welcome window appears, read its contents, click the circle beside **I accept the agreement** if you agree to its terms, and click **Next**.

11. In the Windows Update: Internet Explorer and Internet Tools window, accept the default Install Now - Typical set of components, and click **Next**. The install should take a few minutes.



12. In the Restart Computer window, click **Finish**. Your computer will reboot to complete the Internet Explorer 5.0 installation.

Impresa Nurse Dispatch

Appendix E Installing Java Runtime Environment

- 1. Insert the MITEL[®] Impresa[™] Nurse Dispatch CD-ROM.
- 2. Upon insertion of the CD-ROM, your computer may start the Install Wizard on its own. If it does not, click the **Start** button in the lower left corner of your screen, click **Settings**, click **Control Panel** and then double-click the **Add/Remove Programs** icon.
- 3. When the Add/Remove Programs Properties window appears, click the **Install** button on the Install/Uninstall tab.
- 4. When the Install Program from Floppy Disk or CD-ROM window appears, click **Next**.
- 5. When the Run Installation Program window appears, accept the default setting and click **Finish**. If Windows is unable to locate your installation program, click **Browse** in the Run Installation Program window.
- 6. Click the arrow beside the Look in: dialog box to access the drop-down menu and click the CD-ROM drive.

Browse		? ×
Look in: dialogic English NA mitel Ms mtemp nt nt	 (C:) 3½ Floppy (A:) (C:) Nd_ver1_1_0 (D:) writer_grp on 'mediap2' (E:) edwardtr\$ on 'nant03' (M:) Pcapps on 'nant03' (S:) Network Neighborhood My Briefcase 	Autoexec.b. jdk1_2_1-w etup Files
File <u>n</u> ame: Files of <u>t</u> ype:	Programs	 ▼ Cancel

7. Double-click the Java Runtime Environment folder.

Browse	? ×					
Look jn: 😰 Nd_ver1_1_0 (D:) 💌	🗈 🏕 📰					
Administation Installation						
🚞 Guardian Installation						
🚞 Internet Explorer 5.0						
🔁 Java Runtime Enviroment						
🖄 Server Installation						
1						
File <u>n</u> ame:	<u>O</u> pen					
Files of tupe: Programs						
These of gype. Theograms						

- 8. Double-click the **jre13.exe** icon.
- 9. Note the installation program in the Run Installation Program window, and then click **Finish**.



- 10. Read the Software License Agreement and, if you accept its terms, click Yes.
- 11. In the Choose Destination Location window, note the location where Java Runtime Environment will be installed and click **Next** to complete the installation. All required files will be copied to the specified directory.

Appendix F Installing MiTAI

There are three ways to install MiTAI, depending on which card connection you are using. The following procedures list in order how to install MiTAI with:

- A TALK TO CX card (SX-200)
- Remote PBX Access (IPERA 2000)
- An AFC card (SX-2000)

Installing MiTAI with a TALK TO CX Card (for an SX-200 PBX)

To install MiTAI with a TALK TO CX card, follow this procedure:

Note: If this is the first time you are installing MiTAI, jump to step 5.

- 1. Click the **Start** button in the lower left corner of your screen, click **Settings**, click **Control Panel** and then double-click the **Add/Remove Programs** icon.
- 2. Scroll through the program on the Install/Uninstall tab until you find Mitel Telephony Application Interface, then double-click **Mitel Telephony Application Interface**.
- 3. When the Confirm File Deletion window appears, click **Yes**.
- 4. When the Remove Programs window indicates that the uninstall has been completed, click **OK**.
- 5. Insert the Mitel Impresa ND Installation Disc.
- 6. Upon insertion of the disk, your computer will likely start the Install Wizard on its own. If this occurs, jump to step 10. If this does not occur, click the Start button in the lower left corner of your screen, click Settings, click Control Panel and then double-click the Add/Remove Programs icon.
- 7. When the Add/Remove Programs Properties window appears, click the **Install** button on the Install/Uninstall tab.
- 8. When the Install Program from Floppy Disk or CD-ROM window appears, click Next.
- 9. When the Run Installation Program window appears, accept the default setting. Click **Finish**.
- **Note:** If Windows is unable to locate your installation program, click **Browse** in the Run Installation Program window. Click the arrow beside the Look in: dialog box to access the drop-down menu, then click your CD-ROM drive. Double click the MiTAI folder, then double-click the Setup.EXE icon. In the Run Installation Program window, click **Finish**.
- 10. When the Welcome window appears, read its contents and click Next.
- 11. Read the Software License Agreement and, if you accept its terms, click Yes.
- 12. When the System Information window appears, click Next.

