

### **Getting Started Guide**

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## 1. Introduction

This guide is intended for someone setting up the turnkey OnePoint Messenger<sup>7M</sup> Telephony Server at the customer site. The turnkey Telephony Server is loaded at the factory with all necessary software and hardware. The installer must configure it on-site for its on-site network and telephone switch (PBX). To provide integration with a PBX, see the OnePoint Messenger integration guide for the associated PBX, as listed in "Supporting Documentation" on page 10 in this chapter. This guide provides an installation sequence using the Mitel SX-2000<sup>TM</sup> as the example.

This guide also covers the installation of required software on the Microsoft<sup>®</sup> Exchange Server and on client PCs to provide a unified messaging environment. This chapter includes the following sections:

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#### About OnePoint Messenger

OnePoint Messenger is a set of software applications that support unified messaging. Unified messaging is the combination of telephone messages, fax, and e-mail on one mail server and the presentation of those messages to end users through a combined messaging interface. OnePoint Messenger includes software to provide unified messaging through Outlook<sup>®</sup> 98 and Outlook 2000, supported Web browsers, and any touchtone-compliant telephone.

OnePoint Messenger server software is installed on two computers running Microsoft Windows NT<sup>®</sup> Server 4.0:

• *The "Exchange Server"*: The computer running Microsoft Exchange®; OnePoint Messenger adds software to the Exchange

Server for performing unified messaging, including an Exchange Extension that adds the Unified Messaging tab to each Exchange account profile.

• *The Telephony Server*: A large suite of software components providing messaging and maintenance services is installed on a computer that handles communication between the telephony network and Microsoft Exchange. It also handles the VPIM transcoding and gateway.

See "OnePoint Messenger Server Components" on page 20 in Chapter 2 for more on Telephony Server components, and see Appendix A (page 77) for more details, including line card types and settings. See Chapter 1 in the *OnePoint Messenger Administrator Guide* for a detailed system overview, a summary of each of the hardware and software components, and an overview list of tasks. Chapter 1 in the *OnePoint Messenger User Guide* also has a basic system overview and a summary of what you can do with OnePoint Messenger.

#### The Turnkey Telephony Server

The OnePoint Messenger "turnkey" system is a fairly standard computer on which is installed all of the hardware and software needed to perform the role of the OnePoint Messenger Telephony Server hence the name "turnkey" system, implying that you only need to "turn the key" for it to start. However, there is much more involved, which is the purpose of this manual.

The installed software is listed in Chapter 2 ("What You Need for a OnePoint Messenger System" on page 13) and includes Microsoft Windows NT Server 4.0<sup>®</sup> with Service Pack 5, Internet Explorer 4.01<sup>®</sup> with Service Pack 1, Microsoft Outlook, and OnePoint Messenger. The OnePoint Messenger software suite includes both proprietary software and software bundled from other vendors. The OnePoint Messenger components are detailed in Chapter 1 of the *OnePoint Messenger Administrator Guide*.

The turnkey box is the Telephony Server 800 (TS800). It has a standard PC mid-tower design with the typical number and type of peripherals (keyboard, mouse, CD-ROM, floppy, 6GB EIDE hard disk). The processor is a 550 MHz Intel Pentium III. 256 MB RAM is required to support 24 voice ports. The ATI Rage<sup>TM</sup> video interface and the NIC are on the motherboard, so they do not require slots. For motherboard details, see the Intel JN440BX Motherboard Technical Product Specification included in the box.

The backplane contains three PCI slots and five ISA slots. What line cards are installed on the system depend on the PBX to which the Telephony Server will be connected and on the preference of the customer. Information about supported cards appears in Appendix A of the *OnePoint Messenger Installation Guide*. Details on cards supported for a specific PBX integration appears in the integration guide for that PBX. Details on the turnkey hardware, including regulatory approvals, appears in Appendix A here.

#### **Required Skills**

OnePoint Messenger installers are expected to have Microsoft Certified Systems Engineer (MCSE) certification in Windows NT Server 4.0 and Microsoft Exchange. While the OnePoint Messenger documentation covers the basic Windows NT and Exchange tasks needed to configure and manage a OnePoint Messenger environment, installers and administrators must have a good understanding of Windows NT domain options and associated administrator rights, NT tools, the Event log, etc.

To provide user access to mailboxes using a Web browser, you must install and manage Internet Information Server (IIS), which will require IIS training.

For those of you installing and managing Windows NT and Exchange on the Exchange Server, you will be required to perform NT Administrator functions, including setting up domains, creating administrator accounts, and performing software maintenance and backups. OnePoint Messenger applications all use common Microsoft Windows interfaces and interoperate with NT system utilities, so the learning curve on OnePoint Messenger software is very easy after you become conversant with Windows NT facilities. For example, each OnePoint Messenger application sends error and trace messages to the NT Event Log. All OnePoint Messenger software with user interfaces have online help.

#### **Organization of this Manual**

This manual contains six chapters:

• This Chapter 1 introduces OnePoint Messenger and its documentation, and lists required installation and administrator training. • Chapter 2 (page 13) lists the hardware and software necessary to create a OnePoint Messenger unified messaging environment, including what you need to get from the PBX programmer, and it summarizes the installation process. It also lists the administrative rights, accounts, passwords, and computer and network names that you will need to gather and use.

**NOTE:** For configuring a Mitel SX-200 for OnePoint Messenger, see the *OnePoint Messenger/SX-200 Integration Guide*. For configuring a Mitel SX-2000 for OnePoint Messenger, see the *OnePoint Messenger/SX-2000 Integration Guide*.

- Chapter 3 (page 23) covers the installation of Exchange Server software.
- Chapter 4 (page 29) covers the installation of the Telephony Server platform, along with configuration adjustments that you need to make to allow the Telephony Server to communicate through the on-site network.
- Chapter 5 (page 49) lists validation tests and provides a roadmap for other tasks.
- Chapter 6 (page 55) details the steps required to install OnePoint Messenger software on client PCs and covers client PC validation tests.
- Appendix A (page 77) contains details on TS800 hardware components and recommended usage, including slot assignments.

#### **Supporting Documentation**

The shipping box for the turnkey Telephony Server contains documentation from each of the hardware manufacturers whose components comprise the turnkey system, including computer (separate documents for motherboard, CD-ROM drive, and SCSI adapter card), line cards, and modem. The box should also contain this guide and any other OnePoint Messenger hardcopy guides ordered by the customer. The OnePoint Messenger CD-ROM also contains copies of all OnePoint Messenger guides, in Acrobat 3.0 PDF format, in addition to Show N Tel guides from Brooktrout Technology.

The OnePoint Messenger Installation Guide contains information on:

- Removing, reinstalling, and upgrading OnePoint Messenger components and licenses, including the use of the License Install utility for adding Telephony Server feature licenses.
- Hardware and software requirements, upgrade options and considerations, and card configuration instructions.

There is a OnePoint Messenger integration guide for each of the following PBXs:

- Mitel SX-200
- Mitel SX-2000
- Lucent Definity
- Nortel Meridian
- NEC NEAX 2400
- Fujitsu 9600
- Centrex switches

Each PBX integration guide contains the tasks required to prepare your PBX to support OnePoint Messenger services:

- Configuring the Telephony Server to communicate with a PBX, including using Show N Tel Manager and the PBX-related nodes of Microsoft Management Console
- Setup requirements for peripheral cards and other hardware associated with that PBX integration. See also the manufacturer documentation included in the turnkey system shipping box, and see Appendix A here (page 77).

The *OnePoint Messenger Administrator Guide* contains a system overview and administration details that can help you, the installer, understand the purposes and use of the components. It contains procedures for creating user mailboxes (Chapter 2), configuring the Telephony User Interface (Chapter 3), managing fax services (Chapter 4), and operating and maintaining the Telephony Server (Chapter 5), as well as details on each OnePoint Messenger utility.

The *OnePoint Messenger User Guide* describes the use of OnePoint Messenger voice, fax, and unified messaging features—on Outlook, Web browsers, and telephones. The guide also contains information on client software setup.

All of the OnePoint Messenger books are stored as Acrobat PDF files on the OnePoint Messenger CD-ROM. The *Show N Tel Manager User's Guide* from Brooktrout Technology is also included on the OnePoint Messenger CD-ROM, stored as sntmgrguide.pdf.

Other useful sources of information include Windows NT and Exchange manuals, as well as the vendor manuals of products that complete your OnePoint Messenger unified messaging environment. For a list of URLs of those websites, see Appendix B in the *OnePoint Messenger Administrator Guide*.

#### **Contacting Mitel Technical Publications**

The Mitel Technical Publications and Media Development Group maintains this document. We welcome your questions and suggestions—notes on spelling and grammatical errors, comments on readability, and suggestions for improvements. Please reference the document number that appears on the back of the cover page. Send your comments to:

techpubs@mitel.com

## 2. Preparing for Installation

This chapter lists the hardware and software necessary to create a OnePoint Messenger unified messaging environment and summarizes the installation process:

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<ul> <li>Preparing the Installation Site</li> <li>Gathering Information: Names, Passwords, and Addresses</li> </ul>	16 17
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#### What You Need for a OnePoint Messenger System

To create a OnePoint Messenger unified messaging environment, you need two Windows NT Server 4.0 computers. One computer hosts Microsoft Exchange with additional OnePoint Messenger software, and the other is the turnkey Telephony Server. The servers should be on the same 100 megabit LAN segment. For messaging users to access and make unified messages from Outlook, OnePoint Messenger client software must be installed on client PCs.

#### Turnkey TS800

The turnkey TS800 Telephony Server should have all necessary cards and software installed at the factory. For details on the components of the TS800, see Appendix A (page 77).

Verify that backup copies of all software for the Telephony Server are included in the shipment, as listed here and in Chapter 4 (see "Unpacking the Server and Verifying Contents" on page 30):

• The OnePoint Messenger CD-ROM containing all OnePoint Messenger software for the Telephony Server, and OnePoint

Messenger add-on software for the Exchange Server and client PCs

- OnePoint Messenger license key on floppy diskette, which contains data from the existing Telephony Server hardware, so it can only be used to reinstall OnePoint Messenger on the shipped configuration. See Chapter 5 in the OnePoint Messenger Installation Guide or Chapter 9 in the OnePoint Messenger Administrator Guide for details.
- Windows NT Server 4.0 with Service Pack 6a
- Outlook 98
- Internet Explorer 5.01
- MiTAI 7.5.3 for Mitel PBX integrations, (includes the AFC driver to correspond with Mitel SX-2000 PBX software)
- Network card software on floppy diskette
- Video card software on floppy diskette

**NOTE:** You do not need the network and video card software when installing the turnkey Telephony Server, unless it becomes necessary to reinstall Windows. The drivers available on the Windows NT CD-ROM do not support the network and video cards in the Telephony Server. For details on upgrading or reinstalling OnePoint Messenger software, see Chapter 5 in the *OnePoint Messenger Installation Guide*.

Windows NT Option Pack 4 is included for the Exchange Server, containing Internet Information Server 4.0, used for provided Web access to messages.

**NOTE:** Please refer to the latest OnePoint Messenger Release Notes for changes in requirements.

#### **Exchange Server**

The following software for the Exchange Server is required, but is not included with the turnkey Telephony Server:

- Microsoft Windows NT Server 4.0 with Service Pack 5 or 6a
- Microsoft Exchange 5.5 with Service Pack 1, 2, or 3
- Internet Explorer 5.01

## Software Required for Web Browser Access to Mailboxes

With the OnePoint Messenger Web Access site license (option purchase, noted in the OnePoint Messenger license key) you can provide users access to their mailboxes via supported Web browsers. Currently, the supported browsers are Netscape 4.0 or higher and Internet Explorer 4.0 or higher.

To provide Web Client access, install on the Exchange Server:

- Exchange 5.5 with Service Pack 1, 2, or 3
- Outlook Web Access (available on the Exchange CD-ROM)
- Internet Information Server (IIS) 4.0 with Active Server Pages, (available on the NT Option Pack 4 CD-ROM)

#### **Software Required on Client PCs**

OnePoint Messenger subscribers ("users") can be set up to access various levels of messaging through Outlook, Web browsers, and telephones. If a user will access messages Outlook, you must install on the user's computer ("client PC"):

- Microsoft Windows 95<sup>®</sup>, 98<sup>®</sup>, or NT<sup>®</sup>
- Microsoft Outlook 98 or Outlook 2000
- OnePoint Messenger Desktop Client, installed from the OnePoint Messenger CD-ROM or from the \Staging\WEB Client subdirectory on the Telephony Server.

#### **SMDI Integration Hardware**

For integrating the Telephony Server to Nortel and Lucent PBXs, the Telephony Server requires a "call pickup box" (protocol converter) to collect integration data coming from PBX, translate it to the Simplified Message Desk Interface (SMDI) protocol, and forward it to the Telephony Server. For those PBX integrations, the turnkey Telephony Server ships with the Calista PBXLink<sup>TM</sup>, which performs that function. For details on options and setup, see the appropriate integration guide, included on the OnePoint Messenger CD-ROM.

#### Fiber Optic Cables for a Mitel SX-2000 PBX

For the link between a Mitel SX-2000 PBX and the Telephony Server, two cables are required for a fiber link to the SX-2000—one for transmitting and the other for receiving. The specifications are:

- Fiber cable type: Glass Multi-mode
- Fiber diameter: **62.5/125 mm**
- Connector type: ST
- Maximum distance (cable length): 1 km
- Maximum optical loss: 6 dB (including splices and connections)
- The grade or type of cable used must be suitable for the installation (i.e., light or heavy duty, plenum, outdoor). Consult local building codes and your fiber cable supplier.

Those fiber cables are not provided with the Telephony Server.

**NOTE:** Optical repeaters cannot be used to increase the maximum distance.

#### **Remote Management Hardware and Software**

The turnkey Telephony Server ships with a copy of Symantec's pcAnywhere<sup>®</sup> remote control software installed, which you can use on the Telephony Server for providing remote management. You can control all Telephony Server software, either through your LAN, or, with the supplied modem, through a telephone connection. This remote management facility also enables offsite vendor technical support personnel to help you with installation and operation problems. The shipping box contains Symantec's user manual for pcAnywhere; it discusses how to set up permissions for specified users to log in from the network or from a telephone connection.

#### **Preparing the Installation Site**

The Telephony Server is housed in a PC-type tower cabinet that has a footprint of 23 cm wide by 49 cm deep (9" X 19.5"). The cabinet height is 48 cm (19"). The Telephony Server must be situated where it can connect to the:

- PBX (for more details, see the relevant PBX integration guide):
  - For a Mitel SX-200, use twisted pair wire, 25 feet maximum

- For a Mitel SX-2000, use fiber optic link, as listed above ("Fiber Optic Cables for a Mitel SX-2000 PBX")
- For PBXs using SMDI integrations, use RS-232 cable, 50 feet maximum
- LAN wiring using standard Ethernet cabling
- Grounded three-prong power outlet (NEMA 5-15R for 115 Vac, NEMA 6-15R outlet for 230 Vac, or other approved outlet)

Access to the front, rear, and sides of the Telephony Server is required for maintenance. The Telephony Server should only be situated in a clean and dry environment in accordance with the following environmental requirements:

- $10^{\circ}$  to  $35^{\circ}$  C ( $50^{\circ}$  to  $95^{\circ}$  F) ambient temperature
- 30% to 80% relative humidity non-condensing
- maximum altitude 3048 m (10,000')
- Isolation from strong electromagnetic fields
- UPS recommended

**NOTE:** The Telephony Server must be acclimatized to the local environment for at least 12 hours before installation.

## Gathering Information: Names, Passwords, and Addresses

Before starting the installation, fill out a reference list of computer names, administrator IDs and passwords, and Exchange names, as shown in Table 2-1. This will provide you and other installers a quick reference for entering the information in logon and installation setup screens. You can also enter some or all of this information for future online reference in the **Site Log** and the **Site Info** dialog, both available through the System Service Tool. For details, see Chapter 5 in the *OnePoint Messenger Installation Guide*.

What information you record below depends on how you divide responsibilities and what domain roles the servers play. For example, if you set up the Exchange Server as a domain controller, any domain administrator can log onto the machine as the local administrator, so you do not need a separate local administrator name and password. For details, see the section "Administrator Rights Overview" on page 18 below, and see your Microsoft documentation.

#### **Table 2-1 Names and Passwords**

1	Exchange Server computer name
2	Exchange Server local administrator name
2	Exchange Server local administrator password
3	Microsoft Exchange Site name
4	Organization name (entered for Exchange, Outlook, and OnePoint Messenger)
5	Exchange administrator logon name ("Exchange_Admin" is used here)
6	Exchange administrator password
7	Internet domain (e.g., mycompany.com)
8	Intranet domain (e.g., http://mycompany_intranet/)
9	IP Address of Telephony Server
10	IP Address of Exchange Server
11*	Telephony Server computer name ("onepoint" is entered at the factory)
11	Telephony Server local administrator name ("administrator" at factory)
12	Telephony Server local administrator password (factory uses "rmx250")
13	Telephony Server administrator name ("TSAdmin" is used here)
14	Telephony Server administrator password
15	Exchange/TServer network domain name
16	Exchange/TServer network subnet mask
17	Exchange/TServer network default gateway
18	DNS IP address
19	Exchange/TServer network primary WIN Server
20	Exchange/TServer network secondary WIN Server
21	Telephony Server Message Center pilot number, as set on PBX
22	Telephony Server Automated Receptionist pilot number, as set on PBX
23	Telephony Server Fax on Demand pilot number, as set on PBX
24	Windows NT domain in which Exchange Server resides

#### **Administrator Rights Overview**

A major part of OnePoint Messenger installation is the creation and use of various administrator accounts. It is not necessary that you create your network hierarchy and permissions in exactly the way assumed in this guide. The critical condition is that installers and administrators have enough rights to install and manage the Telephony Server and Exchange.

This guide uses "TSAdmin" for the logon name of the Telephony Server administrator and "Exchange\_Admin" for the Exchange administrator. Both are assumed to have domain administrator rights. You can have multiple Exchange and Telephony Server administrators to whom you can grant different access levels. You may also set up access privileges for remote administrators in pcAnywhere. If you set up other administrator accounts, you should maintain a record of those names, passwords, rights, and the people that can use those accounts.

#### Installation Summary

The instructions in this guide are written for the installer who is starting with a turnkey Telephony Server (one completely installed at the factory with at least the minimum hardware and software described on page 14) and one bare PC (network card should be installed, without installed operating system) for the Exchange Server. However, if you already have Exchange or Windows NT Server 4.0 installed on the Exchange Server, you do not need to reinstall. Compare the software requirements listed above with what you have to make sure you have installed what you need.

If you need to make changes to the Exchange Server to support OnePoint Messenger, do so before you begin to set up the Telephony Server. The directions in this guide do not detail the process of instaling Windows NT or Exchange beyond noting the sequence of installation of the critical components. For details on these products, see your Microsoft documentation. There is a list of references to both Microsoft documentation and Microsoft service packs in Appendix B of the *OnePoint Messenger Administrator Guide*.

What you need to do on the turnkey Telephony Server is detailed in Chapter 4 (page 29), including physically installing it, testing it, setting up addresses and permissions, configuring the Message Transfer Agent software to send VPIM messages, and integrating it with the primary Exchange Server. To integrate the Telephony Server with the primary Exchange Server, you will run Configuration Wizard, which manages installation of OnePoint Messenger software from the Telephony Server to the Exchange Server and creates a couple of administrative user accounts in Exchange. Finally, to provide Web access to mailboxes, you install the Web Client server component on the Exchange Server.

To integrate the Telephony Server with a specific brand of PBX, follow the directions in the OnePoint Messenger integration guide created for that PBX. The specific guide discusses what you need to do on the PBX, what you need to set up between the PBX and the Telephony Server, how to configure the appropriate line cards on the Telephony Server, and how to configure the integration software on the Telephony Server, including the assignment of telephony applications to ports.

If you need to reinstall OnePoint Messenger on the Telephony Server, use the OnePoint Messenger CD-ROM and follow the procedure listed in Chapter 5 of the *OnePoint Messenger Installation Guide*.

Follow Chapter 6 here (page 55) to install client software on each end user PC. You can install from the OnePoint Messenger CD-ROM or over the LAN from the Telephony Server.

#### **OnePoint Messenger Server Components**

The installation instructions in this guide are explicit enough for you to be able to successfully install OnePoint Messenger without detailed knowledge of how it works. However, you will be better prepared to make choices during the installation if you understand the roles and uses of the following OnePoint Messenger components:

- Directory Initialization is a utility for manually performing an initial directory synchronization on the Telephony Server with the Exchange Server directory. Thereafter, Directory Access Service (DAS) automatically synchronizes Exchange and Telephony Server directories. For details, see Appendix A in the *OnePoint Messenger Administrator Guide*.
- License Install is a utility for installing feature licenses. For details, see Chapter 5 in the *OnePoint Messenger Installation Guide*.
- ODBC provides for compaction of OnePoint Messenger configuration and maintenance databases. For details, see Chapter 9 in the *OnePoint Messenger Administrator Guide*.
- Telephony Server Monitor (TSMon) and WinFT Watchdog are utilities that manage the starting and stopping of OnePoint Messenger services. For details, see Chapter 5 in the *OnePoint Messenger Administrator Guide*.

- Show N Tel Runtime is a software suite from Brooktrout Technology that supports call processing, PBX integration, and other functions. For details, see the Chapter 4 in the *OnePoint Messenger Installation Guide*, your specific PBX integration guide, or the Brooktrout *Show N Tel Manager User's Guide* included as sntmgrguide.pdf on the OnePoint Messenger CD-ROM.
- The Telephone User Interface (TUI) provides the telephone menus and prompts and manages the interface parameters to the Post Office Network Gateway (PONG) and DAS to send and receive messages, addresses, and user data. You can rerun the OnePoint Messenger Installation Program to choose additional prompt languages to install—U.S. English, U.K. English, Spanish, or any combination. For details on configuring the interface, see Chapter 3 in the *OnePoint Messenger Administrator Guide*. For details on using the TUI, see Chapter 7 in the *OnePoint Messenger User Guide*.

For a summary of OnePoint Messenger components installed on the Telephony Server, Exchange Server, and client PCs, and for a task summary, see Chapter 1 in the *OnePoint Messenger Administrator Guide*.

# 3. Installing Exchange Server Software

This chapter covers the installation of Windows NT and Exchange Server software on the Exchange Server. If this software is already installed, you do not need to reinstall. Verify in Chapter 2 ("What You Need for a OnePoint Messenger System" on page 13) that you have the components you need. Although it is not essential, consider removing any software from the Exchange Server that is not related to the operation of the core messaging functions. The performance of the messaging services is dependent on the availability of system resources. The sections in this chapter are:

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#### What You Need to Complete This Chapter

To complete the procedures detailed in this chapter, you need the following software for the Exchange Server:

- Windows NT 4.0 with Service Pack 5 or 6a
- Microsoft Exchange Server 5.5 with Service Pack 1, 2, or 3
- To provide users with Web browser access to unified messages:
  - Microsoft<sup>®</sup> Internet Information Server (IIS) 4.0, from NT Option Pack 4
  - Microsoft<sup>®</sup> Internet Explorer (IE) 5.0 or higher
  - Microsoft Outlook Web Access
  - OnePoint Messenger Web Client server component

**CAUTION!** To use McAfee VirusScan<sup>®</sup> on the Exchange Server, you must install VirusScan 4.03 or higher.

#### **Installing Windows NT Server 4.0**

**NOTE:** If Windows NT Server 4.0 with Service Pack 5 (SP5) is already installed, you do not need to reinstall. If you are not sure that SP5 is installed, check the **Version** tab in **Windows NT Diagnostics** (in the Administrative Tools group).

Install NT Server 4.0, with NTFS as the file system. Do not select Internet Information Server (IIS). You will install IIS 4 from NT Option Pack 4.

During the NT Server installation, you must choose the NT domain role for the Exchange Server, from these choices:

- Primary Domain Controller (PDC)
- Secondary Domain Controller ("backup server" or BDC)
- Stand-alone Server ("member server")
- Workgroup only

For OnePoint Messenger, you can select any one of the roles initially, but the directions in this guide assume that you set up Exchange as a stand-alone server. See your Windows NT Server documentation for a full discussion of the options.

#### Installing NT Server 4.0 Service Pack

- 1. After installing NT Server 4.0, shut down and restart the Telephony Server with **NT Server 4.0 Service Pack 5 or Service Pack 6a** in the CD-ROM drive. The setup should autostart.
- 2. During the installation of the service pack, do **not** select the options to install IIS or Active Server Pages (ASP). You will install upgraded components from Option Pack 4.

If you have an NT service pack higher than SP 6a already installed, you may be able to use it instead. Please check with Customer Support. If you need to resolve issues through offsite technical support, be sure to note the later service pack.

#### **Installing Option Pack 4 and Internet Explorer**

If you want to provide Web access to mailboxes, install **IIS 4.0** from Windows NT 4 **Option Pack 4** and **Internet Explorer** (available on the Outlook CD-ROM or from the Microsoft Web site) on the Exchange Server.

- 1. From the Option Pack 4 main installation screen, select the **Custom** installation option.
- 2. Select **IIS 4.0** (Internet Information Server).
- 3. Deselect Index Server.
- 4. Deselect the **FTP** subcomponent under **IIS 4.0**.
- 5. Deselect the SMTP subcomponent under IIS 4.0.
- 6. Click **Next** until finished.
- 7. In order for the Unified Messaging Player and recorder to appear in the Web Client, set up IIS using the default "**Basic Authenti**cation on the Exchange Virtual Directory." This guide does not otherwise discuss IIS setup and management.
- 8. From the Outlook 98 CD-ROM, its own CD-ROM, or from the Web, install Internet Explorer 4.01 with Service Pack 1, or any higher version, through Internet Explorer 5.01. You can download Internet Explorer from the Microsoft Web site at:

http://www.microsoft.com/windows/ie/download/default.asp

**NOTE:** To support Web access, you also need to install Outlook Web Access from the Exchange Server CD-ROM (see page 27), and purchase and install the OnePoint Messenger Web Client site license and software (see page 47).