13. When asked to initialize settings, accept the default settings and click Next.



14. Note the default destination for the setup file and click **Next**.
15. Select the **Talk To card** and click **Next**.



- 16. Note the folder that the Install Wizard will add your MiTAI program icon to and click Next.
- 17. When you want to begin copying files, click **Next** in the Start Copying Files window.

18. Click the **Hardware** tab, click the interrupt (IRQ) drop-drown menu arrow and select **11**, then click the I/O Address drop-down menu and select **300**, then click **OK**.

Mitel TalkTo Settings
Software Hardware Versions
Hardware Jumper Settings Interrupt I/O Address 300 💌
Hardware Conflict Report
OK Cancel Apply

19. When the Setup Complete window appears, click Finish.

Installing MiTAI with Remote PBX Access (for an IPERA 2000)

To install MiTAI with remote PBX access, follow this procedure:

Note: If this is the first time you are installing MiTAI, jump to step 5.

- 1. Click the **Start** button in the lower left corner of your screen, click **Settings**, click **Control Panel** and then double-click the **Add/Remove Programs** icon.
- 2. Scroll through the program on the Install/Uninstall tab until you find Mitel Telephony Application Interface, then double-click **Mitel Telephony Application Interface**.
- 3. When the Confirm File Deletion window appears, click **Yes**.
- 4. When the Remove Programs window indicates that the uninstall has been completed, click **OK**.
- 5. Insert the Mitel Impresa ND Installation Disc.

- 6. Upon insertion of the disk, your computer will likely start the Install Wizard on its own. If it does not, click the **Start** button in the lower left corner of your screen, click **Settings**, click **Control Panel** and then double-click the **Add/Remove Programs** icon.
- 7. When the Add/Remove Programs Properties window appears, click the **Install** button on the Install/Uninstall tab.
- 8. When the Install Program from Floppy Disk or CD-ROM window appears, click Next.
- 9. When the Run Installation Program window appears, accept the default setting. Click **Finish**.
- **Note:** If Windows is unable to locate your installation program, click **Browse** in the Run Installation Program window. Click the arrow beside the Look in: dialog box to access the drop-down menu, then click your CD-ROM drive. Double click the MiTAI folder, then double-click the Setup.EXE icon. In the Run Installation Program window, click **Finish**.
- 10. When the Welcome window appears, read its contents and click Next.
- 11. Read the Software License Agreement and click Yes.
- 12. When the System Information window appears, click Next.
- 13. When asked to initialize settings, accept the default settings and click Next.



- 14. Note the default destination for the setup file and click **Next**.
- 15. Select Remote PBX Access and click Next.

Initialize Settings	X
Initialize Settings	Select the Hardware this installation is for. C Application Fiber Controller (AFC) card Remote PBX Access C TalkTo card Mitel SX2000 on NT
	 Miller 3A2000 0H N1 < <u>Back</u> <u>Next</u> > Cancel

- 16. Note the folder that the Install Wizard will add your MiTAI program icon to and click Next.
- 17. When you want to begin copying files, click **Next** in the Start Copying Files window.
- 18. When the Setup Complete window appears, click Finish.

Installing MiTAI with an AFC Card (for an SX-2000 PBX)

To install MiTAI with an AFC card, follow this procedure:

Note: If this is the first time you are installing MiTAI, jump to step 5.

- 1. Click the **Start** button in the lower left corner of your screen, click **Settings**, click **Control Panel** and then double-click the **Add/Remove Programs** icon.
- 2. Scroll through the program on the Install/Uninstall tab until you find Mitel Telephony Application Interface, then double-click **Mitel Telephony Application Interface**.
- 3. When the Confirm File Deletion window appears, click **Yes**.
- 4. When the Remove Programs window indicates that the uninstall has been completed, click **OK**.
- 5. Insert the Mitel Impresa ND Installation Disc.

- 6. Upon insertion of the disk, your computer will likely start the Install Wizard on its own. If this occurs, jump to step 10. If this occurs, jump to step 10. If this does not occur, click the **Start** button in the lower left corner of your screen, click **Settings**, click **Control Panel** and then double-click the **Add/Remove Programs** icon.
- 7. When the Add/Remove Programs Properties window appears, click the **Install** button on the Install/Uninstall tab.
- 8. When the Install Program from Floppy Disk or CD-ROM window appears, click Next.
- 9. When the Run Installation Program window appears, accept the default setting. Click **Finish**.
- **Note:** If Windows is unable to locate your installation program, click **Browse** in the Run Installation Program window. Click the arrow beside the Look in: dialog box to access the drop-down menu, then click your CD-ROM drive. Double click the MiTAI folder, then double-click the Setup.EXE icon. In the Run Installation Program window, click **Finish**.
- 10. When the Welcome window appears, read its contents and click Next.
- 11. Read the Software License Agreement and click Yes.
- 12. When the System Information window appears, click Next.
- 13. When asked to initialize settings, accept the default settings and click Next.



14. Note the default destination for the setup file and click **Next**.

15. Select Application Fiber Controller (AFC) card and click Next.



- 16. Note the folder that the Install Wizard will add your MiTAI program icon to and click Next.
- 17. When you want to begin copying files, click **Next** in the Start Copying Files window.

18. Click the **Hardware** tab, click the interrupt (IRQ) drop-drown menu arrow and select **11**, then click the I/O Address drop-down menu and select **A300**, then click **OK**.

Mitel Applic	ation Fiber Controller (AFC) Settings	×
Software	Hardware Versions	
	· ·	
Hard	dware Jumper Settings	
Inte	errupt I/O Address Memory (Fixed Location)	
11	A300 💌 D0000 - D7FFF	
H	lardware Conflict Report	
	Interrupt 11 conflicts with EI59x	
	OK Cancel Apply	

19. When the Setup Complete window appears, click **Finish**.

Impresa Nurse Dispatch

Appendix G Installing Impresa Nurse Dispatch Server

Before uninstalling the server software and reinstalling the server, you must select the directory numbers for the digital network interface circuit (DNIC) to Dialogic card ports and backup the database. The database backup procedure can be found in the section *Before You Begin*, in Chapter 8, "System Maintenance and Troubleshooting".

To install the MITEL[®] Impresa[™] Nurse Dispatch (ND) server:

- 1. Insert the Impresa ND CD-ROM disk.
- 2. Upon insertion of the disk, your computer may start the Install Wizard on its own. If it does not, click the **Start** button in the lower left corner of your screen, click **Settings**, click **Control Panel** and then double-click the **Add/Remove Programs** icon.
- 3. When the Add/Remove Programs Properties window appears, click the **Install** button on the Install/Uninstall tab.
- 4. When the Install Program from Floppy Disk or CD-ROM window appears, click **Next**.
- 5. When the Run Installation Program window appears, accept the default setting and click **Finish**. If Windows is unable to locate your installation program, click **Browse** in the Run Installation Program window.
- 6. Click the arrow beside the Look in: dialog box to access the drop-down menu and click the CD-ROM drive.

Browse		? ×
Look in: dialogic English NA mitel Ms mtemp nt	 (C:) 3½ Floppy (A:) (C:) (Md_ver1_1_0(D:)) writer_grp on 'mediap2' (E:) edwardtr\$ on 'nant03' (M:) Pcapps on 'nant03' (S:) Network Neighborhood My Briefcase 	Autoexec.b. jdk1_2_1-w Ntdetect.co etup Files
File <u>n</u> ame: Files of <u>t</u> ype:	Programs	 ▼ Cancel

7. Double-click the **Server Installation** folder.

Browse	? ×
Look in: 😰 Nd_ver1_1_0 (D:) 💽 🖭 🥅	
Administation Installation	
🚞 Guardian Installation	
📄 Internet Explorer 5.0	
Java Runtime Enviroment	
Rever Installation	
145	
I	_
File <u>n</u> ame: Ope	n
Files of type:	
	;el

- 8. Double-click the **Setup.exe** icon.
- 9. Note the installation program in the Run Installation Program window, and then click **Finish**.
- 10. When the Mitel Impresa ND Setup window appears, read the Welcome message and click **Next**.