#### Making the Exchange Server Part of the Domain

**NOTE:** If you set up the Exchange Server on the domain while installing Windows NT, you do not need to perform this procedure. To perform this procedure, the domain administrator must log on to the Exchange Server.

- 1. Log on to the Exchange Server as the local administrator.
- 2. Right-click the Network Neighborhood icon on the desktop.
- 3. On the **Identification** tab of the Network dialog, click **Change**.

- 4. On the **Identification Changes** dialog:
  - Click the **Domain** radio button.
  - Enter the domain name.
  - Click Create a Computer Account in the Domain.
  - In the **User Name** field, enter the domain administrator name.
  - In the **Password** field, enter the domain administrator password.
  - Click OK.
- 5. The Network Configuration screen displays

Welcome to the <domain name> Domain.

Click OK.

- 6. The **Network** screen is displayed, click **Close**.
- 7. On the **Network Settings Change** screen, click **Yes** to restart the computer.

#### **Testing the Network Connection**

- 1. When the Exchange Server reboots, log on to the domain:
  - a. Click the drop-down arrow by the Domain field on the log-on screen
  - b. Select your domain name from the list.
  - c. Enter your domain administrator network user name.
  - d. Enter your domain administrator password.
  - e. Click OK.

The fact that your computer is able to log on to the domain constitutes a test of network connectivity.

#### To further test connectivity:

- 1. From the Windows **Start** menu, choose **Programs**, then **Command Prompt**.
- 2. In the **Command Prompt** window type:

```
ping <IP address>
```

where <IP address> is the IP address of another computer running on the LAN.

or type the computer name of a computer on the network.

3. On the screen you should see the following display:

```
C:\>ping <server name>

Pinging <servername>.<domain Name> [IP Address] with

32 bytes of data:

Reply from <IP Address>: bytes=32 time=20ms TTL=128

Reply from <IP Address>: bytes=32 time=1ms TTL=128

Reply from <IP Address>: bytes=32 time=44ms TTL=128

Reply from <IP Address>: bytes=32 time=2ms TTL=128
```

4. Enter Exit to quit the Command Prompt window.

#### Installing Microsoft Exchange

#### Set up an Exchange Administrator NT account:

**NOTE:** For details, refer to the directions in the Microsoft manual *Exchange Server Getting Started*.

- 1. Log on to any NT Server in the domain in which the Exchange Server resides as a domain administrator: Click the Windows **Start** button, then choose **Programs**, then **Administrative Tools**, and **User Manager for Domains**.
- 2. From the User menu in the User Manager for Domains application, choose New User.
- 3. In the **User Name** field, enter the ID for the Exchange Administrator that you entered in Table 2-1. ("Exchange\_Admin" is used in these instructions as an example.)
- 4. In the **Password** field, enter the password for Exchange\_Admin that you entered **in** Table 2-1.
- 5. Confirm the password.
- 6. Clear User Must Change Password at Next Log On.
- 7. Select Password Never Expires.
- 8. Click Groups.

- 9. In the **Groups Membership** dialog, select **Domain Admin** in the **Not member of** area.
- 10. Click Add to add Domain Admin to the Member of area.
- 11. Click OK.
- 12. In the New User Properties dialog, click Add, then Close.
- 13. Log off Windows NT.

#### To install Microsoft Exchange Server 5.5:

**NOTE:** If you are upgrading Exchange, installing more than one Exchange Server, or installing a language version other than English see the Microsoft *Exchange Server Getting Started* manual. If you already have Exchange installed, you do not need to reinstall it.

- 1. Log on to the Exchange host as Exchange\_Admin.
- 2. Install Microsoft Exchange 5.5 from its CD-ROM. If you want to provide Web access for messages, select the option to install the **Outlook Web Access** component.

**NOTE:** Exchange services must be shut down while you install Outlook Web Access.

3. Install Exchange 5.5 Service Pack 1, 2, or 3.

**NOTE:** the procedure "Setting the Forms Author Permission in Exchange" that was here has been moved to page 39 in Chapter 4 in order to consolidate the procedures dealing with setting permissions.

#### Where To Go from Here

Chapter 4 (page 29) discusses setting up the Telephony Server hardware, giving administrator rights to TSAdmin, and using Configuration Wizard to integrate Telephony Server with Exchange.

Chapter 5 (page 49) contains validation tests and an outline for further configuration and administration.

Chapter 6 (page 55) discusses setting up OnePoint Messenger with Outlook on users' PCs. Before doing so, create user accounts in Exchange. See your Microsoft Exchange documentation. To modify user profiles in Exchange to enable OnePoint Messenger, see Chapter 2 in the *OnePoint Messenger Administrator Guide*.

## 4. Installing the Telephony Server

This chapter explains how to install the Telephony Server in its turnkey-solution form. For information on setting up a Telephony Server from a bare box, see the *OnePoint Messenger Installation Guide*.:

Section	Page
Unpacking the Server and Verifying Contents	30
Powering Up the Server and Verifying Power On Self Test (POST)	31
Verifying Fiber Link Synchronization for an SX-2000	31
Configuring the TCP/IP Properties	32
Changing the Time Zone	32
Renaming the Telephony Server	33
Making the Telephony Server Part of the Domain	33
Setting Up the Telephony Server Administrator Account	34
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#### **Unpacking the Server and Verifying Contents**

As you unpack the turnkey Telephony Server, you should compare what is in the box with the packing list and with your list of what you ordered. If any items are missing, stop and contact your OnePoint Messenger dealer. Verify that the package contains the Telephony Server with line cards installed and:

- Printed manuals: This *Getting Started Guide*, hardware component vendor guides, and any other OnePoint Messenger books ordered.
- Power cable
- OnePoint Messenger CD-ROM
- Microsoft Outlook 98 CD-ROM. This software is preloaded on the Telephony Server. The CD-ROM is included for maintenance purposes on the Telephony Server only.
- Microsoft NT Server 4.0 CD-ROM. This software is preloaded on the Telephony Server. The CD-ROM is included for maintenance purposes on the Telephony Server only.
- CD-ROM containing the MiTAI software and AFC drivers
- Floppy diskette containing the video driver
- Floppy diskette containing the network card driver
- Modem, serial cable
- pcAnywhere software and manual in Symantec box

A detailed list of documentation appears in Chapter 1 of this guide ("Supporting Documentation" on page 10). A detailed description of the required software is listed in Chapter 2 ("What You Need for a OnePoint Messenger System" on page 13).

#### Inspecting the Hardware

To verify both that the line cards purchased are installed in the recommended slots and that they are seated tightly, you should inspect them. Opening the Telephony Server cover is described in the supplied Systium Technologies guide *Eight Slot NLX Mid-tower*. For details on cards and their settings (including recommended backplane slots), see Appendix A (page 77), which also contains information on the Telephony Server components. See also the manufacturer documentation included in the box.

#### **Backup Software**

The OnePoint Messenger CD-ROM contains all OnePoint Messenger software and documentation. It also contains critical Microsoft components for the Telephony Server, including Microsoft Management Console, ADO 2.5, Microsoft HTML, and other components. All software is pre-loaded on the Telephony Server hard disk drive. The CD-ROM is provided for servicing purposes, such as if you need to reinstall OnePoint Messenger or install another prompt language.

The Telephony Server contains a network card and a video card that require driver software more updated than that available on the Windows NT CD-ROM. The driver software has been installed at the factory and is included on backup diskettes should it be necessary for you to reinstall Windows NT.

The AFC drivers and MiTAI software are preloaded on the server. The diskettes are provided for servicing purposes only.

#### Powering Up the Server and Verifying Power On Self Test (POST)

**CAUTION:** Ensure the power supply input voltage switch is set to the correct value (120 or 230 VAC).

#### **Plugging In the Cables**

- 1. Insert the included power cable into the power socket in the back of the Telephony Server cabinet.
- 2. Connect the power cable to the power source.
- 3. To connect the Telephony Server to a LAN, plug the Ethernet cabling into the NIC.
- 4. Power up the server and observe the PC BIOS Power On Self Test (POST). It will test memory, peripherals, and the mother-board.
- 5. If the POST passes, then the Microsoft Windows NT operating system will boot.

#### Verifying Fiber Link Synchronization for an SX-2000

The Mitel SX-2000 fiber link connection to the Telephony Server has two connections, one for transmitting and another for receiving. The AFC card on the Telephony Server has a green LED associated with each fiber optic port (visible from the rear of the Telephony Server). When the server is powered up, these LEDs indicate the status of the fiber connection. When the connection is faulty, or transmit/receive is reversed, the LEDs flash. When the fiber link is correctly installed and functional, the LEDs stay illuminated. After powering up the server, check the LEDs and reverse them if necessary. Accidentally reversing transmit and receive will not damage the AFC or the PBX. Retain the dust covers until ready to use again.

#### **Configuring the TCP/IP Properties**

Use the Windows NT Network Control Panel application to configure your server's protocol and IP addressing parameters to work with your network. The Telephony Server must be made part of the same domain as the Exchange Server.

- 1. Log on to the server as the local administrator "**administrator**" using the password "**rmx250**".
- 2. Right-click the Network Neighborhood icon on the desktop.
- 3. Click **Properties**, then **Protocols**, then **TCP/IP**, then **Properties**.
- 4. Enter the IP address, subnet, and default gateway for the server. Click the **DNS** tab and configure the DNS search order for IP addresses. Click **WINS Address**, and configure the Primary and Secondary WINS server IP addresses.
- 5. On the TCP/IP Properties screen, click **OK**.
- 6. On the Network screen, click **Close**.

#### **Changing the Time Zone**

The turnkey Telephony Server is configured in a factory in North American Central Time Zone. If you are in another time zone, change the computer's clock. One way is to:

- 1. Right-click the clock in the **System Tray** part of the **Windows Taskbar**.
- 2. From the popup menu, choose Adjust Date/Time.
- 3. Click the **Time Zone** tab.
- 4. Click the drop-down arrow to select your time zone from the list.
- 5. Click OK.

#### **Renaming the Telephony Server**

**CAUTION!** If you change the computer name of the Telephony Server when using versions of OnePoint Messenger previous to the official release of OnePoint Messenger 2.0, System Service Tool will not operate. If you must change the name, get OnePoint Messenger vendor assistance.

To change the computer name of the Telephony Server when running the official release of OnePoint Messenger 2.0:

- 1 Right click on the **Network Neighborhood** icon on the desktop, then choose **Properties** from the context menu.
- 2 Change the name in the **Identification** tab of the Network dialog that appears, then click **OK**.
- 3 Navigate in Windows Explorer to \OnePoint Messenger\bin, then double-click cfgdbsetup.exe. Running the program cfgdbsetup.exe updates the OnePoint Messenger configuration database.
- 4 Restart the computer.

#### Making the Telephony Server Part of the Domain

**CAUTION!** Do not change the computer name of the Telephony Server unless the OnePoint Messenger Release Notes for your service level indicate that you can. Currently, changing the name restricts you from upgrading OnePoint Messenger software. If you must change the name, get OnePoint Messenger vendor assistance.

Because the Telephony Server could not join your NT domain when Windows NT was installed at the factory, your domain administrator should log on to the Telephony Server now to do so. The Telephony Server must have a static IP address (in other words, do not use DHCP to supply an IP address), and the address must be registered on your Domain Name Server.

#### To move the Telephony Server to a new NT domain:

- 1. Log on to the Telephony Server as the local administrator.
- 2. Right-click the Network Neighborhood icon on the desktop.

- 3. On the **Identification** tab of the Network dialog, click **Change**.
- 4. On the Identification Changes dialog:
  - Click the **Domain** radio button.
  - Enter the NT domain name where the Exchange Server resides.
  - Click Create a Computer Account in the Domain.
  - In the **User Name** field, enter the domain administrator name.
  - In the **Password** field, enter the domain administrator password.
  - Click OK.
- 5. The Network Configuration screen displays

Welcome to the <domain name> Domain.

Click OK.

- 6. The **Network** screen is displayed, click **Close**.
- 7. On the **Network Settings Change** screen, click **Yes** to restart the computer.

#### Setting Up the Telephony Server Administrator Account

This procedure creates a Telephony Server administrator account (this example uses the account name "**TSAdmin**", but you can choose another name ) with broad powers on both the Telephony and Exchange Servers. The account creation process is similar to what you did to create the Exchange administrator account (see "Installing Microsoft Exchange" on page 27 in Chapter 3.) Here, TSAdmin is given Domain Administrator rights, which is necessary if you set up the Exchange Server as a Primary or Secondary Domain Controller. Otherwise, TSAdmin needs only Domain User rights.