- 11. Read the Software License Agreement and, if you accept the contents of the agreement, click **Yes**. If you do not accept the license agreement terms, click **No**.
- 12. Read the next setup screen to ensure your system meets the prerequisites needed to install Impresa ND, then click **Next**.
- 13. Note the default drive the install wizard will store your server software on and click Next.
- 14. Note the name of the program folder the install wizard will add your server software icons to and click **Next**. The server software will be copied to the specified location/path.

Mitel Impresa Nurse Dispatch Setup	×
Select Program Folder Please select a program folder.	
Setup will add program icons to the Program Folder listed below. You may t name, or select one from the existing folders list. Click Next to continue.	ype a new folder
Program Folders:	
Mitel Impresa Nurse Dispatch	
Existing Folders:	
Administrative Tools (Common) Adobe Acrobat 4.0 Dialogic System Software Java 2 Runtime Environment Linkbot Pro 5.5	
Mitel Docs	
Mitel Impresa Nurse Dispatch Mitel Telephony Application Interface	_
InstallShield	
< <u>B</u> ack <u>N</u> ext >	Cancel

Note: This step of the procedure will take a few minutes to complete.

15. When the InstallShield Wizard Complete window appears, ensure that Yes, I want to restart my computer is selected and click **Finish**.

Mitel Impresa Nurse Dispatch	Setup
	InstallShield Wizard Complete The InstallShield Wizard has successfully installed Mitel Impresa Nurse Dispatch. Before you can use the program, you must restart your computer. Yes, I want to restart my computer now. No, I will restart my computer later. Remove any disks from their drives, and then click Finish to complete setup.
	K Back Finish Cancel

- 16. After the Impresa ND server has been restarted, log into the system using the Administrator username and password. Once you have logged in, you will be presented with the DAO 3.6 Installation Welcome Screen. Press the **Next** button to start the installation.
- 17. When the Installation Completed window appears, click **Finish** to exit the installation.

18. When the Dialogic Port Configuration window appears, click Create.

۹,	Dialogic Port Configuration
	Please enter your Dialogic port configuration. This application supports the Dialogic cards D/41H and D/21H.
	Port Name
	Direction Directory Number
	Create Delete Modify Ok

19. When the Dialogic Port Creation window appears, type the port name, direction, and directory number (the extension on the PBX that the PC is going to connect with) for each of the four circuits Impresa ND will use to connect with the PBX you have chosen.

The first four letters of the port name will always be dxxx. These letters represent all of the compatible boards used with the Impresa ND system. The next letter and number will always be **b1**, which represent the board you will be connecting to and its number. The next letter will always be **c**, which stands for circuit. The final number in the port name signifies which circuit your extension number is going to connect to, and will increase by one each time you configure a new circuit (e.g. 1,2,3, or 4).

۵,	Dialogic Port Creati	on			_ 🗆 ×
	Port Name dxx	kb1c1		(eg. dxxxb1c1)	
	Directory Number 200	0	Direction	outbound	
		Jk	Cance	el	

Note: You will have to click **Create** four times in total to configure the four NDrcuits. If you are using the paging function of Impresa ND to page nurses, you must select **inbound** as the direction for one of the four directory numbers.