This procedure is divided into the sub-procedures listed here:

- Create a Telephony Server administrator account.
- Give Local Administrator Rights to TSAdmin on the Telephony Server (page 36).
- Give Act as Part of the Operating System Rights to TSAdmin on the Telephony Server (page 37).

- Give Local Administrator rights to TSAdmin on the Exchange Server (page 37).
- Give Service Account Administrator rights to TSAdmin on Exchange (page 38).
- Set the forms author permission in Exchange (page 38).

**NOTE:** Setting the forms author permission in Exchange is not actually part of the creation of the Telephony Server administrator account. The procedure is added to this section for your convenience, so that you can find all of the procedures for setting permissions in one place.

#### To create a Telephony Server administrator account:

- 1. Log on to any NT Server in the domain. On the logon screen, in the **Name** field, enter the ID assigned to the domain administrator. In the **Domain** field, select the domain in which the Exchange Server is a member.
- 2. Click the Windows **Start** button, then choose **Programs**, then **Administrative Tools**, then **User Manager for Domains**.
- 3. From the User menu, choose New User.
- 4. In the **User Name** field, enter the ID for the Telephony Server Administrator that you entered in Table 2-1, "Names and Passwords," on page 18 in Chapter 2 ("TSAdmin" is used in these instructions as an example.)
- 5. In the **Description** field, type:

Telephony Server administrator

- 6. In the **Password** field, enter the password for TSAdmin that you entered in Table 2-1.
- 7. Confirm the password.
- 8. Clear User Must Change Password at Next Log On.
- 9. Select Password Never Expires.
- 10. Click Groups.
- 11. If the Exchange Server is a Primary or Secondary Domain Controller, follow these substeps. Otherwise, go to the next step:

- a. In the **Group Memberships** dialog, double-click **Domain Admin** in the **Not member of** list to add it to the "Member of" list.
- b. Click **OK** in the **Group Memberships** dialog, then click **Add** in the **New User** dialog to accept the new user and return to the User Manager for Domains main screen.
- 12 Alternatively, if the Exchange Server is a member server (i.e., a standalone server in the domain, not a domain controller), in the **Group Memberships** dialog, make sure that TSAdmin is listed as a **Domain User** in the **Member of** area. If not:
  - a. Double-click **Domain User** in the **Not Member of** list to add Domain User to the **Member of** list.
  - b. Click **OK** in the **Group Memberships** dialog and **Add** in the **New User** dialog to accept the new user and return to the User Manager for Domains main screen.
- 13 Close the User Manager for Domains application.
- 14 Log off.

#### To give Local Administrator Rights to TSAdmin on the Telephony Server:

- 1. Log on to the Telephony Server as "administrator" (the Local Administrator, not the Domain Administrator) in the **Name** field of the logon screen, and select the name of the computer in the **Domain** field.
- 2. Click the Windows **Start** button, then choose **Programs**, then **Administrative Tools**, then **User Manager for Domains**.
- 3. On the bottom pane of the User Manager for Domains main screen, double-click **Administrators**. The Local Group Properties dialog appears.
- 4. In the Local Group Properties dialog, click Show Full Names.
- 5. Click Add. The Add Users and Groups dialog appears.
- 6. In the Names area, select TSAdmin. Click Add.
- 7. Click **OK** to close the **Add Users and Groups** dialog. Click **OK** again to close the **Local Group Properties** dialog.

Keep the application User Manager for Domains open.
To give Act as Part of the Operating System Rights to TSAdmin on the Telephony Server:

- 1. Still logged on to the Telephony Server as the local administrator and still on the **User Manager for Domains** main screen, choose **User Rights** from the **Policies** menu.
- 2. In the User Rights Policy dialog, select the Show Advanced User Rights box.
- 3. In the **Right** list, click the down arrow, locate and select **Act as Part of the Operating System**.
- 4. Click Add. The Add Users and Groups dialog appears.
- 5. Click Show Users.
- 6. Select TSAdmin.
- 7. Click Add.
- 8. Click **OK** to close the **Add Users and Groups** dialog, then click OK to close the **User Rights Policy** dialog.
- 9. On the User Manager for Domains main window, choose Exit from the User menu.

10. Log off.

# To give Local Administrator rights to TSAdmin on the Exchange Server:

- 1. Log on to the Exchange Server as the local administrator. If the Exchange Server is the primary domain controller, this account is the same as the Domain Administrator. Otherwise, if you set up the Exchange Server as a Stand Alone Server, select its computer name account in the **Domain** field. In any case, if Exchange is live and supporting e-mail users, logging off and on does not impede that function.
- 2. Click the Windows **Start** button, then choose **Programs**, then **Administrative Tools**, then **User Manager for Domains**.
- 3. In the bottom pane of the User Manager for Domains main screen, double-click Administrators. The Local Group Properties dialog appears.
- 4. Click Show Full Names in the Local Group Properties dialog.
- 5. Click Add, the Add Users and Groups dialog appears.
- 6. In the Names pane, select TSAdmin and click Add.

- 7. Click **OK** to close the **Add Users and Groups** dialog, and again to close the **Local Group Properties** dialog.
- 8. Choose **Exit** from the **User** menu to quit User Manager.

# To give Service Account Administrator rights to TSAdmin on Exchange:

- 1. In Exchange Administrator, select the **Exchange Site name** in the Exchange tree view.
- 2. From the File menu, choose Properties.
- 3. On the **Properties** dialog, click the **Permissions** tab, as shown in Figure 4-1.
- 4. Click Add. The Add Users and Groups dialog appears.
- 5. Select the User Account "TSAdmin", then click Add, then OK. The Add Users and Groups dialog closes.
- 6. On the **Permissions** tab, select **Service Account Admin** from the list in the **Roles** field, then click **OK**.
- 7. On the Exchange tree view, select the **Configuration** level. Repeat steps 2 through 6 above. The Configuration level Properties dialog is slightly different, as shown in Figure 4-2.
- 8. Quit Exchange Administrator.

#### Figure 4-1 Exchange Administrator, Site Properties, Permissions

CANOSITE Properties			
eneral Permissions			
OLCANO:	SITE		
Windows NT accounts with permis	sions		
Account A	Role		Add
S CALAVERAS\exchange	Service Account Ac	tmin. 🔺 –	
🚯 CALAVEBAS\tsadmin	Service Account Ac	Imin	Remove
		~	
1		(F)	
Holes:			
Service Account Admin.	<b></b>		
		1	
04	Concel	Applu	Help

Figure 4-2 Exchange Administrator, Configuration, Permissions

nfiguration Properties			
General Permissions Service Acc	ount Password		
🔩 Configurati	on		
⊢ Windows NT accounts with <u>p</u> ermix	ssions		
Account 🛆	Role		Add
🚯 CALAVERAS\exchange	Service Account /	Admin. 📃	
😰 CALAVEBAS\tsadmin	Service Account/	Admin	Bemove
		-	
<b>x</b>			
Boles:		<u></u>	
Service Account Admin	•		
1			
	Coveral	1 Apple	1 Hol-

# Setting the Forms Author Permission in Exchange

This procedure enables the Configuration Wizard to move the unified messaging forms to Exchange. You can perform this procedure before you create the Telephony Server administrator account, but it is placed here to minimize your management effort, since you are already editing permissions in Exchange.

## To set the forms author permission in Exchange:

- 1. In Exchange Administrator, from the **Tools** menu, choose **Forms Administrator**.
- 2. Select Organization Forms in the list.

or

If Organization Forms is not in the list, click **New**. In the dialog that opens, click **OK** to add Organization Forms to the Forms Administrator list.

- 3. Click Permissions.
- 4. Select **Default** from the list box.
- 5. In the **Permissions** area, select **Owner** in the **Roles** list/text box. and click **OK**.
- 6. Click Close to close the Forms Administrator dialog.

## Setting the Mail Transport Agent Address

This procedure enables the Telephony Server to provide Internet gateway services for VPIM messages.

- 1. Start Internet Explorer.
- 2. In the Address field, enter:

http://localhost:1967/mta.html

then press [Enter].

- 3. At the Enter Network Password screen:
  - a. For User Name, enter TSAdmin (use the same case as you used to log in).
  - b. For **Password**, enter the TSAdmin password.
  - c. Optionally, click Save password in your password list.
  - d. Click **OK**. The Mail Transport Agent Administration Web page appears.
- 4. Click **Internet MTA Config**. The main MTA Configuration page appears.
- 5. For line 1.1, "VPIM Domains for which you wish to receive mail", enter your Telephony Server computer name and your Internet domain name in the form:

<Telephony Server machine name>.<Internet domain name>

For example, if your Telephony Server computer name is "TServr" and your Internet domain name is "bluescreen.com", then enter:

#### TServr.bluescreen.com

The address above appears on the Configuration Wizard Status Summary screen (see "Integrating the Telephony Server with Exchange" on page 41.)

- 6. Optionally, select the checkbox for line 1.9, "Enable Delivery Log".
- 7. Click Create sendmail.cf.
- 8. On the success screen that appears, click **MTA Administration Main Page**. The MTA main page reappears.
- 9. Click **Stop MTA**. A success page appears.

- 10. Click **Back** to return to the MTA main page.
- 11. Click Start MTA. A success page appears.
- 12. Click **Back** to return to the MTA main page.
- 13. Click **Get Current Status.** A success page should appear displaying:

ServiceStatus - mta: RUNNING

14. Click **Back** to return to the MTA main screen, then close Internet Explorer.

# Integrating the Telephony Server with Exchange

When the OnePoint Messenger Installation Program finishes installing software on the Telephony Server, it automatically starts the OnePoint Messenger Configuration Wizard, which is used to specify the primary Exchange Server, create a transport profile to it on the Telephony Server, move OnePoint Messenger software from the Telephony Server to the Exchange Server, and create several OnePoint Messenger management mailboxes on Exchange. However, when installing software on the turnkey Telephony Server at the factory, the Exchange Server is not available to complete the Exchange integration, so you must now run Configuration Wizard to do that. You can run Configuration Wizard again at any time, for example, to direct the Telephony Server to a new primary Exchange Server, or if you change the computer name of the primary Exchange Server.

Before running the Configuration Wizard, all telephony services on the Telephony Server must be stopped. If any are running, use Telephony Server Monitor (TSMon) to stop them. For details on TSMon, see "Operating the Telephony Server" in Chapter 5 of the *OnePoint Messenger Administrator Guide*. Exchange Administrator must also be closed, and the IIS and WWW Publishing services must be although Exchange can continue to run.

## To run Configuration Wizard:



- 1. Start Configuration Wizard from the OnePoint Messenger program group on the Telephony Server.
- 2. The first screen of the Configuration Wizard is the **Configuration Reminder** screen which displays this text:

Please remember to check that you have the following rights on the Exchange Server to which you are linking:

- TSAdmin has the 'Local Administrator' right on the Exchange Server.
- TSAdmin has 'Service Account Administrator' rights on the Exchange Server Site and Con-figuration level.
- The 'Organization Forms' folder has been created and the Default name has the 'Owner' role.

If you have completed these tasks, click **Next**. Otherwise, click **Cancel**, then complete the tasks before starting the Configuration Wizard.

- 3. On the **Exchange Server Name** screen of the Configuration Wizard, enter the computer name of your primary Exchange Server. Click **Next**.
- 4. The **Exchange Server Information** displays the Exchange Site and Organization names associated with the Exchange Server, on the computer that you identified as the Primary Exchange Server. If the information is correct, click **Next**. If not, click **Back** to return to the previous screen and enter the correct information. If you misspell the Exchange computer name, an error message appears, and you have a chance to re-enter the name.
- 5. The **TS** Administrator Account screen, as shown in Figure 4-3, displays the Telephony Server Administrator name that you used to log in, and the Telephony Server domain name. Enter the password that you use for the named Telephony Server Administrator, then confirm it in the **Confirm Password** box. Click **Next**.

TS Administrator Account	
Please verify the account information and enter the password for the telephony server administrator account.	
User Name	
wange	
Domain	
CALAVERAS	
Password	
XXXX IXXXXX	
Confirm Password	
XXXXXXXX	
< <u>B</u> ack <u>N</u> ext> Cance	Help

Figure 4-3 Configuration Wizard, TSAdministrator Account

- 6. Review the default names entered in the fields on the **Mailbox Configuration** screen, as shown in Figure 4-4. The names can be changed if you wish. Consider using names that will remind you that the account is for the Telephony Server Administrator. Enter the following information, so the Telephony Server can establish a communication pipe with Exchange:
  - Mailbox Display Name: Accept the default name entered for the Telephony Server mailbox on Exchange, or enter a new one. This name will appear in the Exchange directory. You may or may not want to use this address as a reception box for e-mail, such as support requests.
  - **Mailbox Alias Name:** Accept the default alias entered for the Telephony Server mailbox, or enter a new one. This is a short name that normally is used by people entering an e-mail address using the simple alias.
  - **Mailbox Profile Name:** Create a profile name, used to name the mail transport profile that is created here, for the Telephony Server to communicate with Exchange.