20. After you have configured all four circuits, click **Ok** in the Dialogic Port Configuration window.

🐃 Dialogic Por	t Configuration	X		
Please enter your Dialogic port configuration. This application supports the Dialogic cards D/41H and D/21H.				
Port Name	dxxxb1c1 dxxxb1c2 dxxxb1c3 dxxxb1c4			
Direction inb	ound Directory Number 2003			
Create	Delete Modify Ok			

Impresa Nurse Dispatch

Appendix H System and Site Planner

Before beginning the Impresa Nurse Dispatch (ND) installation, fill in the tables on the following pages. This appendix provides the following tables to assist you in gathering the information required to configure an alarm path:

- Attendants
- Attendant Groups
- Alarm Path
- Residents
- Door Monitors
- System Parameters

Instructions for configuring the alarm path are in the *Impresa Nurse Dispatch Help System* and in the *Impresa Nurse Dispatch User Guide*. Configuration is done using the Configure menu in the Impresa ND Administration window. The alarm path configuration is done in the following order:

- 1. Paging services (necessary only if the attendant uses a pager)
- 2. Attendants
- 3. Attendant groups
- 4. Alarm paths
- 5. Residents
- 6. Door Monitors
- 7. System Parameters

Checklist:

Do the extension numbers for Impresa ND match those of the PBX?

Is the PBX programmed for camp-on? This feature makes a sound to alert an attendant who is using the telephone when an alarm is generated.

Attendants

Last Name	First Name	Telephone Ext.	Telephone Type	* Pager Number	Pager PIN	Paging Service

* Add leading digit to Pager Number

Attendant Groups

Attendant Group Name	*Attendant

* Defined in Attendants table

Alarm Path Name	*Attendant Groups for the Day Shift			*Attendant Groups for the Night Shift		
	Level 1	Level 2	Level 3	Level 1	Level 2	Level 3

Alarm Paths

* Defined in Attendant Groups table

Room #	Last Name	First Name	Phone Ext.	Phone Type	*Alarm Path Name	Pull Cord Ext.	Pull Cord Type	Pull Cord Locatio n

Residents

* Defined in Alarm Paths table

Door Monitors

Door Location	Door Extension	*Alarm Path Name	Start Time	End Time

* Defined in Alarm Paths table

System Parameters

System Parameter	Description	Setting
Telephone Off-hook Timer	The number of seconds that the monitored tele- phone can be off-hook before generating an alarm. A valid range is minimum 1 and maximum 300.	
Telephone Hold State Timer	The number of seconds that the monitored tele- phone can keep a call on hold before generating an alarm. A valid range is minimum 0 and maximum 360.	
Attendant Alarm Ring Timer	The number of seconds that the attendant's tele- phone rings when an alarm is generated. If the at- tendant does not answer during this time period, the call will proceed to another attendant. A valid range is minimum 24 and maximum 60.	
Attendant Camp-on Timer	The number of seconds that the attendant's tele- phone beeps when an alarm is generated and the attendant is busy on the telephone with a call. A val- id range is minimum 24 and maximum 60.	
Simultaneous Alarm Calls	The number of alarms that can call attendants at one time.	
Pager Call Back Telephone Number	The number that the attendant uses to call back into the system to get information about the alarm.	
Alarm Regeneration Timer	The number of seconds that the attendant has to clear the alarm, before the alarm is regenerated. A valid range is minimum 120 and maximum 600.	
Night Service	The start and finish time of the night service for the facility. The time is in a 12-hour format HH:MM AM/PM.	
Incoming Alarm IVR Port	The port used by the attendant to determine the alarm condition of the system.	

Impresa Nurse Dispatch

Appendix I Remote Access

This appendix describes how MITEL Product Support connects to the maintenance port on the Impresa Nurse Dispatch (ND) server from a remote (off-site) location.

About Remote Maintenance

MITEL Product Support staff connect to the Impresa ND server through a dial-up Point-to-Point (PPP) connection to the maintenance port on the Impresa ND server.

The Impresa ND server's dedicated dial-up connection (maintenance port) is intended for MITEL Product Support use only. The connection consists of the Impresa ND server's internal modem, which is connected to a customer-supplied Plain Old Telephone System (POTS) jack.

This manual assumes that the POTS jack connects to a BIX block in the telephone room. From the BIX block, a 25-pair Amphenol cable clips onto the ONS Line card at the back of the PBX.

Many major Internet providers offer a local phone number with unlimited access to the Internet for a reasonably low, flat-rate per month (recommended). If MITEL Product Support is required, the customer may choose to provide the number to the MITEL service or Product Support representative.

pcAnywhere Requirements

The Impresa ND server uses the supplied remote access software, Symantec pcAnywhere for Windows NT to communicate with MITEL's remote-maintenance PC. pcAnywhere must be running on the Impresa ND server for the connection to be established.

For detailed information about pcAnywhere, see the Symantec pcAnywhere User's Guide.

To enable remote maintenance connections to the Impresa ND server's maintenance port, you must:

- Configure the modem connection
- Configure pcAnywhere.

Configuring the Modem Connection

The modem connection settings are accessed through the **Control Panel** on the Impresa ND server. They must match the settings of the modem at the far end (MITEL Product Support). A definition for the Impresa ND server's internal modem has already been added. The default settings are

- 56600 bits per second
- 8 data bits
- no parity

- 1 stop bit
- flow control set to XON/XOFF

These settings may be changed if necessary.

Configuring pcAnywhere

The pcAnywhere software on the Telephony Server has been configured as a "host." The pcAnywhere wizard guides you through configuring host connection items and starting pcAnywhere on the Impresa ND server.

To configure pcAnywhere

- 1. On the Start menu, point to Program Files, and then click Symantec pcAnywhere.
- 2. Follow the instructions as they are displayed on the screen and accept all defaults.

Appendix J File System Configuration

By default, program files, prompt files, and configuration files are installed on the Impresa Nurse Dispatch (ND) server in a subdirectory of the C:\Program Files\Mitel\Impresa Nurse Dispatch\<folder>. Other MITEL products are installed in subdirectories of the Mitel folder. Third-party products are installed in a subdirectory of the Program Files folder.

On client PCs, the installation script copies the Administration and Guardian components to the following directories: C:\Program Files\Mitel Impresa Nurse Dispatch\<folder>.

Impresa Nurse Dispatch Documentation Files

Should extra copies of the printable documentation be required, Adobe Portable Document File (PDF) versions of the following publications are included on the *Impresa Nurse Dispatch Installation Disc*:

- Impresa Nurse Dispatch Technical Documentation
- Impresa Nurse Dispatch User Guide

• Installation and Configuration Manual (see screen capture below)

Help files

By default, all Impresa ND Help files are installed in a language subdirectory of the C:\Program Files\Mitel Impresa Nurse Dispatch\.

Loading a Help system manually

To load the top-level index page of a Help system into your default web browser, click **Nurse Dispatch Administration Help**.

Export and archive files

Export files and archive files are stored in the C:\Program Files\Mitel\Impresa Nurse Dispatch\Server.

Numerics

800S platform IRQ and I/0 addresses 80 rear panel 23 911, emergency alarm 11

A

Adding, server to network 24 AFC card configuration utility 63 connecting to FIM 33 default configuration 81 Alarm assistance required 11 door 11 emergency 911 11 messaging system 11 surveillance 12 Alarm detection 12 Alarm, telephone timer 11 Archive files, location of 136 Assistance required alarm 11

В

Backups before software upgrade 117 client PC file locations 135 server file locations 135 Boot sequence, verifying 63

С

Cable connecting fiber link 33 Cards default configurations 80 **Client components** location of files 135 upgrading 62 **Client PC** hardware requirements 18 setting up remote access 133 Clock settings, editing 26 Computer account, creating 24 Configuration AFC card 63 application 16 file system 135 ISA card default 80 Configuration files, location of 136 Configuring **Dialogic drivers 92** modem connection 133 **PBX 27**

pcAnywhere 134 Connecting fiber link 33 server peripherals 23 Connections IPERA 2000 PBX 15 MODEM 133 server 15 SX-200 PBX 15 SX-200 PBX 15 SX-2000 PBX 15 Conventions, in this manual 8 Corruption, recovering hard disk 63 Country code, editing 26 Creating computer account 24

D

Data file locations 135 recovering 62 replacing missing or corrupted 62 Detection, alarm 12 Diagnosing, problems 63 Diagnostic, tools 63 **Dialogic drivers** configuring 92 install 87 Dial-up access, Product Support 133 Directories 135 Documentation location of files 135 Domain user account for Administrator 78 Domains, supporting Internet 17 Door alarm 11 Driver Configuration, MODEM 79