Mailbox Configuration	
Please enter the following Exchange maibox and profile information. The following mailbox and profile will be created for the telephony server administrator.	
Mailbox Display Name	
TS Administrator	
Maibox Alias Name	
tsadmin	
Mailbox Profile Name	
TSAdminPrafile	
C Back Next Cancel	Help
Cancer	

## Figure 4-4 Configuration Wizard, Mailbox Configuration

- 7. When you finish entering the names, click Next.
- 8. Review the entries in the fields displayed on the **Configuration Summary** screen, as shown in Figure 4-5. The fields are a compilation of the information that you have entered. If the entries are not correct, click **Back** until you reach the screen that contains the entry you need to change. Then retrace your steps forward. If the entries are correct, click **Next**.

Figure 4-5 Configuration Wizard, Configuration Sum
--

figuration Summary			
Module	Setting		
Exchange Server Exchange Site Exchange Organization Mailbox Display Name Mailbox Alias Name Mailbox Profile Name User ID Network Domain	VOLCANO VOLCANOSITE Calaveras TS Administrator tsadmin TSAdminProfile wonge CALAVERAS		
•		Þ	
< Back	Nevts	Cancel	l Help

9. On the **Configuration Status** screen, as shown in Figure 4-6, click either **Typical Configuration** or **Custom Configuration to** start the integration with the Exchange Server, depending on what remains to be completed, as described below.

Configuration Sta	atus			
Ready				
Configuration St	atus Messages			
	2000			
	<u>[Typ</u>	ical Configuration	<u>C</u> ustom Confi	iguration
	< <u>B</u> aok	Finish	Cancel	Help

Figure 4-6 Configuration Wizard, Configuration Status

**Typical Configuration:** Configures using all of the choices that you have made. This option is appropriate for new installations and complete system rebuilds. The Configuration Wizard creates a mail transport profile on the Telephony Server and several mailboxes on Exchange. These include a Telephony Server Administrator mailbox, a Test User mailbox, and a mailbox for storing messages from outside callers in the Sent folder.

**Custom Configuration:** Leads to a series of question boxes, which ask the following questions, to which you can answer **Yes** or **No** (Answer **No** to the indicated questions if you are re-installing software over an existing installation, or you are designating a new primary Exchange Server.):

- Create/Update all local registry on Telephony Server?
- Write Telephony Server name in Exchange Server Registry?
- Give local "Log on as a service" right to the TSAdmin account? (**No**)
- Configure controls with Administrator account information?
- Create Telephony Server mailbox?
- Create Telephony Administrator profile?
- Install Exchange Extension? (You may choose to skip this if you are re-installing the software.)
- Set organizational folder role to publish client forms? (No)
- Install VPIM Gateway?

• Install Fax Gateway?

VPIM is the Voice Profile for Internet Mail protocol for transferring messages to other voice messaging systems (such as NuPoint Messenger) over the Internet. The Fax Gateway manages the sending of faxes to fax machines. If you already have a fax server, do not install this.

After you click **Typical Configuration**, or complete the questions associated with **Custom Configuration**, the configuration proceeds with the **Unified Messaging Forms Installation** sequence.

10. A Choose Profile screen appears. Click OK.

**NOTE:** You may see two dialog windows with **OK** buttons. Ignore them and click **OK**.

11. Two warning messages entitled "Warning: Opening Untitled" appear as the client forms install (regular and fax). Click **Disable Macros** for both.

The **Configuration Status** screen is displayed with a progress bar that extends to the right edge when configuration is complete, as shown in Figure 4-7. The **Configuration Status Messages** window on the screen is used to display configuration status messages, including error messages, such as a failed key registration.

Figure 4-7 Configuration Status Screen After Completion

Configuration Status
Configuration completed
Configuration Status Messages
Creating TS Administrator mailbox. Create Outside Caller mailbox. Create TS Test User mailbox. Add mailbox [OutsideCaller] to accept message from property on the Exchange
Iypical Configuration
Kan

12. If the **Configuration Status** window displays an error message that you can remedy by revising a field entry, click **Back** to revise

the entry on the appropriate screen. If you cannot remedy the error, click **Cancel**.

13. When the **Configuration Status** window displays a successful result, click **Finish**.

## Synchronizing Exchange and Telephony Server Directories

You must manually launch Directory Initialization on the Telephony Server to start the synchronization between the Exchange directory and the directory cache on Telephony Server. The synchronization process is then automatic. For details on directory synchronization, see Appendix A in the *OnePoint Messenger Administrator Guide*.

To complete this procedure, the Telephony Server needs a network connection to its primary Exchange Server.

- 1. From the **OnePoint Messenger program group** on the desktop, start **Directory Initialization.**
- 2. On the Directory Initialization screen, click Start.

When synchronization is complete, Directory Initialization reports "Done!" and lists the number of accounts examined and synchronized.

3. Click **OK** to quit Directory Initialization.

## Installing the Web Client Server Component on Exchange

If you want to provide Web browser access to mailboxes, you must install the Web Client server component on Exchange. It is copied to the \Staging\WEBInstall subdirectory on the Telephony Server during OnePoint Messenger installation, and that directory is shared during the factory installation.

**NOTE:** To provide Web access to mailboxes, also install **IIS 4.0** from Windows NT 4 **Option Pack 4** and **Internet Explorer** on the Exchange Server. See "Installing Option Pack 4 and Internet Explorer" on page 25 in Chapter 3.

## To install the Web Client server component on Exchange:

1. Use the Windows Control Panel Services application to stop the IIS service.

- 2. Click Windows **Start** button on the Exchange Server, then choose **Run**.
- 3. In the Run dialog, enter:
- 4. \\<Telephony Server>\WEBInstall\setup
- 5. The Welcome screen is displayed, click Next.
- 6. The **Information** screen is displayed, click **Next**.
- 7. On the **Select Components** screen, select the radio button that specifies the particular version of service pack installed on the Exchange Server. Click **Next**.
- 8. The installation program begins to copy files while displaying a progress screen. When finished, a **Setup Complete** message is displayed, displaying the following two options:
  - Yes, I want to restart my computer now.
  - No, I will restart my computer later.
- 9. Click **Yes**, and then **Finish**. Exchange reboots.

# 5. Where Now?

At this point in the installation and configuration of the OnePoint Messenger turnkey system (Telephony Server linecards and OnePoint Messenger software pre-installed and configured) you should have a Telephony Server and an Exchange Server that can communicate over the LAN and through Outlook to the TSAdmin mailbox. This chapter contains tests to validate the connection between the Telephony Server and the Exchange Server. It also points you to other tasks:

Section	Page
Testing the Network Connection	49
Validating Messaging from the Telephony Server	50
Upgrading or Reinstalling Software	51
Integrating OnePoint Messenger with a PBX	52
Setting Up Users	54

## **Testing the Network Connection**

The following test is a simple ping test for the Telephony Server like the one in Chapter 3 to test the connection to the Exchange Server.

- Log on to the Exchange NT domain from the Telephony Server as TSAdmin. On the log-on screen, select your NT domain name from the **Domain** drop-down list, enter your password, then click **OK**. That you can log on to the network indicates that your physical network components are working—NIC, cables, and LAN.
- 2. From the Windows **Start** menu, choose **Programs**, then **Command Prompt**.
- 3. In the Command Prompt window type:

ping <IP address>

where <IP address> is the IP address of the Telephony Server

or type:

ping <server name>

where <server name> is the computer name of the Telephony Server. (To verify the name, right-click **Network Neighborhood** on the desktop, choose **Properties**, then the **Identification** tab).

4. On the screen you should see:

```
C:\>ping <server name>

Pinging <servername>.<domain Name> [IP Address] with

32 bytes of data:

Reply from <IP Address>: bytes=32 time=20ms TTL=128

Reply from <IP Address>: bytes=32 time=1ms TTL=128

Reply from <IP Address>: bytes=32 time=44ms TTL=128

Reply from <IP Address>: bytes=32 time=2ms TTL=128
```

5. Carry out the same test, pinging the Network Gateway and the Exchange Server.

## Validating Messaging from the Telephony Server

Using the Configuration Wizard, you created several Exchange accounts, including TS Administrator and TS TestUser. You can use those accounts or others on Exchange to validate messaging between the Telephony Server and Exchange.

# To test e-mail communication between the Telephony Server and Exchange:

- 1. On the Telephony Server, start **Outlook** using the **TSAdmin** profile.
- 2. In the Outlook Inbox, click the New Mail Message button.
- 3. In the **To** field, enter TS, then click **Check Names**. The account names "TS Administrator" and "TS TestUser" should appear in the Check Names list.
- 4. Select TS TestUser.
- 5. Do the same in the Cc field, selecting TS Administrator.
- 6. Enter something in the **Subject** field and some text on the message body.
- 7. Click Send.

8. When the copy of the message arrives that you sent to yourself, you know you have e-mail communication.

**CAUTION!** Do not install the OnePoint Messenger Outlook Client on the Telephony Server. Doing so will overwrite OnePoint Messenger settings in the NT Registry, and will require installing OnePoint Messenger.

You can test unified messaging by integrating the Telephony Server with your telephone switch (referred to here as the PBX), discussed next, or by installing Outlook and the OnePoint Messenger Outlook Client on users' computers, discussed below in "Setting Up Users" on page 54.

**NOTE:** For details on using Outlook to create a unified message, see Chapter 3 in the *OnePoint Messenger User Guide*.

# **Upgrading or Reinstalling Software**

Occasionally, installing a turnkey system entails installing a software upgrade. Follow the directions in the release notes that accompany the software upgrade. If the software is a base release, generally you have the option of removing the previous version or of installing the new version over it. Also, you usually can choose to configure the installed software and then install the upgrade, or to install the upgrade before doing the configuration.

OnePoint Messenger is designed to automatically back up the current configuration and install it with the upgrade. OnePoint Messenger also allows you to remove the upgrade and roll back to the previous configuration, although you are advised to do a system backup to be more assured of being able to restore the original configuration. Use the System Service Tool to manage the installation of service packs and hot fixes.

For details, see Chapter 5 in the *OnePoint Messenger Installation Guide*. That chapter also discusses what to do if you need to remove OnePoint Messenger software and reinstall, and it discusses revising the network configuration after the Telephony Server/Exchange integration is complete.

# Integrating OnePoint Messenger with a PBX

In general, the most efficient PBX integration sequence is to prepare the PBX for OnePoint Messenger before the Telephony Server arrives, so that your pilot numbers, extensions, and trunk numbers are available to enter in MMC and Show N Tel on the Telephony Server for the SNT lines, and the Message Center, Automated Attendant, and Fax on Demand services.

Follow the directions in the appropriate OnePoint Messenger/PBX integration guide to configure your PBX to accommodate the OnePoint Messenger system and to set up the Telephony Server. Those guides are included on the OnePoint Messenger CD-ROM. Integration guides are provided for:

- Centrex switches
- Fujitsu 9600
- Lucent Definity G3
- Mitel SX-200
- Mitel SX-2000
- NEC NEAX 2400, all versions
- Nortel Meridian

If you do not have access to the specific integration guide for your PBX, you can use, along with the documentation provided by your PBX manufacturer, the general instructions listed in Chapter 4 of the *OnePoint Messenger Installation Guide*. That guide is designed for installing software and hardware on a bare box and for making changes to your OnePoint Messenger release level or feature licenses.

# Overview of the Integration Interfaces on the Telephony Server

On the Telephony Server, PBX integration is accomplished primarily through Show N Tel Manager (SNT), which is installed as part of the OnePoint Messenger software. For more on Show N Tel Manager, see the *Show N Tel System Administrator Guide* from Brooktrout Software, included as sntmgrguide.pdf on the OnePoint Messenger Installation CD-ROM.

Show N Tel Manager has two major functions:

• To identify the features of the linked PBX, you select a phone system definition on the **Phone System** tab of **Show N Tel Man**-

**ager**. If you are integrating a Mitel PBX, you also edit the **Switch/CTI** and **Device Map** tabs.

• To assign and manage the applications that control the functionality of each line port, you use the **Runtime** tab.

For a Mitel PBX, you must also enter the **Message Center pilot** number in the **Telsrvr.ini** file and enter **MiTAI** in the **Hosts** file, which is located in the directory \**WINNT\system32\drivers\etc.** For details, see Chapter 5 in the *OnePoint Messenger/SX-2000 Integration Guide*.

For integrations using the SMDI protocol, you also use the **Templates** and **PBX Configuration** nodes of TS Admin (the Unified Messaging Snap-in to Microsoft Management Console). For details on the use of TS Admin, see Chapter 3 in the *OnePoint Messenger Administrator Guide*.

# **Other Telephony Server Configuration Elements**

There are many choices that you can make about how OnePoint Messenger communicates through telephones. Some of the settings are installed with defaults that you rarely need to change. Some of the settings do need to be set, but they are not critical for getting the integration running. Examples include preparing fax cover pages and system greetings. Those kinds of configuration elements are covered in the *OnePoint Messenger Administrator Guide*. The sections of that guide that are likely to be of most use to installers are in:

- Chapter 1, a task overview
- Chapter 2, a discussion of managing OnePoint Messenger users through Microsoft Exchange. Before you install Outlook on users' PC, you should create accounts for them in Exchange.
- Chapter 3, a discussion of setting general user telephony interface and mailbox settings that you set in the Unified Messaging Snapin to Microsoft Management Console. Most settings have defaults that provide enough information for the system to run. Some that do not include the pilot numbers for the Automated Attendant (Automated Receptionist) and Fax on Demand service. Your PBX integration guide covers the settings that require editing in order for the system to run.
- Chapter 5, a discussion of Telephony Server operation, troubleshooting, and maintenance

• Appendix B, a list of information sources for supporting hardware and software

When you finish the tasks in those chapters, you should have a system configuration that can provide all messaging functions:

- The PBX can route unanswered calls to the Telephony Server, and also route calls to the Message Center, Fax on Demand, and Automated Attendant.
- The Telephony Server can answer calls for users and route them to Exchange, retrieve messages from Exchange and play them for users, and perform other telephony functions.

The next step is to set up software on client (user) PCs, as discussed next and in Chapter 6 here (page 55).

## Setting Up Users

During the running of the Configuration Wizard, as described in "Integrating the Telephony Server with Exchange" on page 41 in Chapter 4, several administrative mailboxes are created on Exchange. In addition, at this point, your site may have already been running Exchange without unified messaging, so you have a set of user mailboxes already created. Chapter 2 in the *OnePoint Messenger Administrator Guide* discusses how to invoke unified messaging for both existing and new users. Chapter 6 (page 55) describes how to set up client computers to support unified messaging.

When you have created a number of unified messaging mailboxes and are ready to start telephony services, you can launch the Directory Initialization program, as described in "Synchronizing Exchange and Telephony Server Directories" on page 47 in Chapter 4, to synchronize the Exchange directory and the directory cache on Telephony Server. The synchronization process is then automatic. To complete this procedure, the Telephony Server needs a network connection to its primary Exchange Server.

# 6. Installing OnePoint Messenger Client Components

This chapter lists requirements for a client (user) PC and tells you how to install OnePoint Messenger. It contains these sections: :

Section	Page
OnePoint Messenger Client Installation Require- ments	55
Preparing the Client PC for OnePoint Messenger	56
Installing the OnePoint Messenger Client	67
<b>Removing OnePoint Messenger from the PC</b>	71
Setting Up Web Access to Exchange	71
Testing Your PC Sound Setup and Volume Levels	75
Where to Go from Here	75

## **OnePoint Messenger Client Installation Requirements**

OnePoint Messenger now uses a .wav sound file type that is recognized by standard Windows sound players, so you do not need to install special client software for recipients of unified messages to play those messages. For those recipients to whom you do not give Full Unified Messaging, you can give extra unified messaging information and control by installing OnePoint Messenger for Outlook. The user with OnePoint Messenger for Outlook but without Full Unified Messaging primarily lacks the right to create unified messages.

Before installing OnePoint Messenger for Outlook on a user's PC, you must create a mailbox for the user on the Microsoft Exchange Server. For the client's Outlook to communicate with the Exchange Server, there must be a LAN connection to the Exchange Server from the user's PC, and the TCP/IP protocol must be enabled on the computers and the LAN. You can install the OnePoint Messenger client components directly from the OnePoint Messenger Installation CD-ROM or from the Telephony Server, if there is a LAN connection between the PC and the Telephony Server.

**NOTE:** You do not need to run the OnePoint Messenger client installation program in order to provide access to the user's mailbox from a Web browser or from a telephone.

# **Client PC Hardware and Software Requirements**

The PC must have the following hardware and software to run the OnePoint Messenger Outlook client:

- Microsoft Windows 95, Windows 98, or Windows NT 4.0
- Microsoft Outlook 2000 or Outlook 98
- At least 20MB of disk storage, including 3MB for OnePoint Messenger. Outlook alone requires 17MB.
- Outlook typically utilizes up to 14MB of RAM, if the resource is available.
- For network access to the Exchange Server, you need either a network card for LAN access or a modem for remote access.
- To play and record voice messages using PC multimedia hardware, you need a sound card, speakers, and a microphone.

## Preparing the Client PC for OnePoint Messenger

Before you can make full use of OnePoint Messenger features, you must set up:

- Desktop multimedia
- Outlook
- Network access
- Exchange transport profile

This section discusses the procedures for providing those elements.

# Multimedia

In order to use desktop multimedia—microphone and speakers install the multimedia elements from the Windows CD-ROM.

1. Load the Windows CD-ROM.

2. Select **Multimedia** from the **Add/Remove** dialog in the installation wizard.

## Outlook

Before you can install OnePoint Messenger, Outlook must be installed—Outlook 2000 or Outlook 98. Install the full version of Outlook. You can install Outlook from its own CD-ROM or as part of Microsoft Office.

- 1. Select Full Installation (not the default Standard installation).
- 2. Select **Corporate or Workgroup** as the e-mail service (do not select Internet).

If you have Outlook already installed, but are not sure if the version is supported, check the version number in the Outlook Help menu.

## To check the Outlook version number:

- 1. Start Outlook.
- 2. Choose About Microsoft Outlook from the Help menu.

If Outlook is already installed, verify that the Exchange transport profile is correctly created.

## To verify that the Exchange transport profile is correctly created:

- 1. From the Windows **Start** button, choose **Settings**, then **Control Panel**.
- On Windows 95 and NT, double-click Mail and Fax. On Windows 98, double-click Mail. The Properties dialog appears.
- 3. Click the **Services** tab. Verify that Microsoft Exchange Server is listed. If Exchange is not listed, follow the directions to modify the existing profile or create a new one in "Creating or Modifying an Exchange Transport Profile" on page 62.

# **Setting Network Access**

In order for OnePoint Messenger to run, network communication must be established. To do this on a Windows 95 or 98 PC, you must set the proper network access control and security level.

### On Windows 95 and Windows 98, set the network access control:

- 1 Right click the **Network Neighborhood** icon on the desktop and choose **Properties**.
- 2 Select the Access Control tab.
- 3 Select "User-level access control."
- 4 Type your LAN domain name in the edit box.
- 5 Click **OK**.

## Setting the Security Level

For Windows 95 and Windows 98 clients, you must set the DCOM security level to use Call-Me in Outlook. For details on Call-Me, see "Choosing between Call-Me and Meet-Me" in Chapter 3 of the *OnePoint Messenger User Guide*.

If you have a Windows 95 system, you must first install DCOM95 1.2 or later. You can download DCOM95 from the Microsoft website. The current DCOM download URL is:

http://www.microsoft.com/com/resources/downloads.asp

#### To set the security level:

- 1. In Windows Explorer, navigate to the **\system** subdirectory of the **\Windows** directory.
- 2. Double-click **dcomenfg.exe**. A dialog with three tabs should appear, as shown in Figure 6-1.

## Figure 6-1 DCOM Dialog

Distributed COM Configuration Properties
Applications Default Properties Default Security
Default Acc <u>e</u> ss Permissions
You may edit who is allowed to access applications that do not provide their own settings
Edit Default
Default Launch Permissions
You may edit who is allowed to launch applications that do not provide their own settings.
Edit Default
Default Configuration Permissions
You may edit the list of users that are allowed to modify OLE class configuration information. This includes installing new OLE servers and adjusting the configuration of existing OLE servers.
Edit Default
OK Cancel Apply

- 3. If this message appears—"Before you can use DCOM, your system must be configured for 'User-level' security"—use the **Network** icon in the Windows **Control Panel** to set directory access for "User-level" security before running the DCOM configuration utility. That means you must change file-sharing to identified users rather than general password access:
  - a. In **Control Panel**, double-click the **Network** applet.
  - b. In the Network dialog, select the Access Control tab.
  - c. Select **User-level access control**. Changing file sharing from file to user level removes all existing shares. You must reboot for the changes in sharing to take effect.
- 4. When user-level sharing is set up, select the **Default Security** tab of the dcomcnfg dialog.
- 5. In the Default Access Permissions area, click Edit Default.
- 6. Add "The World" to the access list.
- 7. Click OK.

## **Running the Inbox Setup Wizard**

To establish communication between Outlook and the Exchange Server, you must create an Exchange transport profile. When you start Outlook for the first time, the Inbox Setup Wizard appears, as shown in Figure 6-2, to help you create the transport profile.

Figure	6-2	First	Screen	of	Microso	oft	Exchange	Setup	Wizard
riguit	0-2	I II St	buttun	UI.	111111050	π.	Exchange	beiup	vv izai u

Microsoft Exchange Setup Wizard			
	Select the information service(s) that you want to use with Microsoft Exchange.		
	< Back Next > Cancel		

- 1 Under "Use the following information services," select **Microsoft Exchange Server**, as shown in Figure 6-2.
- 2 Click **Next**. The next wizard window appears, as shown in Figure 6-3.

Figure 6-3 Exchange Setup Wizard, Window Two



3 Under Microsoft Exchange server, enter the network computer name of the Exchange Server. Under Mailbox, you can accept the suggested profile name or enter any name that you prefer. Click OK. The third wizard window appears, as in Figure 6-4.

### Figure 6-4 Setup Wizard, Window Three

nbox Setup Wizard 👘	
	Microsoft Exchange Server         Do you travel with this computer?                 Yes                  Yes                  You choose Yes you will be able to read and compose mail while not connected to a network.                 If you choose No you will only be able to read and compose mail when connected to the Microsoft Exchange Server via a network or modem.
	< <u>B</u> ack Next> Cancel

- 4 If you want to be able to work offline, click **Yes** under the prompt "Do you travel with this computer?"
- 5 Click **Next**. The next screen helps you locate your Personal Address Book on your local drive. This window lists the default address book that is installed with Exchange. You can accept this, or click **Browse** to select another address book.

#### Figure 6-5 Exchange Setup Wizard, Personal Address Book

Microsoft Exchange Setup Wizard			
	Personal Address Book Enter the path to your personal address book. If you do not have a personal address book, click Next, and one will be created for you in the following location.		
	C:NExchangeNmailbox.pab Browse		
	< Back Next > Cancel		

- 6 Click **Next**. A message appears offering you the option of having Outlook start when you boot Windows. Choose your preference, then click **Next**.
- 7 Click Finish.

You can view and modify the properties of your transport profile in the **Mail and Fax** applet in Control Panel, as described next.

# Creating or Modifying an Exchange Transport Profile

This section explains how to modify an existing Exchange transport profile or configure a new one, to tell Outlook the network location of your mailbox and make other choices, such as search order of directories, whether to copy mail to your local disk, and what mailboxes to open.

## To create or modify an Exchange transport profile:

1 From the **Start** menu, choose **Settings**, then **Control Panel**. The Control Panel appears in Figure 6-6.



### **Figure 6-6 Windows Control Panel**

2 On the Control Panel, double-click **Mail and Fax** (**Mail** in Windows 98). The **Properties** window appears for the default profile, as shown in Figure 6-7.

Microsoft Outlook Properties	<		
Services Deliveru Addressing			
	L		
I he following information services are set up in this profile:			
Uutlook Address Book			
<u></u>			
Add Hemove Properties			
Copy About			
Cham Darffar			
	1		
UK Lancei <u>Apply</u> Help			

**Figure 6-7 Microsoft Outlook Properties** 

3 To add Microsoft Exchange to the profile, click **Add** on the **Services** tab. The **Add Service to Profile** dialog appears, as shown in Figure 6-8.

#### Figure 6-8 Add Service to Profile Window



4 Select **Microsoft Exchange Server**, then click **OK**. The **Microsoft Exchange Server** window appears, as in Figure 6-9.

Microsoft Exchange Server	×	
General Advanced Dial-Up Networking Remote Mail		
Microsoft E <u>x</u> change server:		
Mail <u>b</u> ox:		
turnw Check Name		
When starting  C _Connect with the network  Work offline and use dial-up networking  C Works the connection type when starting		
OK Cancel Apply Help		

## Figure 6-9 Microsoft Exchange Server Window

- 5 In the **General** tab, type the name of your Exchange Server in the **Microsoft Exchange server** field.
- 6 Enter your network login name ("alias") in the **Mailbox** field, then click **Check Name**.

Your Exchange administrator can set up name resolution between multiple Exchange Servers, so that, if you enter the wrong server name, the correct name will replace the one you entered. To indicate correct entries, underlined server and mailbox names will replace what you entered, as shown in Figure 6-10.

If you enter an incorrect name in either field, an error message appears. If so, check with your administrator for the correct entries.