Ε

Editing country code and clock settings 26 local group accounts 26 Emergency, 911 alarm 11 Export files, location of 136

F

Fiber link connecting 33 verifying 65 Figures 800S platform rear panel 23 File system verifying 64

Files

archive file locations 136 configuration file locations 136 documentation 135 export file locations 136 file system configuration 135 FIM/FIM carrier card connecting to AFC card 33

Η

Hard disk, recovering 63 Hardware diagnosing faults 63, 64 Hardware requirements client PCs 18 Help files loading Help system manually 136 location of 136

I

I/O address conflicts 80 I/O addresses 80 Impresa Administrator domain user account 78 Impresa Administrators group editing 27 Install Dialogic drivers 87 Internet Explorer 77 Java Runtime Environment 105 Microsoft Internet Explorer 5 101 MiTAI with AFC card 112 with remote PBX access 110 with TALK TO CX card 107 pcAnvwhere 77 preparing the site 21 video driver 76 Installing client software 38 Internet Domains, supporting 17 Internet Explorer, installing 77 IRQ conflicts 80 **IRQ** levels 80 ISA card default configuration 80 ISA expansion cards, replacing 80

J

Java Runtime Environment install 105

L

Loading, of Help system manually 136 Location Help files 136 of client PC files 135 of configuration files 136 of documentation files 135

Μ

Manual conventions used in 8 symbols used in 8 Manual loading, of help system 136 Mapping network drives 36 Messaging system alarm 11 Microsoft Internet Explorer 5 install 101 MiTAI install with AFC card 112 with remote PBX access 110 with TALK TO CX card 107 MiTAIX 63 MODEM configuring connection 133 driver configuration 79

Ν

Network adding server to 24 requirements 17 Network drive, mapping 36

0

ONS Line card BIX block connection 133

Ρ

PBX, configuring 27 pcAnywhere configuring 134 for maintenance port 133 installing 77 Peripherals, connecting to server 23 Planner system and site 125 Portable document format, location of files on CD-ROM 135 Power 71 Powering-down server 71 Preparing the installation site 21 Problems diagnosing and resolving 63

preventing 62 Procedure adding members to local groups 27 configuring the PBX 27 connecting server peripherals 23 the fiber link 33 creating a computer account 24 editing country code and clock settings 26 local group accounts 26 identifying hardware faults 64 installing client software 38 mapping network drives 36 powering-down server 71 replacing ISA expansion cards 80 upgrading client software 62 server software 117 verifvina boot sequence 63 fiber link 65 file system 64 hardware 63 Product Support, dial-up access 133

R

Recovering data 62 Recovering hard disk 63 Remote access, setting up client PC 133 Replacing ISA expansion cards 80 missing or corrupted data 62 Requirements client PCs 18 network 17 PBX 18 Resolving problems 63

S

Security user authentication 26 Windows NT login prompts 26 Server connections 15 file system 135 maintenance port 133 powering-down 71 specifications 19 Server connections IPERA 2000 PBX 15 SX-200 PBX 15 SX-2000 PBX 15 Server, unpacking 22 Service Recovery Manager 63 Set up, remote access 133 Setup, Windows NT 74 Site planner 125 Software uninstalling, client and server 99 Software Specifications 19 Specifications server 19 software 19 Supporting Internet Domains 17 Surveillance, alarm 12 Symbols, in this manual 8 System planner 125

Т

Telephone timer alarm 11 Tools, diagnostic 63 Trademarks 2 Troubleshooting diagnosing and resolving problems 63 preventing problems 62 recovering data 62 recovering hard disk 63 replacing missing or corrupted data 62 Typographical conventions 8

U

Uninstalling, client and server software 99 Unpacking, server 22 Upgrading client software 62 server software 61 User authentication 26 User Manager, Windows NT 27 User profiles Windows NT user groups 26

V

Verifying boot sequence 63 fiber link 65 file system 64 hardware 63, 64 Video driver, installing 76

W

Windows NT setup 74 Windows NT User Manager 27 WINS Address 26 WINS lookup 26 Impresa Nurse Dispatch