Microsoft Exchar	nge Server		×	
General Advance	ed   Dial-Up Ne	etworking   Rem	ote Mail	
Microsoft E <u>x</u> cha	Microsoft Exchange server:			
BANDIT	BANDIT			
Mail <u>b</u> ox:				
Turner, Will		Che	o <u>k</u> Name	
When starting <u>C</u> onnect w  Work <u>offlir</u> Choose the	ith the network ie and use dial-u connection type	ip networking when starting		
OK	Cancel	Apply	Help	

## Figure 6-10 Microsoft Exchange Server and Mailbox Names

- 7 In the **When starting** options on the **General** tab, select your preferred mode. If you are using a laptop that you connect from different places, you can check "Choose the connection type when starting."
- 8 Filling in the information in the other three tabs is optional. You do not need to if you want to use just the local desktop with folders on the server. If you want to complete the other tabs, you can do so now or at another time. See your Outlook manual for details.
- 9 Click **OK**. The **Outlook Properties** window reappears, with Microsoft Exchange Server as a service, as shown in Figure 6-11.

Microsoft Outlook Properties	×		
Services Delivery Addressing			
The following information services are set up in this profile: Internet E-mail Microsoft Exchange Server Outlook Address Book Personal Folders			
Add Remove Properties			
OK Cancel Apply Help			

Figure 6-11 Microsoft Outlook Properties Window

- 10 Select the **Delivery** tab, shown in Figure 6-12.
- 11 Under "Deliver new mail to the following location," select your mailbox, as shown in Figure 6-12. In the Recipient addresses... area, you can set the order of transport services as you wish.

#### Figure 6-12 Microsoft Outlook Properties Delivery Tab



- 12 Under "Recipient addresses are processed by these information services in the following order," click the control arrows to move Microsoft Exchange Transport to the top of the list, unless instructed otherwise by your Exchange administrator.
- 13 Click **OK**. The **Mail and Fax** window returns, as shown in Figure 6-13, displaying the new or revised profile.

Mail and Fax			×
General			,
Dhe follo	wing pr <u>o</u> files ar	e set up on this c	omputer:
Microsoft Outlo	ok		×
Add Remove Properties Copy When starting Microsoft Windows Messaging, use this Microsoft Outlook			
Close	Cancel	Apply	

#### Figure 6-13 Mail and Fax Window

**NOTE:** If you have used Outlook and saved information in local folders before linking to Exchange, you may see two sets of similarly named folders: your old folders and a new set on the Exchange server. You can maintain the two sets of information or merge the two.

## Installing the OnePoint Messenger Client

After installing Outlook and setting up your Microsoft Exchange transport profile, install the OnePoint Messenger client components.

**CAUTION!** Do not install the OnePoint Messenger Outlook Client on the Telephony Server. Doing so will overwrite OnePoint Messenger settings in the NT Registry, and will require installing OnePoint Messenger.

**NOTE:** In order to install the software over the network to a Windows NT computer, the account on which you are logged in must have local administrator rights.

The installation program gives you the option of installing the Unified Fax Printer and/or the Outlook components. You can run the installation from the OnePoint Messenger CD-ROM or over the LAN.

**NOTE:** When upgrading OnePoint Messenger client software, remove the older version first. See "Removing OnePoint Messenger from the PC" on page 71.

## To install the OnePoint Messenger client components on a PC:

- 1 From your system administrator, get your OnePoint Messenger server mailbox address and personal Exchange ID ("alias"). If installing the client from the network, get the location of the OnePoint Messenger installation directory. The default directory is \UMInstall on the Telephony Server.
- 2 Start Windows on your PC. Close all applications.
- 3 Click the Windows **Start** button, and choose **Run**.
- 4 In the **Run** dialog, type the path to the server that contains the OnePoint Messenger client components. Typically, the path includes the name of the server, the name of the shared client directory, and the client setup file, in this form:

For example, in this path:

\\Typhoon\UMClient\setup

"Typhoon" is the name of the server.

"UMClient" is the directory that contains the client software.

"Setup" is the setup.exe file.

- 5 Click Next.
- 6 Click Next or Yes to accept the defaults for the next four screens:
  - The Welcome screen
  - The Software License screen
  - The **Information** screen, listing the components that can be installed.
- The **Choose Destination** dialog prompts for the directory in which to install the OnePoint Messenger client components. The default is:

C:\Program Files\Baypoint\OnePoint Messenger

7 The **Select Components** dialog contains two install options— Outlook Client and FAX Client. Selecting **Outlook Client** installs the additions to Outlook, including the Unified Message Player, recorder, and QuickPick. **FAX Client** installs the Unified Fax Printer for creating faxes from applications with Print menus. You can select both, then click **Next**.

- 8 The Select Program Folder screen appears. Click Next.
- 9 A progress screen appears while the OnePoint Messenger client components are installed. A DOS window appears on top of the progress screen, then disappears. If a Readme text file appears with last-minute information about OnePoint Messenger, read the file, then click **Continue**.
- 10 On the Setup Complete screen, choose either:
  - Yes, I want to restart my computer now.
  - No, I will restart my computer later.

The computer must restart in order for the OnePoint Messenger installation to take effect.

# **Testing the OnePoint Messenger Client**

Launch Outlook, then check that the OnePoint Messenger client components appear. Unified messaging buttons should appear at the right end of the Outlook toolbar, and unified messaging menu items should appear in the Tools menu, and Unified Messaging Help should launch from the Help menu. If you do not see these elements, use Version Reader, as described in the section "Version Reader" below to check for OutlookExt.dll.

If you installed the Unified Fax Printer, you should see it listed in the printer list in any print menu.

Check CVInstall.log, an installation log file placed in your temp directory. It includes the files installed, the registry keys read and modified, and installation errors.

#### To make sure that everything works, run this test sequence:

- 1. Create a voice message in a New Unified Message form, as explained in "Creating Unified Messages" on page 88 in Chapter 3 of the *OnePoint Messenger User Guide*. If you cannot open a New Unified Message form, see "Version Reader" below to check for the existence on the PC of cvMail.dll, cvCommon.dll, and cvExten.dll.
- 2. Send the voice message to the same client mailbox.

- 3. When the message comes back from the Exchange Server, you should see it listed with a telephone icon in the Outlook message summary. Double-click the message. QuickPick should open a window and Auto-play should play the voice attachment component.
- 4. If QuickPick does not appear, see "Version Reader" below to check for QuickPickControl.dll.
- 5. If the voice message does not play, check for cvSound.dll and ribbit.exe. Also, check the Unified Message Player status window for "No License".
- 6. If you installed the Unified Fax Printer, create and send a fax message, as explained in Chapter 5 of the *OnePoint Messenger User Guide*.

## Version Reader

Version Reader is a handy OnePoint Messenger utility that is installed on your system. It displays version information for the OnePoint Messenger programs currently installed.

### To verify the installation using Version Reader:

1. From the Windows **Start** button, choose **Programs**, then **OnePoint Messenger**, and **Version Reader**. Version Reader appears, as in Figure 6-14. If the OnePoint Messenger group does not exist, the program is either not installed, or you assigned it another program group name.

0	Version Reader		×
	Directory to search:		
	C:\Program Files\Mitel\OnePo	Browse	
		-	
	File	FileVersion	<b></b>
	cvBrand.dll	1.1 Build 114.0	
	cvCmMmClient.dll	1.1 Build 114.0	
	cvCmMmClient0PM.exe	1.1 Build 114.0	
	cvCommon.dll	1.1 Build 114.0	
	cvExten.dll	1.1 Build 114.0	
	cvMailLib.dll	1.1 Build 114.0	
	cvOEMBrand.dll	1.1 Build 114.0	
	cvSound.dll	1.1 Build 114.0	
	cvVersionReader.exe	1.1 Build 114.0	
	OutlookExt.dll	1.1 Build 114.0	-
		448 114440	
		Close	

#### **Figure 6-14 Version Reader**

- 2. Check for the existence and Build number of the files listed above in the list.
- 3. Click Close.

**NOTE:** The OnePoint Messenger program group consists of only Help and Version Reader, because the OnePoint Messenger client runs as a part of Outlook, so you do not need to start it separately.

The Help icon in the program group is for a set of "training cards" for the most common tasks. The last item in the list of cards is a link to the general OnePoint Messenger help containing contextual help for all OnePoint Messenger applications.

# **Removing OnePoint Messenger from the PC**

If you decide to quit in the middle of installing or setting up OnePoint Messenger on the PC, or to remove OnePoint Messenger after it is installed (such as before installing an updated version), follow these steps:

- 1. Click Start, then Settings, then Control Panel.
- 2. On the Control Panel, click Add/Remove Programs.
- 3. Highlight the OnePoint Messenger program in the list.
- 4. Click Add/Remove.
- 5. Click OK.
- 6. Close the **Control Panel**.

If you remove Outlook from a PC, OnePoint Messenger will still be on the system but will be unavailable. Follow the steps above to remove it.

## Setting Up Web Access to Exchange

Outlook Web Access is the client application provided by Microsoft for use with Internet Explorer or Netscape to access the Exchange mail server. OnePoint Messenger adds WEB Client to Outlook Web Access to provide unified messaging.

#### To set up Web browser access to a mailbox:

1 Install and launch Internet Explorer 4.0 or later or Netscape 4.0 or later.

- 2 Configure the dial-up or LAN settings of the PC for TCP/IP access.
- 3 In the Address field of the browser, as shown in Figure 6-15, enter the URL or network address of your Exchange Server. Your organization may use two forms of the URL—one that you enter from the company LAN and another for remote use.

Figure 6-15 Browser Logon Screen with Password Screen

Address window	Logon window
🙀 Microsoft Outlook Web Access - Logon Netscape	
<u>File E</u> dit ⊻iew <u>G</u> o <u>C</u> ommunicator <u>H</u> elp	
Back Forward Reload Home Search Guide Print Security Stop	
🗧 🋫 Bookmarks 🙏 Location: http://sajes01/exchange/logon.asp	
Microsoft Octobook Web Access for Microsoft (R) Exchange Server	
Version 5.5 SP2 Microsoft (R) Outlook (TM) Web Access is a Microsoft Exchange Active Server Application that gives you private access to your Microsoft Outlook or Microsoft Exchange personal e-mail account so that you can view your Inbox from any Web Browser. It also allows you to view Exchange server public folders and the Address Book from the World Wide Web. Anyone can post messages anonymously to public folders or search for users in the Address Book. For more information about this Outlook explore the folders.	Log On doej Exchange Users Only: Type your alias and then <u>click here</u> to connect to your personal e-mail account.
Username and Password Required   Implement Imp	Public Access <u>Click here</u> to: browse Public Folders, find names in the Address Book, and post messages anonymously.
User Name: onepoint/doej Password: ""  OK Cancel	

Password Screen overlaid on Logon Screen

4 In the **Logon** field on your Exchange **Microsoft Web Access Logon** page, type your logon ID ("alias"), then press [**Enter**].

Typically, the alias is the name that you use to log on to the network.

5 If a **Username and Password Required** screen like that shown overlaid on Figure 6-15 above appears, type your alias and password in the appropriate fields.

**User Name field**: If your Exchange Server is not the primary domain controller, you must enter both your network domain name and personal alias in the **User Name** field on the **Username and Password Required** screen in this form:

<domain>/<alias>
For example, if your network domain name is "Building 4" and your alias is "fred," type:

Building 4/fred

Typically, your password is your primary computer network logon password. The Internet Information Server administrator can choose from various methods of authentication (or none).

# **Errors on Logon**

If you receive an error message when you attempt to log on, check:

- Did you attempt to link directly to your mailbox URL, rather than access it through the **Logon** screen?
- Did you enter your name, domain, or password incorrectly?
- Is Exchange or the link with Exchange down, or too busy to provide you service? An error of this type may generate a screen with the text

"error ASP 0115...Unexpected error.../exchange/USA/ logon.asp...."

• Do you have the correct browser; only Netscape 4.0+ and Internet Explorer 4.0+ are certified with OnePoint Messenger.

If you enter any logon data incorrectly, it is best to close and restart the browser to avoid further error messages that are spurious.

The Exchange Web server has a timeout setting. If you do not actively use your WEB Client session, Exchange disconnects you. If that happens, or you receive an error message, restart your browser before logging on again.

# **Downloading Plug-ins**

When you first log in to your mailbox using a Web browser from a PC on which OnePoint Messenger for Outlook is not installed, a plug-in for playing voice messages is downloaded to the PC.

## **Netscape Plug-in**

Whether or not you have OnePoint Messenger for Outlook installed, when you first log in using Netscape, Exchange senses that you need the Voice Player plug-in for Netscape, providing the dialog shown in Figure 6-16.

#### Figure 6-16 Netscape Plug-in Download Start Dialog



#### To download the Netscape plug-in:

- Click **OK** on the "Netscape Plug-in Download Start Dialog" dialog. A page appears titled "OnePoint Messenger Player/Recorder Download Page."
- 2 Click Download Plug-In Now. A security screen appears, as shown in Figure 6-17. If you have other applications open, it may not appear on top. Minimize the other applications, or press [Alt-Tab] to the plug-in screen.

#### Figure 6-17 Netscape Plugin Download Security Alert

🛎 Java Security	×			
JavaScript or a Java applet from 'Mitel Corporation additional privileges.	n' is requesting			
Granting the following is <b>high risk</b> :				
Installing and running software on your computer.				
	Details			
E Remember this decision				
Identity verified by www.verisign.com/CPS Incorp.by Ref. LIABILITY LTD.(o)97 VeriSign				
Certificate Grant Deny	Help			

- 3 Click **Grant**. The SmartUpdate: Unified Messaging Player/ Recorder Plug-in screen appears.
- 4 Click **Install**. A JavaScript message screen appears displaying "The Unified Messaging player/recorder Plug-in is installed."
- 5 Click OK.
- 6 On the screen labelled Unified Messaging Player/Recorder Download Page, click **Login**.

After that, Outlook Web Access and WEB Client download automatically to create a simulation of the Outlook Inbox.

## **Testing Your PC Sound Setup and Volume Levels**

To use a PC to listen to or record voice messages, make sure the sound card and volume controls are set up properly. Refer to your desktop multimedia documentation for instructions about how to set and test the multimedia components.

Also, use the Microsoft utilities included with Windows, such as Windows Media Player and Volume Control, to test and set your audio output levels. For details on using those applications, see your Windows documentation and "Tuning Your Multimedia Setup" in Appendix A of the *OnePoint Messenger User Guide*.

## Where to Go from Here

After you add more user accounts on Exchange, you can refer to this chapter as a guide to install software on those users' PCs.

If you have completed all the tasks in this *Getting Started Guide* and the OnePoint Messenger integration guide for your PBX, OnePoint Messenger is ready to operate at a basic level, routing unanswered calls to users' mailboxes on Exchange and allowing OnePoint Messenger users to retrieve and create messages from any of three client interfaces. Refining the performance of the messaging system and adding features and users are discussed in the *OnePoint Messenger Administrator Guide* and Chapter 5 of the *OnePoint Messenger Installation Guide*.

# A. Turnkey System Details

This appendix contains details on the Telephony Server 800 (TS800). It contains the following sections:

Section	Page
TS800 Hardware and Software Overview	77
Supported Cards and Recommended Settings	78
Regulatory Approvals	83
Environmental Requirements	84

#### **TS800 Hardware and Software Overview**

In addition to the features listed in Table A-1, the TS800 has a standard PC tower AT bus design with standard connections for IDE devices, SVGA video, keyboard and PS/2 mouse (both included), parallel, serial (two ports), PCI (three slots), and ISA (four slots).

**Table A-1 TS800 Components** 

Component Type	TS800
Processor	550 MHz Pentium III
Memory (RAM)	256 MB
Integrated Network Interface	10/100 Base T
Integrated Graphics Interface	ATI Rage Pro – 4 MB
RAID SCSI controller	No
Hard Disk type	minimum 3 GB IDE
Hard drives quantity	1
CD-ROM	32x (IDE)
Telecom Slots Available	4 ISA
Total Drive Bays	4
Server Cooling Fans	1
Power Supplies	1
Chassis Style	Tower

For updated details on currently shipping product, see the data sheets included in the turnkey system packing box.

# **Power Supply**

- Input Selectable 100-120V@60Hz , 200-240V@50Hz
- Output: +5V@25A, -5V@0.5A, +12V@9A, -12V@1A
- Power On/Off switch with Power On LED

## Drives

- 6 GB IDE, S.M.A.R.T. supported
- 32X CD-ROM IDE
- 3.5" Floppy Disk Drive
- 4 drive bays

## **External Modem**

An external modem and serial cable is included, along with pcAnywhere, for providing remote management and technical support.

## Software

Windows NT Server 4.0 with Service Pack 6a is installed on Drive C, running the NTFS file system. A Windows NT Server 4.0 CD-ROM is included with the Telephony Server. Also installed are Internet Explorer 5.01 and Outlook 98.

OnePoint Messenger is installed on Drive C. It includes all necessary third-party software, including Show N Tel Runtime, configuration software for all supported line cards, WinFT (for automatic system reboot), Crystal Reports Runtime, Greenleaf CommX, Metasoft Image Maker, pcAnywhere (for remote management; a modem is also included), Inprise BDE, Vintra MTA, and other Microsoft components—MSMQ, ADO, and MMC.

## **Supported Cards and Recommended Settings**

The line cards and protocol converters supported in the TS800 for OnePoint Messenger 2.0 appear in Table A-2 with their related PBX integrations.

Integration	Card	Туре	Manufacturer	Part Number
SX-2000	AFC	Proprietary	Mitel	137288602 (R1.5) 137288604 (R1.1)
SX-200	TALKTO CX	Proprietary	Mitel	138964302R2 (R2.5)
SX-2000	AG-0	DSP	NMS	9164-001-001-NA
all	AG-8	Loop +DSP	NMS	9164-120-008-NA
SX-2000	AG-24	DSP	NMS	9164-001-001-NA
Fujitsu, Centrex	AG-T1	T1+DSP	NMS	9164-500-009-NA
all	2-port Fax	ISA fax	Brooktrout	9164-001-003-NA
all	4-port Fax	ISA fax	Brooktrout	9164-001-004-NA
all	8-port Fax	ISA fax	Brooktrout	9164-001-005-NA
Nortel, Lucent	Calista PBX- Link	Call pickup pro- tocol converter	Calista Inc.	Included in Lucent integration package, 9164-120-301-NA or in Nortel package, 9164-120-401-NA

Table A-2 Supported Line Cards and Protocol Converter Cards

# **Recommended Line Card Settings**

What line cards that can be installed on the TS800 depend on the PBX to which the TS800 is connected. This section contains details on supported cards, organized by the specific PBX (The same information appears in the related PBX integration guide). Recommended IRQ and base I/O address settings and slot mappings for various combinations of cards are shown. Installing cards with these recommended settings and slot mappings expedites support of your system.

## **Identifying Slots on the Motherboard**

Slot numbers in the tables below are based on the PCB artwork on the peripheral riser card in the TS800. The riser card has two PCI slots on the top side and six ISA slots on the bottom. The artwork labels the PCI slots Slot 0 and Slot 1. The ISA slots are labelled J1 through J6, starting from the CPU in the middle of the PC, as shown in Figure A-1 below. The tables show the series J1 through J7 in parentheses alongside the imputed slot number. For example, the ISA slot next to the case wall is labelled Slot 2 (J6).

PC case wall			
ISA—Slot 2 (Je	PCI—Slot 2		
ISA—Slot 3 (J	PCI—Slot 1		
ISA—Slot 4 (J4			
ISA—Slot 5 (J3			
CPU	ISA—Slot 6 (J2)		
	ISA—Slot 7 (J1)		

Figure A-1 Slot Layout on Riser Card in TS800

Figure A-1 shows that the CPU limits the length of the cards that can be placed in the ISA slots in the middle of the PC. So, except for the SX-200 integration, which uses the TalkTo card, which is short enough to use in one of those slots, the line cards are limited to Slots 2 through 5.

#### Mitel SX-2000 Cards and Settings

Integration to the Mitel SX-2000 is accomplished through the Mitel Telephony Application Interface 7.5.3 (MiTAI) protocol. The physical integration is through a fiber link connection from the Fiber Interface Module on the PBX to a Mitel Application Fiber Channel (AFC) card on the TS800. The AFC card uses an MVIP cable to communicate with DSP and fax cards on the TS800. The maximum supported number of line ports is 24. The following card configurations in Table A-3 are recommended for the SX-2000 integration:

Voice: 24;	Fax: 16; Trunking: P	C	ption 1		
Slot	Card Type	I/O Address	IRQ	MVIP Clock Source	MVIP Termination
2 (J6)	Fax(2,4,8)	0288	10	Slave	Yes
3 (J5)	Fax(2,4,8)	0260	10	Slave	No
4 (J4)	AG 24	02C0	5	Slave	No
5 (J3)	AFC	A300	11	Master	Yes
<b>Voice</b> : 24	4; <b>Fax</b> : 0; <b>Trunki</b>	ng: Proprietary	5	Slave	Yes
2 (J6)	AG0	42C0	5	Slave	Yes
3 (J5)	AG0	22C0	5	Slave	No
4 (J4)	AG0	02C0	5	Slave	No
5 (J3)	AFC	A300	11	Master	Yes
Voice: 10	6; <b>Fax</b> : 8; <b>Trunki</b> i	C ng: Proprietary	Option 3		
2 (J6)	FAX (2,4,8)	0260	10	Slave	Yes
3 (J5)	AG0	22C0	5	Slave	No
4 (J4)	AG0	02C0	5	Slave	No
5 (J3)	AFC	A300	11	Master	Yes

#### Table A-3 Recommended Card Settings for SX-2000 Integrations

#### Mitel SX-200 Cards and Settings

The SX-200 integration uses MiTAI 7.5.3 to provide the PBX integration data through the TalkTo card. A digital line connects the port labelled "Line" on the TalkTo card to the PBX DNIC card. Analog lines connect the PBX ONS card to four duplexed RJ-14 ports on each NMS card on the TS800. The TalkTo card emulates a dataset 2103/Hostess-i to provide calling party information from the PBX. Unlike the SX-2000, the SX-200 does not multiplex voice over the call control link. Instead, the SX-200 must use standard loop start trunk interfaces to provide voice and fax connections to the PBX. The TalkTo integration is limited to 16 voice ports.

Table A-4 shows the recommended card settings for an SX-200 integration.

<b>Voice</b> : 16; 1	Fax: 8; Trunking	: Analog Loop	C	Option 1	
Slot	Card Type	I/O address	IRQ	<b>MVIP Clock Source</b>	<b>MVIP</b> Termination
2 (J6)					
3 (J5)	Fax(2,4,8)	0260	10	Slave	Yes
4 (J4)	AG8	22C0	5	Slave	No
5 (J3)	AG8	02C0	5	Master	Yes
6 (J2)	TalkTo	0300h	11	(not MVIP)	
<b>Voice</b> : 16; ]	Fax: 0; Trunking	: Analog Loop	C	Option 2	
Slot	Card Type	I/O address	IRQ	MVIP Clock Source	MVIP Termination
2 (J6)					
3 (J5)					
4 (J4)	AG8	22C0	5	Slave	Yes
5 (J3)	AG8	02C0	5	Master	Yes
6 (J2)	TalkTo	0300h	11	(not MVIP)	

#### Table A-4 Recommended Card Settings for SX-200 Integrations

#### **Enhanced Data Link Integration (EDLI) Card Settings**

**Centrex and Fujitsu**: Centrex systems and the Fujitsu 9600 PBX can use the three card combination options shown in Table A-5.

NEC: The NEC 2400 PBX use only Options 1 and 2 in Table A-5.

**Lucent and Nortel**: Lucent and Nortel integrations use only Options 1 and 2 in Table A-5. Those integrations use the Calista PBXLink external protocol converter to take the proprietary data format from the PBX and convert it to the SMDI protocol. An RS-232 link carries the SMDI data from the protocol converter to the Telephony Server. Although one Calista PBXLink supports up to 48 ports, the maximum supported capacity on the TS800 is 24 ports.

Option 1 Voice: 24; Fax: 8; Trunking: Analog Loop					
Slot	Card Type	I/O address	IRQ	MVIP Clock Source	MVIP Termination
2 (J6)	Fax(2,4,8)	0260	10	Slave	Yes
3 (J5)	AG8	42C0	5	Slave	No
4 (J4)	AG8	22C0	5	Master	No
5 (J3)	AG8	02C0	5	Slave	Yes
Voice: 16	Option 2 Voice: 16; Fax: 16; Trunking: Analog Loop				
Slot	Card Type	I/O address	IRQ	MVIP Clock Source	MVIP Termination
2 (J6)	Fax(2,4,8)	0280	10	Slave	Yes
3 (J5)	Fax(2,4,8)	0260	10	Slave	No
4 (J4)	AG8	22C0	5	Master	No
5 (J3)	AG8	02C0	5	Slave	Yes
Option 3 Voice: 24; Fax: 24; Trunking: Digital T1					
Slot	Card Type	I/O Address	IRQ	MVIP Clock Source	MVIP Termination
2 (J6)	Fax(2,4,8)	02A0	10	Slave	Yes
3 (J5)	Fax(2,4,8)	0280	10	Slave	No
4 (J4)	Fax(2,4,8)	0260	10	Slave	No
5 (J3)	AG-T1	02C0	12	Master	Yes

#### Table A-5 Recommended Card Settings for EDLI Integrations

# **Regulatory Approvals**

Each of the hardware components that come as part of the turnkey system ships with manufacturer documentation that lists its regulatory approvals.

# **Environmental Requirements**

The TS800 is designed to work reliably within these temperature and humidity ranges:

## **Operating Specifications**

Temperature	0 to 35 degrees Centigrade
Humidity	20% to 80% Non-condensing

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